somewhat different

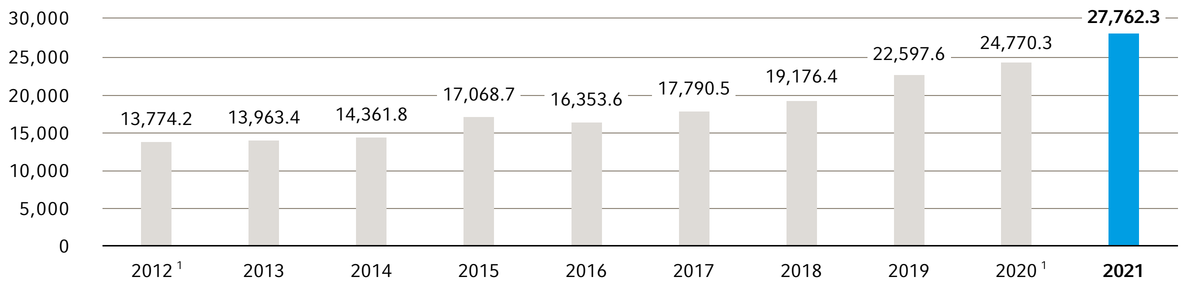
Annual Report 2021

hannover re®

An overview

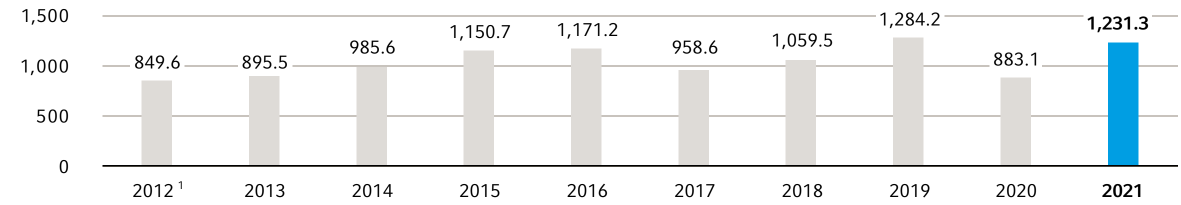
Gross premium
in EUR million

E 01



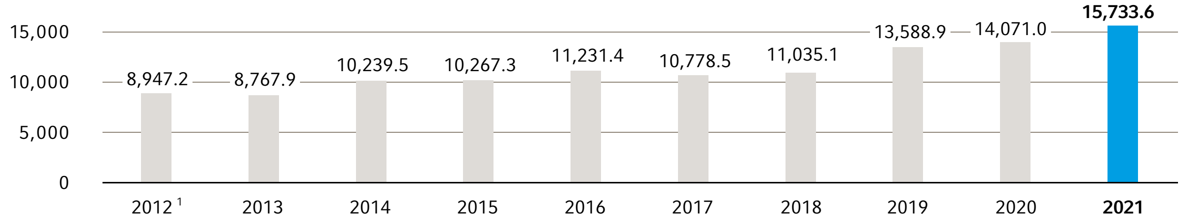
Group net income
in EUR million

E 02



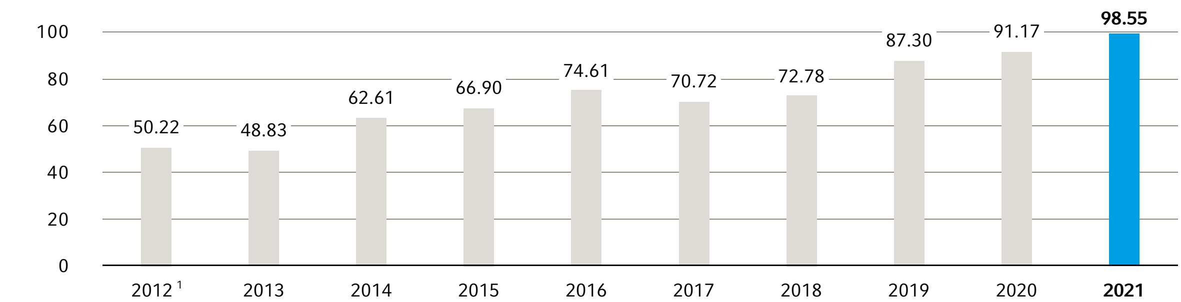
Policyholders' surplus
in EUR million

E 03



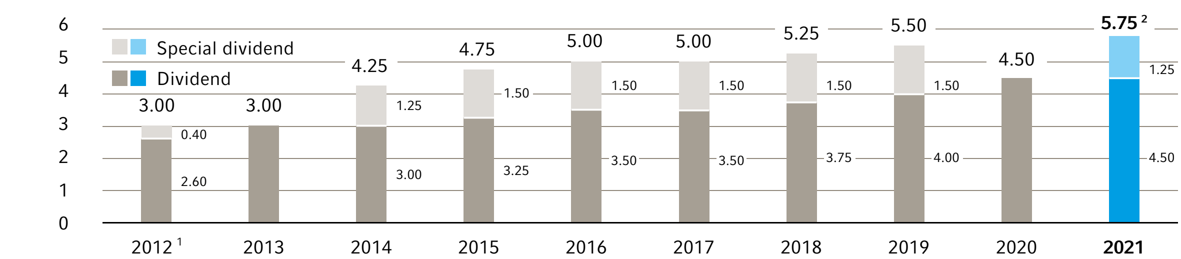
Book value per share
in EUR

E 04



Dividend
in EUR

E 05



1 Restated pursuant to IAS 8
2 Proposed dividend

Key figures

E 06

in EUR million	2021	+/– previous year	2020[1]	2019	2018	2017
Results						
Gross written premium	27,762.3	+12.1%	24,770.3	22,597.6	19,176.4	17,790.5
Net premium earned	24,143.7	+13.0%	21,360.8	19,729.7	17,289.1	15,631.7
Net underwriting result[2]	(211.1)		(691.0)	(9.7)	156.9	(253.6)
Net investment income	1,943.0	+15.3%	1,685.5	1,757.1	1,530.0	1,773.9
Operating profit (EBIT)	1,734.8	+42.9%	1,214.1	1,853.2	1,596.6	1,364.4
Group net income	1,231.3	+39.4%	883.1	1,284.2	1,059.5	958.6
Balance sheet						
Policyholders' surplus	15,733.6	+11.8%	14,071.0	13,588.9	11,035.1	10,778.5
Equity attributable to shareholders of Hannover Rück SE	11,885.0	+8.1%	10,995.0	10,528.0	8,776.8	8,528.5
Non-controlling interests	871.2	+3.2%	844.4	826.5	765.2	758.1
Hybrid capital	2,977.4	+33.4%	2,231.6	2,234.4	1,493.1	1,492.0
Investments (excl. funds withheld by ceding companies)	56,213.2	+14.7%	49,001.6	47,629.4	42,197.3	40,057.5
Total assets	82,902.3	+16.0%	71,437.5	71,356.4	64,508.6	61,196.8
Share						
Earnings per share (basic and diluted) in EUR	10.21	+39.4%	7.32	10.65	8.79	7.95
Book value per share in EUR	98.55	+8.1%	91.17	87.30	72.78	70.72
Dividend	693.4	+27.8%	542.7	663.3	633.1	603.0
Dividend per share in EUR	4.50 + 1.25[3, 4]	+27.8%	4.50[4]	4.00 + 1.50[4]	3.75 + 1.50[4]	3.50 + 1.50[4]
Share price at year-end in EUR	167.15	+28.3%	130.30	172.30	117.70	104.90
Market capitalisation at year-end	20,157.8	+28.3%	15,713.8	20,778.9	14,194.3	12,650.6
Ratios						
Combined ratio (property and casualty reinsurance)[2]	97.7%		101.6%	98.2%	96.5%	99.8%
Large losses as percentage of net premium earned (property and casualty reinsurance)[5]	7.5%		11.2%	7.5%	7.9%	12.3%
Retention	89.5%		90.1%	90.0%	90.7%	90.5%
Return on investment (excl. funds withheld by ceding companies)	3.2%		3.0%	3.5%	3.2%	3.8%
EBIT margin[6]	7.2%		5.7%	9.4%	9.2%	8.7%
Return on equity (after tax)	10.8%		8.2%	13.3%	12.2%	10.9%

1 Restated pursuant to IAS 8
2 Including interest on funds withheld and contract deposits
3 Proposed dividend
4 Dividend of EUR 4.50 plus special dividend of EUR 1.25 for 2021, Dividend of EUR 4.50 for 2020, 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 and dividend of EUR 3.50 plus special dividend of EUR 1.50 for 2017
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

The Group worldwide

E 07

A complete list of our shareholdings is provided on page 190 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

E 08

Hannover Re Group

Property & Casualty reinsurance

Regional Markets

- EMEA (including CIS)
- Americas
- APAC

Worldwide Markets

- Structured Reinsurance and Insurance-Linked Securities
- Facultative Reinsurance
- Credit, Surety and Political Risks
- Aviation and Marine
- Agricultural Risks

Life & Health reinsurance

Financial Solutions

Risk Solutions

- Longevity
- Mortality
- Morbidity

Growth through innovation

Within just 50 years Hannover Re has grown into a global company that tackles risk and opportunity with equal success. We intend to write the next chapter of our success story as a reinsurer – with a partnership-based approach, a power of innovation that spans the world and the extensive decision-making powers entrusted to our experts.

Somewhat different.

Contents

We grow with our clients and partners

For more than 50 years Hannover Re has generated profitable growth and created added value through reinsurance. We deploy our expertise and power of innovation to sustainably develop profitable products and solutions that deliver reliable and affordable risk protection for our customers and ultimately for insureds.

"It is only through profitable growth that we remain a reliable partner for our clients over the long term. This has been and continues to be our focus going forward."

Jean-Jacques Henchoz, Chief Executive Officer

In so doing, we pay special attention to the comprehensive understanding and assessment of risks. In addition to technical pricing that adequately reflects the risk, we look at the entire value chain and optimise it with all the tools offered by reinsurance. In this way, we ensure that risk covers are and remain calculable and affordable. Despite the Covid-19 pandemic, we have grown considerably over the past three years – large and financially robust partners are especially sought-after in times of crisis.

With our highly diversified portfolio we are active worldwide. As one of the market leaders in numerous specialty lines and with our expertise in traditional and alternative risk transfer, we create new opportunities for our clients and partners – particularly with an eye to current and future changes that we are able to monitor very closely and even anticipate.

Thanks to our worldwide network of experts, we are in a position not only to respond quickly to sudden changes but also to assess long-term trends strategically in terms of their business potential, thereby enabling us to leverage profitable opportunities. In this context, we prefer to explore possible avenues for supporting the development of new and sustainable technologies with our solutions.

We have no doubt: the great challenges of our time – climate change, digitalisation, shifting demographics, and indeed changes in economic framework conditions – can only be mastered through joint efforts. Together with our customers and partners, we shape the future and secure major investments for a better life.

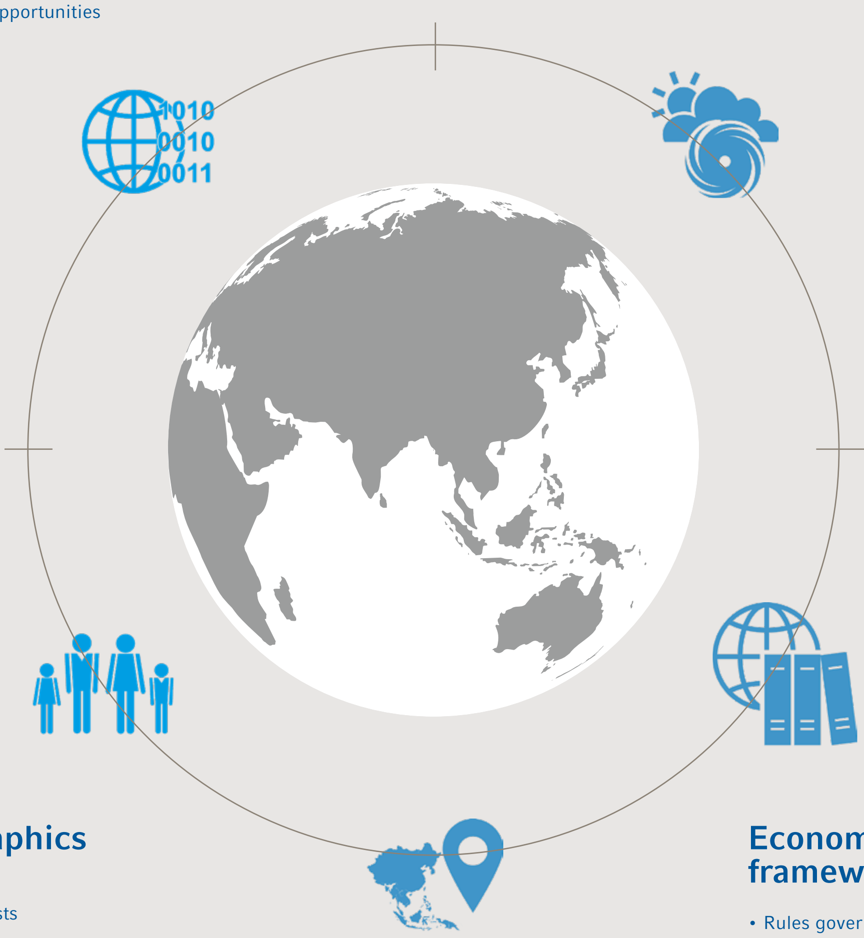
Megatrends

Digitalisation

- Industry 4.0
- Innovative sales channels
- Ecosystem building
- Data analytics
- Automation opportunities
- Cyber crime

Climate change

- Extreme weather events
- Food security
- Risks to infrastructure
- Health risks (e.g. from heat)



Demographics

- Longevity
- Healthcare costs
- Mortality
- Urbanisation/Megacities
- Value concentrations in urban centres
- Economic shifts

Economic growth in Asia

- Region with rapidly growing economies
- Protection gaps
- Competitive pressure

Economic framework conditions

- Rules governing capital requirements for insurers and reinsurers
- Protracted low interest rate environment
- Trade restrictions

Growth in traditional reinsurance business – we team up to create opportunities

Standardised products, some of which have already been on the market for a very long time, can now be automated or optimised. This means that they stay competitive and can address larger customer groups thanks to optimised cost structures. Hannover Re is able to do this, for example, through the smart use of automated underwriting or with the aid of innovative parametric covers. New risks such as cyber exposures, on the other hand, need to be evaluated using a constantly expanding data pool so as to provide adequate coverage.

Underwriting automation

Optimising standard processes

Examining and accepting risks – in other words, underwriting – are routine processes in the insurance industry. They are based on large quantities of data, empirical values from the past and assumptions regarding future developments. By making correct use of these data resources, we can appreciably streamline or even – depending on the risk – entirely automate the decision processes.

Example: With "hr | ReFlex" we are able to offer a modular, automated underwriting system that facilitates immediate, risk-appropriate decision-making directly at the point of sale. It supports all sales channels and makes integration of new products or functions a breeze – enabling us to offer primary insurers the flexibility, responsiveness and expertise that they have already come to expect from us now in digital form too.

Wherever reliable tools are able to step in, it leaves underwriters free to devote themselves to challenging new issues and individual solutions.

Digitalisation – Maximising the possibilities of digitalisation and making standard products leaner and more efficient

Parametric covers

Index-based protection against weather risks

Parametric insurance products – also known as index-based covers – have already been used in agricultural business for a number of years. These products insure and settle losses on the basis of defined parameters that can be unambiguously established. In cases where risks are insurable, parametric products can help to make coverage more accessible, settle claims more quickly and hence close the protection gap in many areas. Hannover Re develops and explores products offering parametric protection for risks such as floods or heatwaves – not to mention cyber risks. By making claims settlement quicker and more straightforward, these insurance products deliver added value because the customer experiences a direct and immediate benefit. These solutions, which are frequently developed in public-private partnerships, could take on added significance in connection with climate change.

"We see considerable potential in parametric covers and are taking a keen interest in them."

(Dr. Michael Pickel, member of the Executive Board)

Climate change – designing innovative products to protect against extreme weather events

"With greater availability of data resources and more accurate empirical values, we can better evaluate cyber exposures and develop products that adequately reflect the risk."

(Sven Althoff, member of the Executive Board)

Cyber risks

Risks from digitalisation and cyber crime

Unlike the traditional line of marine insurance, for example, protecting against cyber risks is a very new risk scenario that has become even more acute since the onset of the pandemic in 2020. The number of cyber attacks and the volume of ransom demands rose sharply in 2021. According to figures provided by the Federal Office for Information Security (BSI), in February 2021 alone an average of 553,000 new malware variants were detected every day.

Insurers already have robust insurance products that Hannover Re supports through obligatory and facultative arrangements. They have, however, implemented exclusions for non-modelled risks (silent cyber exposures) on account of the potential for systemic losses. Hannover Re would like to extend its range of cyber products and is continuously expanding its expert network in this field. Furthermore, it seeks to encourage digital innovations by bringing together potential partners and their specialist know-how on its platform "hr | equarium".

Digitalisation – Identifying risks and opportunities from advances in digitalisation in all areas as well as developing and delivering appropriate products

Growth through individual solutions – beyond risk sharing

We take "solutions business" to mean contracts, products or transactions that are individually tailored to the needs of our customers. Here, too, our reinsurance expertise – the assessment of risks – constitutes the basis for our growth. When the task at hand is developing bespoke solutions that respond to our customers' specific needs, our approach is highly flexible: multiline covers, structured reinsurance, financial solutions, special transactions for the coverage of longevity risks and a wide range of capital market transactions (cat bonds, insurance-linked securities). To do this we not only need an intimate knowledge of our markets, we also have to keep close track of major trends and upcoming developments such as an evolving regulatory environment.

Securitisation of natural catastrophe risks

Increasing access to capital

The current loss situation reduces the capacity of the traditional market and generally leads to considerable earnings volatility, which insurers are required to cushion with a corresponding capital base on account of local regulatory requirements. As an internationally operating reinsurer we can help with traditional reinsurance solutions, but also through structured reinsurance.

One way of leveraging additional risk capital for our customers is risk sharing with institutional investors on the capital market. Examples include coverage for flood risks, liability risks from wildfires or earthquake risks by means of catastrophe bonds, which we support in the role of securitisation partner.

Regulatory issues – finding answers to evolving regulatory environments

Climate change – designing innovative solutions for risk coverage

"More and more customers are drawing on our expertise and strong track record in the securitisation of natural catastrophe risks."

(Silke Sehm, member of the Executive Board)

"Innovation has always been fundamental to the life sector, you don't get any business without it."

(Claude Chèvre, member of the Executive Board)

Longevity

Refining innovative solutions

Longevity is a traditional biometric risk. Many markets are experiencing the demographic shift, people are living longer, the savings phase ends, the payout phase begins. Our customers want solutions that make their payments more predictable.

The associated risk cannot be absorbed through traditional reinsurance alone. Hannover Re is therefore working on suitable types of financial instruments to enable placement on the capital market with the goal of serving the longevity market not only as risk carrier but also as facilitator. A further focus is on the development of individual annuity products that increase policyholders' willingness to retire. This is a decisive contribution to the avoidance of poverty in old age. Today, we have successfully transferred annuity insurance solutions developed in the past primarily for the UK market to other regions of the world. Our customers testify to our long-standing expertise in dealing with longevity risks in a recent study conducted by an international consulting firm.

Demographics – creating innovative products for longevity risks

Financial Solutions

The pursuit of competitive capital management

Financial Solutions are structured reinsurance solutions under which the risk transfer takes the back seat. The goals pursued are primarily financial. In the first place, they help our customers to manage their capital competitively in an increasingly complex regulatory environment. Regulatory requirements and their implications vary – sometimes considerably – from market to market and can change. We therefore keep close track of their development so as to make potential solutions available to our customers in a timely fashion.

Furthermore, Financial Solutions can also help our customers to grow – whether it be through new business financing or through acquisitions. Particularly in the booming Asia-Pacific economic region, both aspects coincide – and we are booking substantial growth here together with our customers.

APAC growth – maximising economic opportunities in booming markets

Regulatory issues – finding answers to evolving regulatory environments

"Financial Solutions business is pure innovation, the solutions are always individual."

(Claude Chèvre, member of the Executive Board)

Hannover Re's success story is one of growth, driven by innovation. From modest beginnings we have transformed a successful business approach into what it is today. Within just 50 years we have become the third-largest reinsurer in the world. Now we want to celebrate good ideas: not merely our own, but also those of our customers and partners. We grow together through the development of individual and innovative solutions, but also by adapting ideas to fit other markets, regions and risks.

Beyond risk sharing – we team up to create opportunities.

About us

Hannover Re, with gross premium of more than EUR 27 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".

For our investors

Jean-Jacques Henchoz,
Chairman of the
Executive Board

Dear Shareholders,
Ladies and Gentlemen,

When I wrote to you here last year the world was in the grips of an "exceptional situation". One year on and Covid-19 is still affecting our everyday lives. Faced with new variants and waves of the virus, it seems as if we are still far removed from the long-awaited return to normality. Yet considerable progress has certainly been made in fighting the virus. Multiple vaccines offering robust protection against the most severe disease are now available, and there are effective treatment methods and drug therapies. Nevertheless, we have still to put the pandemic behind us and the coronavirus continues to take a toll on human life.

As a reinsurer, our task is to make the financial impacts of such catastrophic events manageable. In the 2021 financial year Hannover Re consequently made significant payments to its customers in connection with the pandemic. Additional expenditures were incurred for losses from devastating natural disasters such as the flash floods in Germany caused during the summer by the low-pressure system "Bernd" or hurricane "Ida" in the United States.

Our sympathies go out to all those who have lost family or friends to the pandemic or natural catastrophes or who have been otherwise impacted by them. Hannover Re will continue to play its part in mitigating the financial impacts of such misfortunes. I would like to take this opportunity to expressly extend my thanks to our employees, whose dedication has been a crucial factor in our success and helps to ensure that we – as a company – are able to operate in such a seamless, prudent and reliable manner.

Hannover Re's commercial success is the cornerstone that puts us in a position to fulfil our commitments to our customers at all times. Hannover Re is well placed, in both operational and financial terms. In these challenging times we are thus able to support our customers through both our advice and our actions. We shall further step up our efforts in matters of risk protection, for example by contributing our risk management expertise to debates and ideas centred around preventing future losses and by helping to design innovative coverage concepts.

Despite all this, though, we cannot lose sight of the greatest challenge of our time: global warming. The disastrous flooding in Europe, record high temperatures and the series of damaging tornados in North America have once again shown us in 2021 what lies ahead if the change in the climate continues to progress. On a positive note, we have seen that the Climate Change Conference in Glasgow brought the fight against climate change back into sharper focus. The fact that the insurance industry is increasingly moving towards greater sustainability also gives me a sense of optimism. As one of the largest reinsurers in the world, we shall work with our customers to actively shape this change.

We are conscious of the responsibility for our planet. Now that Hannover Re has joined the UN-convened Net-Zero Insurance Alliance we have taken the next concrete step in the progressive expansion of our commitment to sustainability. We support the transition to a climate-friendly economy.

With a successful business policy and solid results we establish the foundation that gives us the greatest possible scope for action when it comes to sustainability. This is all the more important in times of uncertainty. In addition to the pandemic and natural disasters, the world economy is facing new challenges. The sharp rise in inflation appears to be bringing to an end the policy of quantitative easing pursued by central banks for more than a decade. It remains to be seen what the consequences of this will ultimately be.

At Hannover Re we shall therefore continue to do everything in our power to preserve our major strengths: profitable growth and successful cycle management, long-term and partnership-based customer relationships, a lean operating model and highly efficient capital management.

That we are staying the course is borne out by the good result for the financial year just ended – with Group net income up by 39 percent to EUR 1.23 billion and a solid capital adequacy ratio under Solvency II of 243 percent. We are further underscoring our financial stability and profitability by adjusting our dividend policy, which sees us aiming for at least a stable ordinary dividend going forward. Our dividend proposal for the financial year just ended therefore amounts to EUR 5.75. This consists of an unchanged ordinary dividend of EUR 4.50 and a special dividend of EUR 1.25. The message is clear: we offer our capital providers, our customers and our business partners reliability in an uncertain world.

In closing, I would like to express the hope that in the coming year I will only be reporting in passing on Covid-19 and that we will all be living with fewer restrictions. I would also like to thank you most sincerely for the trust that you, our valued shareholders as well as our clients and business partners, place in us each and every day. I do this on behalf of the entire Executive Board and all the employees of Hannover Re.

We shall continue to do our utmost to ensure that Hannover Re remains just the way it is: reliable, profitable and "somewhat different".

Yours sincerely,

Jean-Jacques Henchoz
Chairman of the Executive Board

Executive Board of Hannover Rück SE

As of 31 December 2021

Dr. Michael Pickel

Property & Casualty Reinsurance; Group Legal Services
Worldwide responsibility:
- Run-Off Solutions
- Agricultural Risks

Regional responsibility:
- Asia, Australia and Middle East
- Germany, Switzerland, Austria and Italy
- Latin America, Iberian Peninsula

Silke Sehm

Property & Casualty Reinsurance
Worldwide responsibility:
- Catastrophe XL (Cat XL)
- Structured Reinsurance and Insurance-Linked Securities
- Retrocessions

Regional responsibility:
- Continental Europe and Africa

Sven Althoff

Coordination of Property & Casualty Reinsurance Business Group
Worldwide responsibility:
- Aviation and Marine
- Credit, Surety and Political Risks
- Facultative Reinsurance
- Quotations

Regional responsibility:
- North America
- United Kingdom, Ireland and London Market

Jean-Jacques Henchoz

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

Clemens Jungsthöfel

Finance and Accounting
Information Technology
Investment and Collateral Management
Facility Management

Claude Chèvre

Life & Health Reinsurance
Worldwide responsibility:
- Longevity Solutions

Regional responsibility:
- Africa, Asia, Australia, Latin America, Middle East, Western and Southern Europe

Dr. Klaus Miller

Life & Health Reinsurance
Regional responsibility:
- North America, United Kingdom, Ireland, Northern, Eastern and Central Europe

The Hannover Re share

- Share price clearly outperforms the MDAX in 2021 with a gain of 32.1%
- Dividend proposal: Ordinary dividend of EUR 4.50 and special dividend of EUR 1.25

Dynamic equity markets

Essentially, 2021 proved to be a satisfactory year for global equity markets, even though initial hopes that the coronavirus pandemic would soon be contained as vaccines became available failed to materialise. The expectation of a comprehensive fiscal package from newly elected US President Joe Biden helped to drive markets higher as the year got underway. While the economic upswing continued throughout the year, global economic growth was nevertheless curtailed by moderating effects. A wide range of different factors made themselves felt here. A scarcity of raw materials and problems in the global supply chain, for example, led to a chip shortage that affected the automobile industry and many other sectors. Furthermore, the rapid rise in inflation from the summer months onwards stoked fears that central banks would move sooner than previously anticipated to end their ultra-accommodative monetary policy, one of the major drivers of equity markets in recent years. Fresh uncertainty was triggered in the second half of the year by the spread of the Delta and subsequently Omicron variants of the coronavirus, which brought rising case numbers and accompanying fears of renewed lockdowns. Ultimately, a wide range of related adverse factors prompted a new wave of uncertainty and an economic slowdown that was reflected on capital markets in indices tending to move sideways. On top of this, the softening economic trend – especially in China owing to tighter regulation and turmoil in the real estate sector – put markets under pressure.

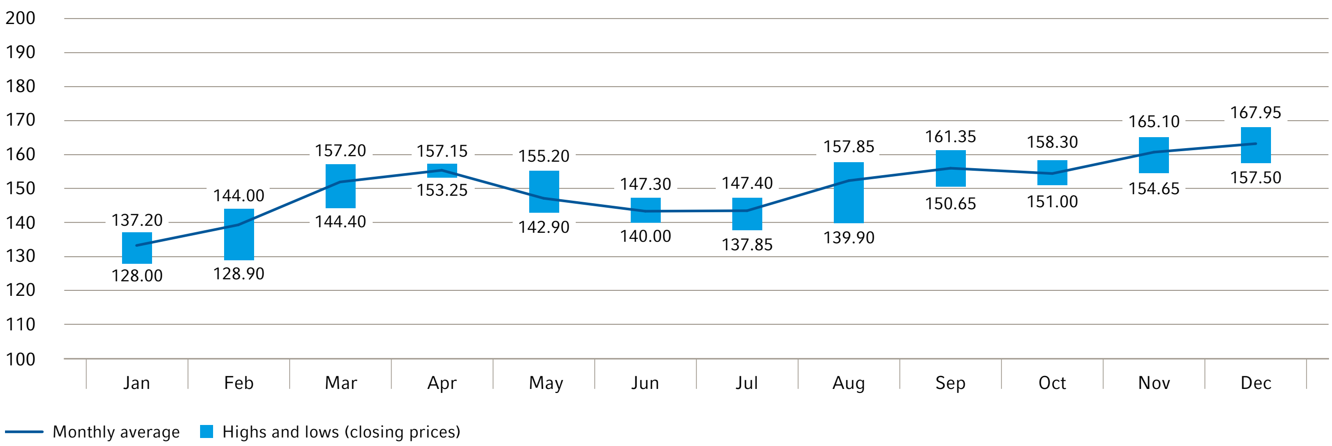
The German DAX index had entered the year at 13,719 points. Although the first half of the 2021 stock market year – in common with the world economy – was shaped by the effects of the global coronavirus pandemic, improvements in the real economy compared to the previous year were particularly conducive to a favourable performance overall on equity markets. On 30 March 2021 the DAX broke through 15,000 points for the first time to close the day at 15,009 – a gain of a good 9% altogether since the beginning of the year. Particularly key drivers of this trend were the hope of a global economic upswing as well as the containment of the pandemic.

In the months that followed the German equity market was unable to make further pricing advances. As part of the index reform undertaken by Deutsche Börse AG in September 2021, the DAX was expanded through the addition of ten MDAX-listed companies, as a consequence of which the MDAX was reduced to 50 members and hence lost a good 40% of its market capitalisation. Yet the combination of uncertainty around monetary policy and economic concerns cast a shadow over the new enlarged DAX 40. At the end of September 2021 the DAX was hovering slightly below the level of the previous quarter at 15,261 points. The parliamentary elections on 26 September 2021 had at least put an end to the considerable political uncertainty in Germany.

On 17 November 2021 the DAX charted a new all-time high of 16,251 points, before the spread of the Omicron variant of the coronavirus unsettled markets and prompted another sharp price decline on the DAX. Despite all the risks associated with the Covid-19 pandemic, supply chain shortages and rising inflation, the stock market year ended on a positive note for the DAX as well as for the US benchmark indices and MSCI World index.

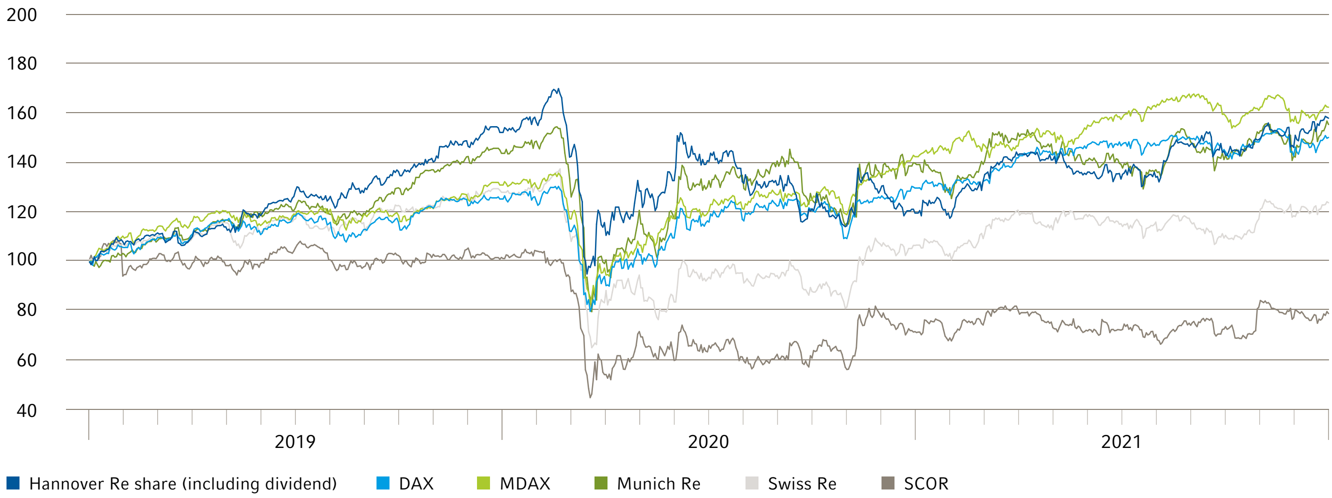
Highs and lows of the Hannover Re share — I 09

in EUR



Relative performance of the Hannover Re share (including reinvested dividends) I 10

in %



Performance of benchmark indices I 11

in EUR	Opening price 2021	Closing price 2021	Change
DAX	13,718.78	15,884.61	15.8%
MDAX	31,013.05	35,123.25	14.1%
S&P 500	3,764.61	4,766.18	26.9%
Dow Jones Industrial	30,627.47	36,338.30	18.7%
MSCI World	2,690.04	3,231.73	20.1%

The Hannover Re share performed well

The performance of the Hannover Re share was similarly less volatile in 2021 than in 2020, even though the Covid-19 pandemic continued to impact the (re)insurance industry.

The share stood at EUR 131.40 going into January and had already touched its low for the year of EUR 128.00 by the end of the month. Buoyed by a positive outlook coming out of the treaty renewals, the share price then rose appreciably before reaching its highest point of the year so far of EUR 157.20 on 30 March 2021. Worries about the repercussions of rising inflation on the (re)insurance industry and the forecast of an unusually active hurricane season then caused the price to slump abruptly to EUR 137.85 on 19 July 2021. The price subsequently showed indications of a rally that did not gather significant momentum until the end of July – further bolstered by the publication of highly satisfactory half-year results in August. In the second half of the year the Hannover Re share was adversely affected by the heavy loss expenditures anticipated from Storm Bernd and Hurricane Ida as well as by the spread of the Omicron variant and the associated uncertainty.

The capital market nevertheless responded robustly and the Hannover Re share also rose steadily from the end of November onwards, reaching its highest point at year-end. The Hannover Re share thus closed out the 2021 financial year with a gain of 28.3% at EUR 167.15 and outperformed its main peers Munich Re (+7.3%), Swiss Re (+8.3%) and Scor (+3.8%).

The performance including reinvested dividends amounted to +32.1%. From an annual perspective, the Hannover Re share thus fared significantly better than the domestic benchmark DAX (+15.8%) and MDAX (+14.1%) indices. In a three-year comparison, the Hannover Re share delivered a performance (including reinvested dividends) of 58.2%. It therefore performed on a similar level to the benchmark DAX and MDAX indices.

Based on the year-end closing price, Hannover Re's market capitalisation totalled EUR 20.2 billion at the end of the financial year. According to the MDAX rankings drawn up by Deutsche Börse AG, the company placed first at the end of December in terms of its free float market capitalisation. With a book value per share of EUR 98.55, the Hannover Re share showed a price-to-book ratio of 1.70 at the end of the year under review; it was thus below the average MDAX price-to-book ratio of 2.14 at year-end. Compared to the average price-to-book ratio for its peer group, the Hannover Re share continues to be significantly better valued.

By year-end 2021 22 analysts had handed down opinions on our company: twelve analysts recommended the Hannover Re share as "buy" or "overweight". Altogether six opinions were a "hold". "Underweight" or "sell" recommendations were issued by only four analysts.

Dividend proposal envisages a higher distribution

The Executive Board and the Supervisory Board intend to propose to the Annual General Meeting on 4 May 2022 that a dividend of EUR 5.75 per share should be distributed. Against the backdrop of a comfortable level of capitalisation and achievement of the profit guidance, the ordinary dividend of EUR 4.50 will be supplemented by a special dividend of EUR 1.25. This would put the ordinary dividend on the level of the previous year and is thus in line with the company's goal of pursuing a consistent dividend policy. Based on the year-end closing price, this produces a dividend yield of 3.4%.

Attendance at the Annual General Meeting again around 76%

The Annual General Meeting 2021 of Hannover Rück SE was held on 5 May 2021 for the second consecutive time without the physical presence of shareholders or their authorised proxies. In view of the ongoing Covid-19 pandemic, the company had again decided on a virtual format to reduce risks to the health of all participants. Altogether, around 76% of the share capital was represented, a similar figure to the previous year.

The shareholders approved the proposal made by the Executive Board and Supervisory Board to pay an ordinary dividend of EUR 4.50 per share for the 2020 financial year – an increase of EUR 0.50 – and to omit payment of a special dividend. In his address to the meeting Chief Executive Officer Jean-Jacques Henchoz looked back on a 2020 financial year shaped by the Covid-19 pandemic, in which Hannover Re generated Group net income of EUR 883.1 million despite the challenging circumstances. At the same time, Jean-Jacques Henchoz highlighted the growing importance of sustainability for the Group's strategy.

All items on the agenda were adopted by a majority of more than 85% of the represented voting rights. The results of the votes and the attendance were published on the company's website following the Annual General Meeting.

Dialogue with the capital market considered a high priority

Even with the ongoing Covid-19 pandemic throughout the 2021 financial year, an active and open dialogue with the capital market retained the highest priority. With travel restrictions still in place worldwide, investor conferences and roadshows have been held almost exclusively in a virtual format as audio or video broadcasts. The Executive Board and representatives of the Investor Relations department were thereby once again able to maintain the dialogue with institutional investors, analysts and private investors and share extensive insights into Hannover Re's strategy and business operations.

In regional terms, the focus of our efforts remained on the financial centres of Europe and North America. While the number of participations in capital market conferences rose to 18 (previous year: 13), the roadshow days were virtually unchanged at 13 (12).

Direct contact with the Investor Relations department continued to play a major role in communication activities. Questions about the impacts of the Covid-19 pandemic on Hannover Re were again a central theme in these discussions in 2021. Rising inflation and concerns about the influence of climate change on losses from natural catastrophes also took on added significance as the year progressed.

Growth opportunities in property & casualty reinsurance and life & health reinsurance as well as the current development of business in line with the Group strategy were major themes of Hannover Re's 24th Investors' Day, which was broadcast on 14 October 2021 as a webcast from Hannover. A modest adjustment to the dividend policy was also announced and the continuity of the dividend payment was emphasised. Going forward, it is envisaged that the regular distribution of an ordinary dividend should at least remain stable. A payout ratio will no longer be set as a target. Payment of a special dividend will remain a capital management tool to be considered if the capitalisation exceeds the capital required for future growth and the earnings guidance is achieved. In general terms, a growing tendency to align investments with sustainability criteria can be observed among investors, as a consequence of which questions relating to Hannover Re's sustainability efforts as well as ESG (environmental, social and governance) issues also continued to be asked more widely.

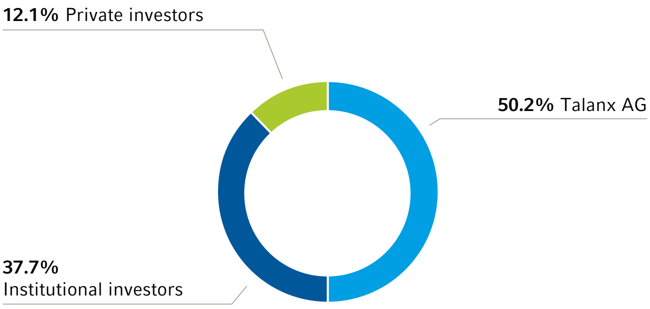
Sustainability ratings improved

Along with traditional financial considerations, non-financial 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 extensively on sustainability and ESG topics. The disclosures took the form of a combined non-financial information statement as an integral component of the Group management report. In this connection we also report for the first time how and to what extent our activities fall within the frame of reference of the EU taxonomy for sustainable economic activities. In addition, we publish annual sustainability reports compiled in accordance with the internationally recognised reporting standards of the Global Reporting Initiative (GRI). In 2021, as in prior years, we cultivated a regular dialogue with a number of different stakeholders on sustainability issues. Particularly among investors and analysts, a marked increase in discussions of specific ESG topics can be observed. In addition, Hannover Re participates in the feedback processes of various ESG rating agencies. The company has ratings from, among others, CDP, ISS ESG, MSCI, Sustainalytics and VigeoEiris and is listed in the FTSE4Good, the Global Challenges Index and the sustainability index of Deutsche Börse AG (DAX50 ESG). Hannover Re also became a signatory to the UN Principles for Sustainable Insurance (UN PSI) and joined the Net-Zero Insurance Alliance (NZIA) in the year under review.

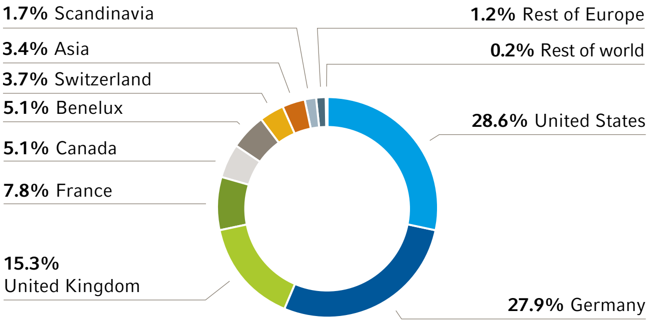
Number of shareholders continues to grow

Our share register showed some 70,560 shareholders at the end of the year, another increase in the number of shareholders year-on-year (64,200). The largest shareholders at year-end were Talanx AG with 50.2% as well as BlackRock, Inc. with a reported 3.0%, Deutsche Asset Management Investment GmbH with a reported 3.0% and FMR LLC with a reported 3.0% of the voting rights. Within the free float, institutional investors accounted for 37.7% (38.1%) of the total shares outstanding, while private investors held 12.1% (11.7%). Our shareholders include investors who pay particularly close attention to sustainability criteria.

Shareholder structure as at 31 December 2021 I 12



Geographical breakdown of the shares held by institutional investors I 13



Basic information

I 14

Securities identification number	840 221
International Securities Identification Number (ISIN)	DE 000 840 221 5
Ticker symbols	HNR1 (Bloomberg), HNRGn (Reuters), HVRRY (ADR)
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
Number of issued shares (as at 31 December 2021)	120,597,134
Common shares	EUR 120,597,134.00
Share class	No-par-value registered shares

Key figures

I 15

in EUR	2021	2020	2019	2018	2017
Number of shares in million	120.6	120.6	120.6	120.6	120.6
Annual low [1]	128.00	107.50	116.40	104.70	95.95
Annual high [1]	167.95	192.40	175.20	125.30	115.65
Year-opening price [1]	130.30	172.30	117.70	104.90	102.80
Year-ending price [1]	167.15	130.30	172.30	117.70	104.90
Market capitalisation at year-end in EUR million	20,157.8	15,713.8	20,778.9	14,194.3	12,650.6
Equity attributable to shareholders of Hannover Rück SE in EUR million	11,885.0	10,995.0	10,528.0	8,776.8	8,528.5
Book value per share	98.55	91.17	87.30	72.78	70.72
Earnings per share (basic and diluted)	10.21	7.32	10.65	8.79	7.95
Dividend per share	4.50 + 1.25 [2, 3]	4.50 [3]	4.00 + 1.50 [3]	3.75 + 1.50 [3]	3.50 + 1.50 [3]
Cash flow per share	40.97	26.79	20.81	18.45	14.05
Return on equity (after tax) [4]	10.8%	8.2%	13.3%	12.2%	10.9%
Dividend yield [5]	3.1%	3.5%	3.2%	4.5%	4.8%
Price-to-book (P/B) ratio [6]	1.7	1.4	2.0	1.6	1.5
Price/earnings (P/E) ratio [7]	16.9	17.8	16.2	13.4	13.2
Price-to-cash flow (P/CF) ratio [8]	4.1	4.9	8.3	6.4	7.5

1 Xetra daily closing prices from Bloomberg
2 Proposed dividend
3 Dividend of EUR 4.50 plus special dividend of EUR 1.25 for 2021, dividend of EUR 4.50 for 2020, 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 and dividend of EUR 3.50 plus special dividend of EUR 1.50 for 2017
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

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 24 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: "Striving for sustainable outperformance". Our entire business operations are geared to our goal of being the preferred business partner for our clients. It is for this reason that our clients and their concerns form the focus of our activities.

We also 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.

Furthermore, we 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 across all lines and regions of property & casualty and life & health reinsurance. In conjunction with efficient 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 "Reinsurer for Germany", 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 for traditional covers 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 derived 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. Given that reinsurance business is subject to cyclical fluctuations, our primary focus is on medium- and long-term attainment of the strategic targets across the cycle.

Target attainment M 01

Business group	Key data	Targets for 2021	Target attainment			
			2021	2020[1]	2019	Ø 2019–2021[2]
Group	Return on equity[3]	900 bps above risk-free	10.8%	8.2%	13.3%	10.7%
	Solvency ratio[4, 5]	≥ 200%	243.1%	235.2%	250.7%	242.8%
Property & Casualty reinsurance	Gross premium growth	≥ 5%[6]	16.3%	15.8%	20.4%	17.5%
	EBIT growth	≥ 5%[7]	83.7%	-36.0%	-2.8%	4.6%
	Combined ratio	≤ 96%	97.7%	101.6%	98.2%	99.1%
	xRoCA[4, 8]	≥ 2%	11.9%	0.9%	0.1%	4.4%
Life & Health reinsurance	Gross premium growth	≥ 3%[6]	5.5%	4.7%	6.7%	5.6%
	EBIT growth	≥ 5%[7]	-43.2%	-31.0%	106.6%	-6.8%
	Value of New Business (VNB)[4, 9]	≥ EUR 250 million	EUR 326 million	EUR 778 million	EUR 663 million	EUR 589 million
	xRoCA[4, 8]	≥ 2%	-11.3%	17.6%	11.8%	6.5%

1 Restated pursuant to IAS 8
2 Annual average growth / weighted averages
3 After tax; risk-free: five-year average return of ten-year German government bonds
4 This information has not been audited by the independent auditor
5 According to our internal capital model and Solvency II requirements
6 Average annual growth at constant exchange rates
7 Average annual growth
8 Excess return (one-year economic profit in excess of the cost of capital) on allocated economic capital
9 Based on Solvency II principles; pre-tax reporting

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: adjusted economic profit – (capital allocated × weighted cost of capital) = 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[1] M 02

	2021		2020		2019	
in EUR million	IVC	xRoCA	IVC	xRoCA	IVC	xRoCA
Property and casualty reinsurance	717.0	11.9%	53.9	0.9%	5.2	0.1%
Life and health reinsurance	(384.0)	-11.3%	653.5	17.6%	421.8	11.8%
Investments[2]	663.5	11.0%	245.4	4.1%	483.4	8.4%
Group	**996.4**	**6.5%**	**952.6**	**6.0%**	**910.2**	**6.2%**

[1] This information has not been audited by the independent auditor

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

The allocated capital consists of the economic equity pursuant to Solvency II including non-controlling interests 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 625 basis points above the risk-free interest rate, meaning that economic 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 (unaudited by the independent auditor) 4.6% in 2021 (previous year: 4.1%).

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.

The close interlinking of our internal capital model with the capital allocation and value-based management helps us to 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.

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.

Research and development

In the context of our innovation activities we continuously develop products and solutions that deliver value added both for Hannover Re and for our clients. Our innovation and digitalisation initiatives are enshrined in our Group strategy.

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.

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. In recent years, for example, we have launched and held two ideas competitions in which we opened up new business opportunities on both the primary and reinsurance side. In addition, we work for and with our customers to develop fresh business approaches and sales channels and we make our proprietary IT applications available for risk assessment in the underwriting process. 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 the national financial regulator (Federal Financial Supervisory Authority = BaFin).

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. This has significantly supported growth over the past five years, especially in structured reinsurance. 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.

In organisational terms, the exploration of market trends and development of innovative products at Hannover Re are tasks assigned to the individual market units. In addition, business opportunities and innovations that cut across markets and segments are coordinated by the "Group Performance & Strategy Development" team and pursued by means of interdisciplinary projects in which various market and service units participate.

Report on economic position

Macroeconomic climate and industry-specific environment

- Global economy recovers after pandemic-induced slump in the previous year
- Slowdown in most regions in the second half of the year
- Significant stabilisation in movements on capital markets
- Market environment for insurers shaped by low interest rates, inflation and catastrophe losses

Macroeconomic climate

The **world economy** bounced back in 2021 from the previous year's pandemic-induced slump. The Kiel Institute for the World Economy (IfW) estimates that global output surged by 5.7% after a contraction of 3.1% in the previous year. The economy showed particularly marked improvement in the early months of the year despite repeated pandemic-driven setbacks. The effects of the pandemic remained largely restricted to the service sector. Industrial output and global trade expanded vigorously up until the spring. In the second half of the year the pace of the economic turnaround slowed in most regions.

Despite the economic recovery, the Covid-19 pandemic continued to have a significant effect on economic activity. Countries with higher vaccination rates were also increasingly able to tolerate higher case numbers without having to implement containment measures. In the summer the rising numbers of infections led to economic reverses, especially in Asia. The repercussions were milder in the United States and Europe. By year-end the economy faced new risks with the emergence of the new virus variant Omicron and rising inflationary pressures. Supply chain shortages continued.

In the advanced economies the upswing lost appreciable momentum in the second half of the year. The same was true of emerging economies, although the picture here was a more nuanced one. In Latin America, for example, the economy picked up markedly in the Andean states of Chile, Peru and Colombia, whereas output in the large economies of Brazil, Mexico and Argentina declined. Growth here was in part depressed by drought-related crop failures and rising prices.

The geopolitical landscape remained tense in 2021. A hardening of relations between the United States and China loomed large under the new Biden administration. In Eastern Europe the conflict between NATO and Russia intensified.

United States

The US economy rallied after the previous year's downturn. Gross domestic product increased by 5.6% (previous year: -3.4%). Private consumption surged by a vigorous 8% (-3.8%). Exports grew by 4.0% (-13.9%), while imports soared by 13.2% (-8.9%). Investments in equipment also shot up by 13.3% (-8.3%). The jobless rate retreated to 5.4% (8.1%). Fiscal policy remained expansionary, although Congress tended to scale back its stimulus spending compared with the programmes of the two previous years. Higher energy prices saw inflation rise to 4.7% (1.2%), a level in excess of the target set by the US Federal Reserve.

Europe

In the Eurozone, the recovery from the pandemic-induced decline in output continued virtually undiminished. After modest contractions over the winter months, overall economic output picked up sharply in the second and third quarters. The first faint sights of a fresh slowdown could be discerned towards year-end, however, as containment measures were put in place again to curb the pandemic. Looked at over the year as a whole, economic output rose by 5.0% (-6.5%). The national picture varied widely in some instances. Ireland was a major growth engine with a gain of 14.9%. The growth rates in France, Italy and Spain stood at 6.6%, 6.2% and 4.2% respectively. Consumption in the Eurozone was up by 3.3% (-8.0%). Consumer prices climbed by 2.5% (0.3%) against the backdrop of soaring energy costs. Unemployment fell slightly to 7.6% (7.8%).

Gross domestic product in the United Kingdom expanded by 6.9% (-9.8%). This growth was heavily propped up by the government, which boosted its spending by 16%. Along with the effects of Covid-19, Brexit impacts were a considerable drag on the economy: supply chain bottlenecks, labour shortages and the logistical reorientation clearly emerged as restrictive factors. Foreign trade was soft: exports fell by 2.2%, while imports were up by a modest 1.6%.

Germany

Gross domestic product grew by 2.6% year-on-year in Germany (-4.6%). Softness over the winter months was followed by a robust upswing in the summer. Restrictions began to make themselves felt again towards year-end. As the year progressed, private consumer spending bounced back sharply to almost pre-crisis levels. Looked at over the year as whole, private consumption nudged modestly higher by 0.3% (-5.9%). Corporate spending rose by 2.1% (-5.5%), with supply chain bottlenecks and materials shortages – which became even more acute in the summer – putting the brakes on any further increase. Construction investments were accompanied by record price increases, the pace of which slowed in 2021 to 1.6% (2.5%).

Boosted by exports of services, which include the resurgence in the travel sector, exports rose by 7.5% in 2021 (-9.3%). Imports were up by 7.8% (-8.6%). Import prices, in particular, increased appreciably on account of rising costs for raw materials and intermediate goods.

The jobless rate fell by 0.2 percentage points year-on-year to 5.7%. The increase in consumer prices was 3.1% (0.5%) averaged over the year as a whole, driven primarily by higher commodity and wholesale prices.

Asia

Emerging markets in Asia maintained the vigorous pace of growth seen in the second half of 2020. From an annual perspective, gross domestic product grew by 6.9% (-1.1%).

In keeping with its strict zero Covid policy, China took far-reaching containment measures in some instances which had appreciable impacts at times on international supply chains. Problems affecting the energy supply and the real estate crisis were two other sensitive factors hampering growth in the country. In the third quarter the pace of economic growth in China almost came to a standstill at just 0.2%. Viewed over the year as a whole, the Chinese economy achieved a gain of 7.8% (2.3%).

After suffering a renewed pandemic-induced downturn in the spring, the Indian economy rallied over the remainder of the year and posted an increase in economic output of 7.6% (-7.0%) for 2021.

Gross domestic product in Japan rose by 1.5% (-4.7%). Exports were a key growth driver with a gain of 11.2% (-11.8%). Compared to many other countries, however, the recovery in the overall economy was softer. The Olympic Games held in the summer failed to give the economy any appreciable boost. Given the low vaccination rate – it was still around 40% in August – case numbers began to rise again in late summer, prompting the reimposition of restrictions and causing consumers to rein in their spending.

Capital markets

After the turmoil of the previous year the investment climate – which in recent years had repeatedly proven challenging – was considerably more stable in 2021, while also showing the effects of the coronavirus pandemic and other geopolitical and economic challenges. Global supply chains, which had already been under strain from the pandemic, were disrupted further by the incident involving the "Ever Given" in the Suez Canal in March. Markets nevertheless remained largely stable, thanks to the supportive policy of central banks, fiscal measures and a slow easing of the backlog in consumption. The generally positive trend was sustained even after brief setbacks due to the emergence of new coronavirus variants and despite upheavals on Chinese real estate markets.

Interest rates with minimal risk on the important fixed-income markets for our company recorded in some cases very sharp increases, especially for USD- and sterling-denominated bonds. This was also true, albeit to a lesser extent, of the euro area. All in all, we benefited from the higher interest rate level in our reinvesting activities. Credit spreads on corporate bonds remained on a low pre-crisis level throughout virtually the entire period under review after the very marked increases and volatility seen in the previous year.

On equity markets the picture was largely favourable. Generally speaking, broader-based demand re-emerged after the temporary emphasis on tech stocks. The markets in established economic regions closed the year with robust gains, while those in developing economic areas were affected so significantly by the upheavals on the Chinese market that losses were posted here overall from an annual perspective.

Alternative investments held up exceptionally well in the course of 2021. Most notably, valuations of investments in private equity and in the real estate sector trended higher, reflecting not only what were certainly more cautious valuations at the end of the previous year but also brisk risk-taking during the year.

The massive monetary and fiscal programmes undertaken by individual governments, which especially in some European countries and in Japan took on considerable dimensions relative to the respective gross domestic product, made themselves felt as in the previous year. Given that such supportive actions make it easier for bubbles to form, it will be important to keep a close eye on the timing and steps taken as these supports are withdrawn. We expect to see elevated volatility again on capital markets in this context.

The development of the global economy was also reflected in rising raw materials and transport costs. These, in turn, have been passed on in the form of a general rise in prices. It is currently too soon to draw any definitive conclusions as to whether we will have to live with higher inflation as a structural and more protracted phenomenon. As growth normalises and the kinks in the supply chain are ironed out again, it is conceivable that inflation may fade and secondary effects such as wage pressures can be curbed. Even after some potential easing, we nevertheless anticipate a slightly higher level of inflation overall compared to the past decade.

The economy continued to enjoy strong support from central banks in our main currency areas, which largely pressed ahead with their expansionary interest rate policy adopted in the prior year. Both the US Federal Reserve and the European Central Bank left their key rates on the previous year's low level. The Bank of England, on the other hand, was the first major central bank to modestly increase its key lending rate in December – primarily in response to inflationary tendencies. The ECB – in common with the Fed and the Bank of England – continued its extensive asset purchase programme for bonds issued by governments and corporate entities in order to support them in this time of crisis. Overall, then, the policies pursued by central banks in our main currency areas were essentially consistent, supplemented by significant fiscal interventions. We view these worldwide interventions by governments and central banks with their enormous money supply as a not inconsiderable challenge because in some ways they divorce the financial world from the natural, reciprocal control mechanisms of the financial markets and it is unclear to what extent the current or future valuation levels are supported by fundamentals.

The euro largely gave back the previous year's gains against the US dollar over the course of the year. It retreated from USD 1.23 to USD 1.13. The euro similarly lost ground against the British pound, falling from GBP 0.90 to GBP 0.84, and also softened against the Australian dollar (from AUD 1.60 to AUD 1.56) and the Canadian dollar (from CAD 1.57 to CAD 1.45).

Industry-specific environment

For the international (re)insurance industry, 2021 turned out to be another challenging year. The Covid-19 pandemic featured particularly prominently for the second year in succession. Once again, business operations were extensively conducted through home-based working as a means to contain the pandemic. Only limited business travel was possible. In addition, low interest rates, sharply higher inflation in some cases and significant losses from natural disasters – such as the severe floods in Europe and Hurricane Ida in the United States – took a toll on the results posted by insurers and reinsurers. While the investment climate remained challenging, it was nevertheless considerably more stable compared to the turmoil of 2020.

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. With effect from 1 January 2023 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 basis for the recognition of insurance contracts. Application of the standard is mandatory for the consolidated financial statements of capital-market-oriented insurance companies. At the same time, the application of the financial instruments standard **IFRS 9** was deferred, with the result that all affected insurers will be able to apply IFRS 9 and IFRS 17 simultaneously from 2023 onwards.

In Europe the **Solvency II** prudential regime is currently undergoing a multi-step review process. In September 2021 the European Commission submitted extensive proposals for an overhaul of EU insurance rules, which will now be considered by the European Parliament and the European Council. The main aim of the review is to enable insurance undertakings to step up their long-term investment in the European Union's recovery from the Covid-19 pandemic. The European Commission would also like to make the (re)insurance industry more resilient so that it is even better equipped to weather future crises and hence better protect policyholders. As a further step, it is envisaged that simplified and more proportionate rules will be adopted for certain smaller insurance companies. At the same time, the commitment of insurers to greater sustainability will be strengthened. Insurers are to be incentivised to scale up long-term capital investment in the economy and hence contribute to the Green Deal and the Capital Markets Union in their dual role as protector and investor.

All in all, the issue of **sustainability** has increasingly moved front and centre for political institutions and corporations in recent years. The topic attracted greater attention in Europe with the unveiling of the Green Deal by the European Commission in December 2019. The primary objective of the Green Deal is to establish Europe as the world's first climate-neutral continent by 2050. This will involve a complete transformation of the energy sector, industry, transportation and agriculture in a shift away from fossil-based energy towards sustainability and climate protection. Against this backdrop, there were a number of regulatory developments relating to sustainability in the year under review. Many of them tie in with the European Commission's Green Deal, including for example the aforementioned revision of the Solvency II regime. The IFRS Foundation also announced the creation of its International Sustainability Standards Board (ISSB) in November at the UN Climate Change Conference in Glasgow. It is intended that this will develop international disclosure standards for reporting on sustainability matters.

The issue of **digitalisation** was once again of special significance to the (re)insurance industry in the year under review. The pandemic has sharply accelerated the pace of the digital transformation, particularly due to the deep inroads made into public life around the world as part of efforts to slow the spread of the virus and the associated shift towards more widespread working from home. This will have an enduring effect on the industry, including through the growing adoption of hybrid forms of work and communication, in the design of digital insurance solutions and in increasing cross-sector partnerships. Technological progress is now so advanced that computer systems are able to analyse enormous quantities of data and provide ever more useful support in many areas of work and life. At the same time, the risks posed by cybercrime must not be underestimated.

Business development

- Group gross premium grows by 12.1%
- Property and casualty reinsurance posts double-digit growth on the back of improved prices and conditions; large loss expenditure higher than expected
- Life and health reinsurance delivers good underlying result, albeit with high pandemic-related losses of EUR 582.0 million
- Return on investment significantly higher than target at 3.2%
- Group net income of EUR 1.23 billion at the upper end of expectations
- Shareholders' equity rises to EUR 11.9 billion; return on equity reaches 10.8%

As the third-largest reinsurer in the world, Hannover Re has a far-reaching international network and extensive underwriting expertise. On this basis, we are able to offer our customers traditional, tailor-made and innovative reinsurance solutions and we work with them to open up new business opportunities.

For a number of years now the global reinsurance markets have been fiercely competitive and overshadowed by rising costs from natural catastrophes. Above and beyond this, the low interest rate environment, higher inflation and the Covid-19 pandemic present further challenges for the industry.

In the 2021 financial year we had to deal with, among other things, pandemic-related expenditures in life and health reinsurance and catastrophe losses in property and casualty reinsurance. Once again, we demonstrated our robust risk-carrying capacity and profitability. All in all, the business development was pleasing.

Gross premium in the **Property & Casualty reinsurance** business group grew by 16.3% at constant exchange rates, comfortably beating our guidance of around 5%. The main factors here were the favourable market climate and improved prices. On the other hand, no pandemic-related losses were recorded for our account overall beyond the reserves set aside in 2020. Nevertheless, the burden of large losses surpassed our budgeted expectation of EUR 1.1 billion. This was due primarily to substantial losses from natural catastrophes in the third quarter. The combined ratio in property and casualty reinsurance improved in the financial year just ended to 97.7% (previous year: 101.6%). Due to the considerable major loss expenditure and on account of the protracted low interest rate environment, the sustained improvement in prices and conditions for reinsurance protection in property and casualty business continued, although at the same time retrocession covers saw a moderate price increase as the year progressed. Thanks to its comparatively low administrative expenses and cost of capital as well as its above-average financial strength, Hannover Re has been and remains able to successfully assert itself in the market. Based on our positioning as one of the largest and most robustly capitalised reinsurers in the world, we enjoy sustained very good access to profitable business.

In our **Life & Health reinsurance** business group we were able to grow the gross premiums considerably more strongly than our anticipated guidance of at least 3% with an increase of 5.5% adjusted for exchange-rate effects. The result was, however, impacted by the effects of the pandemic in the financial year just ended. Altogether, the expenditures incurred here amounted to EUR 582.0 million. The bulk of them stemmed from illnesses and deaths in the United States, our largest single market, and South Africa. The pandemic-related losses were opposed by positive one-time income of EUR 131.7 from a restructuring measure in the US mortality book as well as a positive special effect of EUR 121.9 million in business with longevity covers. The pandemic-related strains for the entire insurance industry further boosted what had already been generally strong demand for reinsurance covers – including for example in financial solutions business, where we offer our customers individual reinsurance solutions designed to improve their solvency, liquidity and capital position.

The Group gross premium booked by Hannover Re increased by 12.1% as at 31 December 2021 to EUR 27.8 billion (EUR 24.8 billion). At constant exchange rates growth would have reached 12.8%. We thus beat our guidance, which we had revised upwards to growth in the upper single-digit percentages. The level of retained premium was virtually unchanged at 89.5% (90.1%). Net premium earned rose by 13.0% to EUR 24.1 billion (EUR 21.4 billion). The increase would have been 13.7% at unchanged exchange rates.

The **investment income** generated by Hannover Re performed significantly better than expected – with income from assets under own management rising by 14.4% to EUR 1,674.8 million (EUR 1,463.7 million) – and thus played an important part in the overall result for the year under review. Earnings benefited from, among other things, strong income from our portfolio of inflation-linked bonds and from alternative investments such as private equity funds. The return on investment stood at 3.2% and thus very clearly beat our target of more than 2.4%, which we had revised upwards.

Other income contracted by 38.6% to EUR 271.2 million (EUR 441.4 million). This was due to a decline in the balance of exchange gains and losses to EUR -77.5 million (EUR 149.1 million). This effect was, however, partially opposed by stronger income of EUR 386.7 million (EUR 342.4 million) from treaties recognised according to the deposit accounting method.

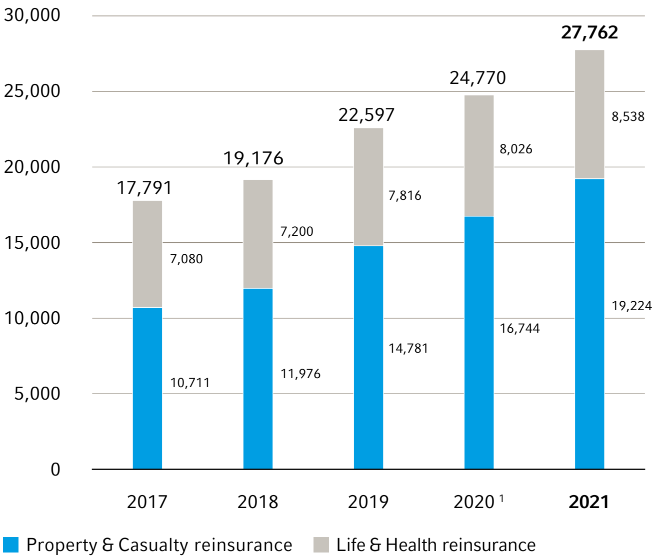
The operating profit (EBIT) improved sharply by 42.9% to EUR 1,734.8 million (EUR 1,214.1 million). Group net income was up by 39.4% at EUR 1,231.3 million (EUR 883.1 million). We thus achieved our Group earnings guidance of EUR 1.15 billion to EUR 1.25 billion. Earnings per share stood at EUR 10.21 (EUR 7.32).

Hannover Re's equity position – measured in terms of the capital adequacy ratio which is still comfortably in excess of threshold levels – remains very robust. The equity attributable to shareholders of Hannover Re rose to EUR 11.9 billion (EUR 11.0 billion) as at 31 December 2021. The return on equity increased to 10.8% (8.2%). The book value per share reached EUR 98.55 (EUR 91.17). We were able to achieve all – and in some cases even substantially outperform – the forecasts shown in the table "Business development and guidance in the year under review", some of which we had revised higher in the course of the financial year.

The total policyholders' surplus, consisting of shareholders' equity, non-controlling interests and hybrid capital, increased to EUR 15.7 billion (EUR 14.1 billion) as at 31 December 2021, in part due to the issuance of a subordinated bond.

A 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 et seq.

Gross premium by business group **M 03**
in EUR million



1 Restated pursuant to IAS 8

Business development and guidance in the year under review **M 04**

	Guidance 2021	Target attainment 2021
Gross premium growth (Group) [1]	gross premium growth of around 5% or in the upper single-digit percentage range [4]	+12.8%
Gross premium growth for Property & Casualty reinsurance [1]	growth of around 5%	+16.3%
Gross premium growth for Life & Health reinsurance [1]	growth of at least 3% [2]	+5.5%
Return on investment	around 2.4% or more than 2.4% [5]	3,2%
Group net income	between EUR 1.15 and 1.25 million [3]	EUR 1.23 billion

1 At constant exchange rates
2 Organic growth only
3 Assuming stable capital markets and / or major loss expenditure in 2021 that does not exceed EUR 1.1 billion.
4 The expected gross premium growth was revised with the publication of the Q1 statement.
5 The expected return on investment was revised with the publication of the Q3 statement.

Overall assessment of the business position

The development of Hannover Re's business in 2021 was affected by considerable losses from natural catastrophes and the pandemic. Covid-19 continues to have substantial adverse impacts on life in society and on the world economy. Coronavirus infections are still claiming lives. We make the agreed payments to our clients for deaths and illnesses. As a result, we faced further significant strains from the pandemic in life and health reinsurance in the financial year just ended, especially for deaths in the United States and South Africa.

In our Property & Casualty reinsurance business group, on the other hand, we did not record any pandemic-related losses in the 2021 financial year over and above the reserves established in 2020. However, expenditures incurred here from natural catastrophes and other large losses exceeded our expectations for the fifth year in a row. At the same time, interest rates remained on a low level, while inflation rose – appreciably in some cases. In response to these challenges, the sustained improvement in prices and conditions seen in many lines on both the insurance and reinsurance side continued.

The investment income generated by Hannover Re improved sharply on the previous year. This was primarily due to earnings booked from inflation-linked bonds and from alternative investments, such as in the private equity segment.

Despite the protracted global crisis and the substantial payments made to our customers, we were able to deliver a Group profit in line with our expectations.

The shareholders' equity of Hannover Re continued to grow and constitutes the foundation for our superb positioning as one of the largest and most financially robust reinsurers in the world.

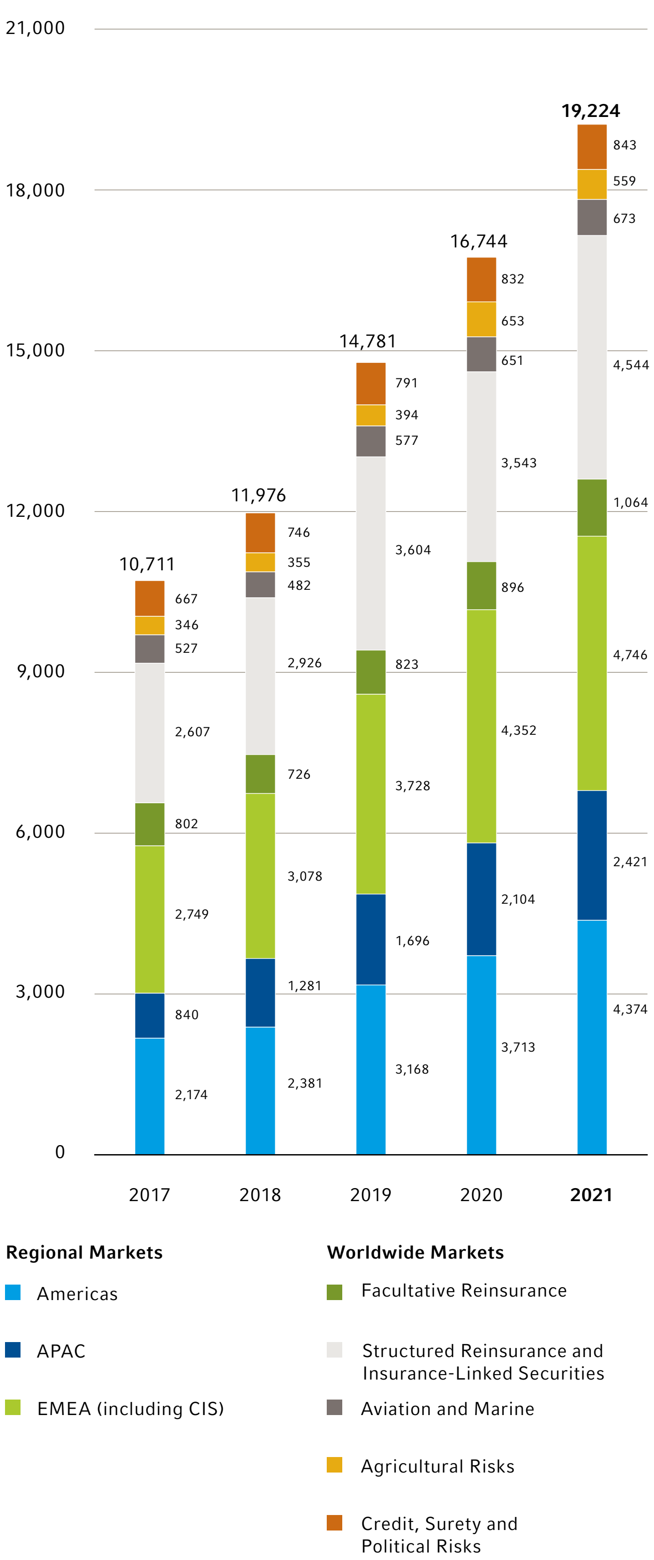
At the time of preparing the management report, it remains the case that both the business position of the Group and its financial strength can be assessed as very good. Within the framework of our Group strategy we determine our necessary equity resources according to the requirements of our internal capital model, solvency regulations, the expectations of rating agencies for our target rating and the expectations of our clients and shareholders.

Results of operations

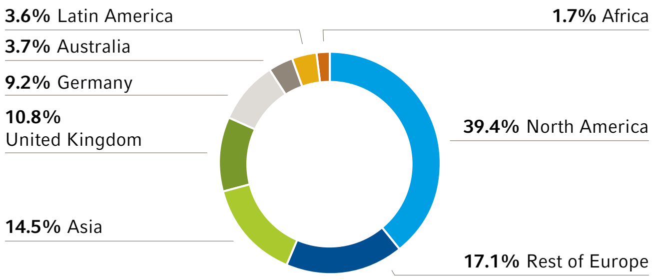
In the following sections we discuss the development of the financial year in our two strategic business groups, namely Property & Casualty reinsurance and Life & Health reinsurance, as well as the performance of our investments and the financial position and assets of our Group.

Property & Casualty reinsurance at a glance

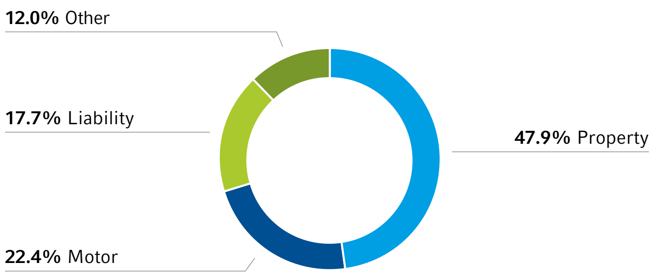
Gross premium in Property & Casualty reinsurance M 05
in EUR million



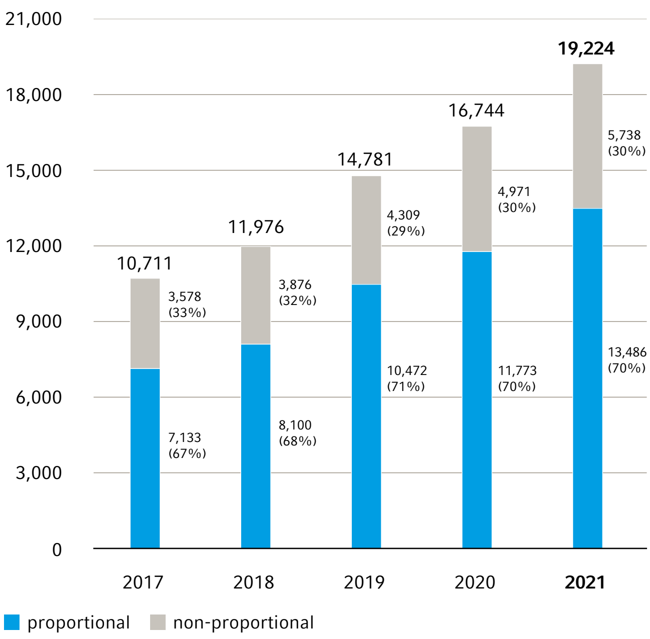
Geographical breakdown of gross premium in 2021 M 06



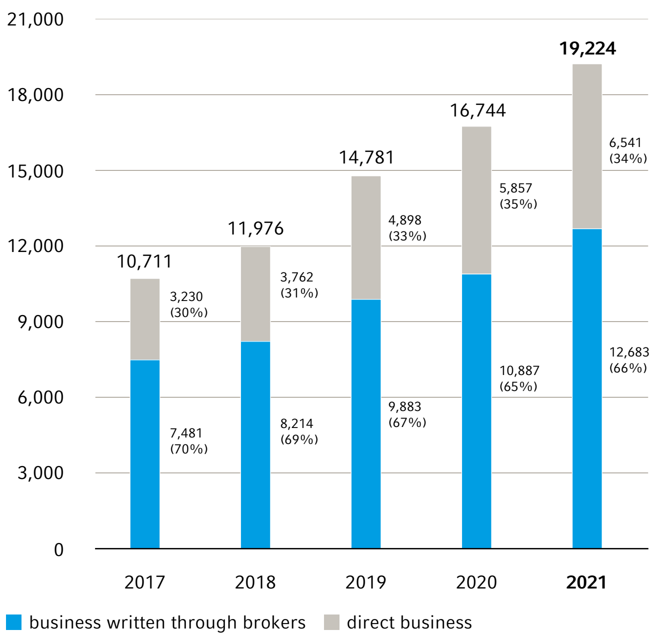
Gross premium by lines of business in 2021 M 07



Breakdown of proportional and non-proportional treaties by volume **M 08**
in % and in EUR million



Breakdown into business written through brokers and direct business **M 09**
in % and in EUR million



Property & Casualty reinsurance

- Gross premium grows by 14.8%
- Continued improvement in prices and conditions
- Large loss expenditure higher than budgeted after catastrophic flooding in Europe and hurricane Ida
- Stable net reserves overall for the Covid-19 pandemic
- Combined ratio improves to 97.7%
- Operating profit up by 83.7%

Accounting for 69% of the Group's gross premium, Property & Casualty reinsurance is Hannover Re's largest business group.

Global markets for property and casualty reinsurance faced a range of challenges in the financial year just ended. The pandemic continued to impact life in society and the economic landscape. Overall, however, in the 2021 financial year we did not incur any further pandemic-related strains for our account in our Property & Casualty reinsurance business group beyond the losses reported in 2020. On the other hand, large loss expenditure clearly showed the effects of natural disasters, most notably flood damage in Europe and storm damage in the United States. This was especially true of the third quarter. While the low interest rate environment persisted, inflation rates also rose – sharply in some areas – over the course of the year.

The profitability of the underwriting results therefore remained our highest priority. The improvement in prices and conditions in many regions and lines on both the primary and reinsurance side continued. Further adjustments were needed to secure the industry's risk-carrying ability for the long term. In addition, insurers are increasingly looking for high-quality reinsurance protection and tailored solutions designed to deliver solvency relief.

The various rounds of treaty renewals in property and casualty reinsurance during the year consequently passed off favourably for Hannover Re.

In the main property and casualty reinsurance renewals as at 1 January 2021 we saw a continuation of the previous year's pricing momentum and further pleasing growth in our renewed business at significantly improved prices and conditions. On 1 January 2021 67% of our portfolio in traditional property and casualty reinsurance (excluding facultative business, ILS business and structured reinsurance) was up for renewal. We boosted the premium volume here by 8.5%. The average price increase was 5.5%.

In the 1 April treaty renewals we traditionally renegotiate our business in Japan and – albeit on a smaller scale – in Australia, New Zealand, the other Asian markets and North America. We were able to grow the premium volume here by 7.4% and increase prices by 5.0%.

This positive trend continued in the 1 June and 1 July rounds of renewals, when parts of the North American portfolio, natural catastrophe risks and some risks in credit and surety reinsurance were renewed. The main renewal season in Australia and New Zealand also took place at this time. We boosted the premium volume by 14.7%, while the average price increase came to 3.2%. In general terms, it was particularly loss-affected programmes or regions that saw sometimes very appreciable premium increases.

In natural catastrophe business we continued to pursue our profit-oriented underwriting policy. Our risk appetite for the coverage of natural catastrophes grew at a slower pace relative to the overall growth in property and casualty reinsurance.

Gross written premium in the Property & Casualty reinsurance business group rose by 14.8% to EUR 19.2 billion (previous year: EUR 16.7 billion). At constant exchange rates the increase would have been 16.3%. The level of retained premium edged slightly lower to 90.1% (90.3%). Net premium earned grew by 17.0% to EUR 16.6 billion (EUR 14.2 billion); adjusted for exchange rate effects, growth would have amounted to 18.4%.

Major losses in the 2021 financial year exceeded our expectations for the fifth consecutive year. In terms of large loss expenditure, heavy strains were incurred primarily in the third quarter from flood damage in Europe, storm damage in the United States and unrest in South Africa. Our net burden of major losses added up to EUR 1,250.2 million (EUR 1,594.9 million). This was higher than our budgeted expectation of EUR 1,100 million.

The largest individual losses for net account were hurricane Ida at EUR 304.9 million, the storm damage connected with low-pressure area Bernd in an amount of EUR 208.4 million, the extreme cold snap in the US in February at a net cost of EUR 156.0 million and unrest in South Africa to the tune of EUR 100.1 million. We generally consider events for which we expect gross loss payments of more than EUR 10 million to be major losses.

The underwriting result including interest and expenses on funds withheld and contract deposits stood at EUR 383.5 million (EUR -223.5 million). The combined ratio improved to 97.7% (101.6%).

The investment income booked for the Property & Casualty reinsurance business group surged by 36.0% to EUR 1,343.1 million (EUR 987.5 million). The operating profit (EBIT) soared by 83.7% to EUR 1,512.3 million (EUR 823.0 million). The contribution made by property and casualty reinsurance to Group net income improved by 76.1% to EUR 1,082.4 million (EUR 614.8 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, sorted according to regional markets and worldwide markets.

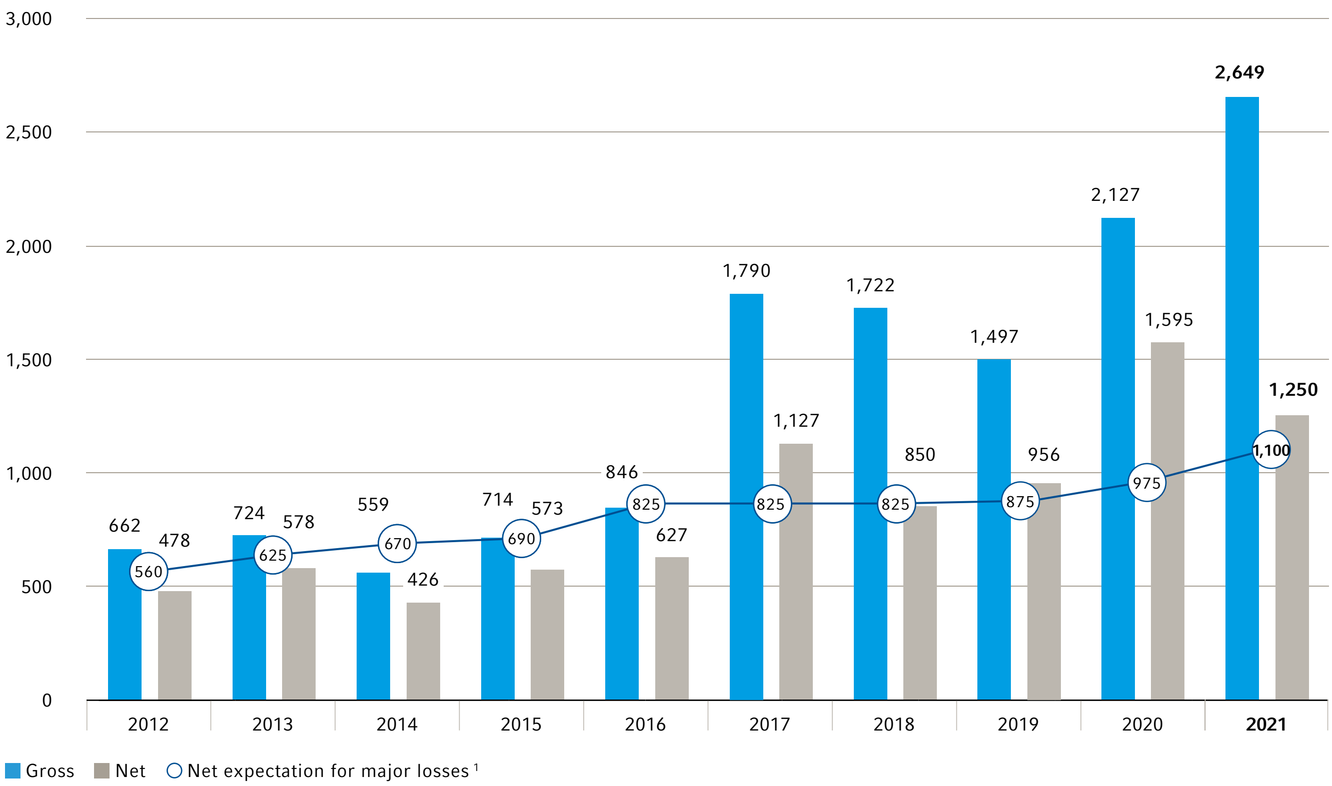
Key figures for Property & Casualty reinsurance M 10

in EUR million	2021	+/− previous year	2020[1]	2019	2018	2017
Gross written premium	19,224.2	+14.8%	16,744.1	14,781.3	11,796.0	10,710.9
Net premium earned	16,623.9	+17.0%	14,205.4	12,797.6	10,804.2	9,158.7
Net underwriting result[2]	383.5		(223.5)	235.4	372.8	15.5
Net investment income	1,343.1	+36.0%	987.5	1,069.4	1,035.1	1,209.3
Operating result (EBIT)	1,512.3	+83.7%	823.0	1,285.8	1,322.6	1,120.2
Group net income	1,082.4	+76.1%	614.8	871.7	929.1	837.3
Earnings per share in EUR	8.98	+76.1%	5.10	7.23	7.70	6.94
EBIT margin[3]	9.1%		5.8%	10.0%	12.2%	12.2%
Retention	90.1%		90.3%	90.3%	90.7%	89.7%
Combined ratio[2]	97.7%		101.6%	98.2%	96.5%	99.8%

1 Restated pursuant to IAS 8
2 Including interest on funds withheld and contract deposits
3 Operating result (EBIT) / net premium earned

Property & Casualty reinsurance: Major loss trend[1] **M 11**

in EUR million



[1] Natural catastrophes and other major losses in excess of EUR 10 million gross

Property & Casualty reinsurance: Key figures for individual markets and lines in 2021 **M 12**

	Gross premium 2021 in EUR million	Change in gross premium relative to previous year	Gross premium 2020 in EUR million	EBIT 2021 in EUR million	Combined ratio 2021	Target combined ratio 2021	EBIT 2020 in EUR million	Combined ratio 2020
Regional Markets								
Americas	4,374.3	+17.8%	3,713.1	161.9	107.3%	94.8%	97.3	107.8%
Asia-Pacific	2,420.7	+15.0%	2,104.3	299.6	91.6%	97.0%	163.5	98.7%
Europe, Middle East and Africa (including CIS countries)	4,746.2	+9.1%	4,352.2	222.4	101.3%	95.4%	140.2	103.5%
Worldwide Markets								
Facultative Reinsurance	1,064.4	+18.8%	896.2	144.0	92.3%	96.5%	182.1	88.2%
Structured Reinsurance and Insurance-Linked Securities	4,543.7	+28.3%	3,542.8	157.9	96.7%	98.7%	124.2	98.5%
Aviation and Marine	672.5	+3.3%	651.0	239.3	69.8%	95.0%	235.7	62.0%
Agricultural Risks	559.0	-14.3%	652.5	59.5	95.0%	92.9%	(17.0)	106.3%
Credit, Surety and Political Risks	843.3	+1.4%	832.0	227.7	79.9%	94.5%	(103.0)	119.8%

Regional markets

Europe, Middle East and Africa (including CIS countries)

In **Continental Europe** the situation in primary and reinsurance business remained uneven overall. Surging inflation, a persistent low interest rate level, claims from Covid-19 that had still to be fully settled and an elevated loss frequency from natural catastrophes led to further price improvements for Hannover Re. This also had positive implications for the quality of the treaties.

Although Western Europe, and here especially France, had been hard hit by the pandemic in the previous year, the reserves set aside for losses were sufficient overall. In the 2021 financial year this region suffered an above-average number of catastrophe losses, particularly effecting the agricultural sector. In addition, the low-pressure area Bernd resulted in considerable losses in the Netherlands and Belgium.

In Italy, numerous bad weather events such as severe rainfall in Sicily caused considerable damage in the year under review and became a dominant issue in the renewal negotiations as at 1 January 2022. In both the motor own damage and fire lines this led to a need for adjustments on the insurance and reinsurance side.

In Spain, natural catastrophes brought about a hardening of reinsurance conditions over the year under review, although the bulk of the losses were absorbed by the local state-owned pool Consorcio.

Economic growth in the markets of Central and Eastern Europe was slowed by the pandemic. Our premiums held stable while at the same time the premium quality improved. In this region we incurred numerous frequency losses in natural catastrophe and fire business. Prices consequently rose on the reinsurance side. Even more appreciable increases are needed, however. Premiums also have to be adjusted to better reflect the risks as part of the ongoing need for remediation in industrial business.

In Northern Europe we further improved the quality of our portfolio and were able to increase the rates under loss-affected programmes. Hannover Re particularly benefits here from its local presence in the market.

On the whole, we were again satisfied with the development of premiums and rates in Continental European markets in 2021. Demand for high-quality reinsurance capacity was particularly evident this year, enabling us to further expand our position in the market.

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 with a share of around 17% in its domestic market.

Business in Germany was heavily shaped by natural catastrophe losses in 2021. The disastrous flooding in July caused by low-pressure area Bernd alone resulted in considerable insured losses. Further hail and heavy rainfall events came on top of this, leading overall to an extreme loss burden from natural catastrophes in Germany.

The continuing pandemic situation in 2021 and the steps taken to contain it left a mark on the insurance industry in common with many other sectors. Supply chain disruptions, for example, impacted the industrial segment and indirectly also motor insurance business owing to a decline in new vehicle registrations. Rising inflation, especially as it affects construction costs, also led to an increase in claims expenditures. Pandemic-related losses in business closure insurance, on the other hand, were barely a factor in 2021 compared to the previous year.

Premium growth in the German primary insurance market was around 2.2% in 2021 compared to the previous year. The motor line saw only minimal growth, in part against the backdrop of the reduced traffic volume overall. On the other hand, the high-volume property insurance lines – namely homeowners’ insurance and industrial lines – continued to deliver above-average premium growth – albeit short of the previous year’s level. As a result, the combined ratio on the market is expected to be around 102% for 2021. This is influenced primarily by the exceptionally high combined ratio in the property line of roughly 130%, which was heavily impacted not only by the catastrophe losses but also by an elevated frequency of large fire losses in the industrial segment.

In motor insurance, the claims side was still heavily influenced by reduced mobility. The number of accident claims was thus well below the level of 2019 and even slightly lower than in 2020. At the same time, the costs of spare parts and repairs continued to rise. Bearing in mind the hail and flood events, the results generated in the motor line in the year under review therefore took a significant turn for the worse compared to the previous year. All in all, though, E+S Rück was still able to benefit from the comparatively moderate claims situation on the motor insurance market.

Natural perils covers are still insufficiently widespread in some regions, and this issue took on added urgency in connection with the major flash flooding in July. This prompted the German Insurance Association (GDV) to put forward a proposal for improving insurance density, which E+S Rück supports.

In the cyber line, progressive digitalisation and sustained growth combined with increasing cyber attacks are leading to greater risk awareness and adjustments in conditions. Silent cyber risks, i. e. cyber exposures from insurance contracts that do not primarily cover this risk, were more heavily restricted market-wide with an eye to potential accumulation scenarios and in many instances they were excluded.

Insurers in the **United Kingdom, Ireland and the London Market** secured further rate increases in the year under review. Although these were less marked than in the previous year, sometimes appreciable increases were pushed through in specific lines. Cyber covers, in particular, as well as some liability lines benefited from the state of the market as a consequence of adverse claims trends in past years. In property insurance, on the other hand, only moderate rate gains were recorded. Our customers with international portfolios were particularly hard hit by large loss events such as the frost damage in Texas, hurricane Ida and the floods in Europe. With this in mind, further price increases in property insurance are to be anticipated.

Compared to the previous year, however, belated notifications of Covid-19-related claims were few and far between. Motor business in the UK benefited from a reduced volume of traffic during the strict lockdowns. In view of the sharply lower number of claims, our customers passed on price reductions to their insureds.

Lloyd's pressed ahead with the initiative to improve market rates and conditions in 2021, causing capacity shortages on the market to continue. At the same time, the number of new syndicates permitted by Lloyd's to commence business activities increased significantly. These new market players will seek to benefit from the sizeable price increases in specific lines and grow their business. It remains to be seen whether this will put the brakes on rate growth in the market.

Substantial rate increases were recorded on the reinsurance side in liability business and for business interruption covers. Price gains driven by worldwide losses from natural perils in past years were given added momentum by the latest major loss events. As a further factor, there were indications of a contraction in the risk appetite on the market and among investors in insurance-linked securities. In cyber reinsurance, which for the most part we write on a proportional basis, we benefited from the appreciable price increases booked by our customers.

In the year under review, we were able to support our clients across all lines with a consistent risk appetite. Our portfolio continued to grow in 2021 on the back of rate increases in the original market, which make themselves felt in our proportional business, and price rises in the non-proportional book.

In the **Middle East** we conduct both traditional reinsurance and business in accordance with Islamic law, known as retakaful. The latter is written not only in the Middle East and North Africa but also in Southeast Asia, thereby supporting the strategic growth initiative launched by Hannover Re in Asia. In the financial year just ended a modest recovery from the impacts of the pandemic and a partial return to normal could be observed on Middle Eastern markets. After the price increases and improvements in conditions seen in the previous year, prices on the reinsurance market tended to remain stable.

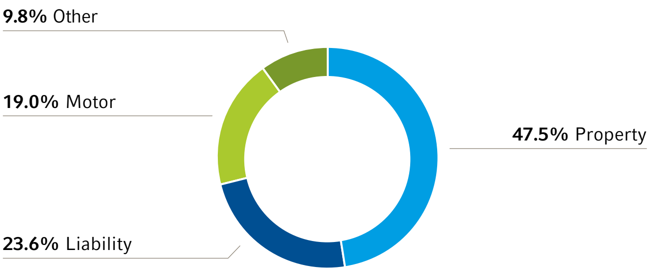
In the 2021 financial year – coming on top of Covid-19 – **South Africa** suffered unrest in July. The imprisonment of ex-president Jacob Zuma triggered a wave of violence, destruction and looting in the province of KwaZulu-Natal which spread as far as Gauteng province, the economic heart of South Africa. The resulting losses are mostly covered by the state-owned monopoly insurer Sasria, in whose reinsurance we have participated for many years.

The economy in South Africa unfortunately continues to suffer under the effects of Covid-19. Even though some sectors – most notably commodities – developed favourably, unemployment kept on rising. The insurance industry is still busy dealing with the settlement of Covid-19-related business interruption claims from the tourism sector. Now that the legal position has been clarified in favour of the insureds, the insurers are making efforts to settle – but loss adjustment bottlenecks and the sluggish delivery of information by insureds is making the settlement process difficult. The loss reserves that we had set aside in the previous year are currently proving to be adequate, and we therefore did not face any financial impacts from the business interruption losses in the year under review.

We generate a large part of our property and casualty reinsurance business in South Africa through managing general agents (MGAs) in which we hold shares. These agencies adapted very well to the difficult conditions in 2021 and largely met their budgets. The loss ratios were exceptionally pleasing. Compass Insure, the primary insurer belonging to our subsidiary in South Africa, posted a gross loss ratio of 52%.

With effect from 1 January 2021 we have operated in South Africa under the name Hannover Re South Africa as well as with two subsidiaries – Compass Insure and the investment company Lireas – that hold our shares in MGAs and insurtechs.

Property & Casualty reinsurance: Gross premium in Europe, the Middle East and Africa (including CIS countries) by lines of business in % **M 13**



The gross premium volume in our reporting category Europe, Middle East and Africa rose by 9.1% to EUR 4,746.2 million (EUR 4,352.2 million). The combined ratio improved slightly to 101.3% (103.5%). The operating result (EBIT) amounted to EUR 222.4 million (EUR 140.2 million).

Americas

We combine our business in North and Latin America in the **Americas** reporting category.

North America is the largest insurance market in the world. Our business here is written largely through brokers.

The economic landscape in North America was once again dominated by Covid-19 in 2021. The legal disputes surrounding business interruption losses connected with the pandemic were mostly decided by the courts in favour of the insurers.

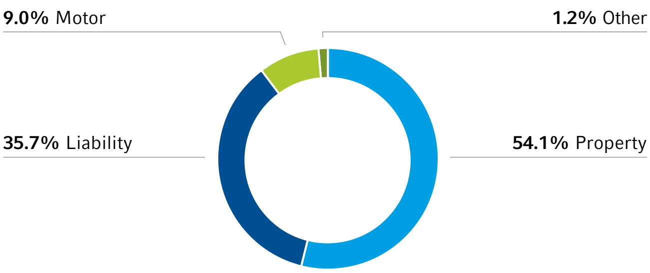
The US economy proved to be rather resilient on the whole despite Covid-19. The premium volume in primary insurance therefore increased and hence the basis for reinsurance also expanded somewhat. Furthermore, insurers were able to push through additional rate increases, which reflected a certain degree of uncertainty in the markets.

Inflation surged sharply higher in 2021 in North America, as in other regions. This added to the pricing pressure in both the property and liability lines.

The financial year was also impacted by various large losses. Particularly costly events were winter storm Uri, which caused considerable losses on the insurance and reinsurance side, and hurricane Ida, which took a toll through wind and flood damage on the East Coast and especially in the region around New York City. Further windstorm events were also recorded. While the wildfires in the western states of the US began very early in 2021, they did not ultimately lead to any significant insured losses. Taken together, these various loss events meant that we were unable to achieve our targeted combined ratio of around 95% for the North American market.

The treaty renewals for 2021 got off to a thoroughly satisfactory start for Hannover Re. We were able to secure improvements in prices and conditions in all lines. This trend continued over the course of the financial year, even though it tended to soften slightly. Exceptions here were the professional indemnity lines and cyber covers, where we booked consistent price increases and improvements in conditions throughout the year.

Property & Casualty reinsurance: Gross premium in the Americas by lines of business in % **M 14**



In **Latin America**, too, Covid-19 heavily impacted the local economies. It will take some time before the growth in gross domestic product returns to pre-pandemic levels. At the same time, the state of the economy also has direct implications for the underlying growth in insured values. Nevertheless, positive tendencies can already be discerned in some countries that point to concrete and profitable business opportunities.

The Latin American region was again shaken by unrest in multiple countries in 2021. In view of this elevated exposure, insurers and reinsurers alike made considerable adjustments – especially in the assessment of political risks and pricing for corresponding covers.

Demand for catastrophe covers remained high and continued to trend upwards on account of various losses in the region. Movements in original rates again resulted in appreciably more attractive margins in Chile and Brazil.

Interest in extended warranties and similar covers for end consumers continued to grow in 2021. With this in mind, we offer innovative reinsurance solutions to our cedants in automated form so as to tap into the available attractive margins.

In collaboration with the United Nations Development Programme (UNDP), Global Parametrics and other market players, Hannover Re is working on concepts for the coverage of natural catastrophe risks in Argentina and Colombia and has positioned itself as a long-term term reinsurance partner for public-private partnerships.

The premium volume in our Americas reporting category again surged sharply in the year under review by 17.8% to EUR 4,374.3 million (EUR 3,713.1 million). The combined ratio of 107.3% was higher than in the previous year (107.8%), principally due to losses from natural catastrophes. The operating profit (EBIT) increased to EUR 161.9 million (EUR 97.3 million).

Asia-Pacific

The **Asia-Pacific** was the region with the strongest economic growth in the world despite Covid-19 and is developing into one of the largest insurance markets globally. This growth opens up business opportunities, not least because the insurance density is still lower than in more mature markets.

Hannover Re continued to expand its APAC footprint in 2021. We assist our clients in this growth region with their development as they face up to the challenges of the coming years through concepts designed to reinforce their capital resources or, for example, by optimising the distribution and design of their products.

Back in 2019 Hannover Re had already launched an Asia-Pacific strategic initiative so as to leverage the region's growth potential even more heavily. We attach special importance to innovative and customer-centric concepts and to the expansion of efficient local decision channels, prompting us for example to relocate our Asian business in property and casualty reinsurance previously written out of Hannover to Asia.

Thanks to rigorous controls, the Covid-19 pandemic affected Greater China to only a very limited extent in the financial year just ended. The insurance industry faced challenges, however, due to regulatory changes as well as the establishment of a new state-backed reinsurance company for agricultural business. Aside from serious flooding in Henan Province in July, no other appreciable insured catastrophe losses occurred in China. All in all, the business developed profitably. Our local branch positioned itself through (product) partnerships and expanded its portfolio.

Our branch in Malaysia is responsible for Japan, Korea and Southeast Asia. We continued to grow our footprint in the region during the year under review, including in Japan. Special emphasis is put on customer-centric concepts as well as on risk-oriented covers to support the expansion of the local infrastructure. In Japan the expenditures on fire losses and natural catastrophes remained within reasonable bounds in the year under review, compared to the previous years which in some instances had been very costly.

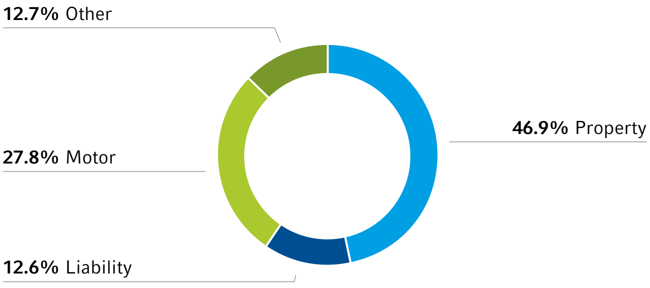
In Korea we delivered on our customer-centric concept and extended our position as a major market player. At the same time, we have achieved broad portfolio diversification. Business in Korea developed favourably.

The 2021 financial year in Southeast Asia was notable for vigorous growth and increased loss expenditure compared to the previous year. Among other things, we incurred losses in Thailand from business with a bearing on the pandemic. Given the price adjustments and general improvements in conditions anticipated for 2022, we consider ourselves well placed to share further in the growth of the Southeast Asian region moving forward.

The situation facing our branch in India remains highly competitive. We were nevertheless able to keep on growing in the property insurance lines. The burden of losses and hence also the result were, however, in line with our expectations.

Responsibility for Australia and New Zealand rests with our branch in Sydney. A high frequency of catastrophe events together with considerable uncertainty around the pandemic had led to substantial losses in the previous year, prompting significant rate improvements on both the original and the reinsurance market. The resulting growth impetus was sustained in 2021 and we were able to expand our portfolio. Large losses were on the low side in 2021, as reflected in a pleasing underwriting result.

Property & Casualty reinsurance: Gross premium in Asia-Pacific by lines of business in % M 15



The gross premium volume in the Asia-Pacific region grew by 15.0% to EUR 2,420.7 million (EUR 2,104.3 million). The combined ratio improved to 91.6% (98.7%). The operating profit (EBIT) climbed to EUR 299.6 million (EUR 163.5 million).

Worldwide markets

Structured Reinsurance and Insurance-Linked Securities

In the **Structured Reinsurance and Insurance-Linked Securities** 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. With our Advanced Solutions we offer our clients support for their capital management as well as innovative and bespoke reinsurance concepts. These provide solvency relief and thus have a positive effect on the client's rating or protect against the strain of frequency losses. Structured concepts also offer an alternative in cases where traditional reinsurance capacity cannot be accessed to the full extent.

Overall, structured reinsurance fared better than expected in the 2021 financial year and the premium volume increased appreciably. We were again able to grow our customer base and also substantially increased the number of treaties. In total, more than half of our premium income derived from the United States and roughly a third from Europe.

The purchasing habits of many customers have continued to shift towards holistic reinsurance solutions. This trend showed no signs of easing and resulted in more and more clients seeking complex structured contractual arrangements. Given that this business is to some extent based on large-volume transactions, premium income in structured reinsurance can generally fluctuate sharply.

The market for **insurance-linked securities** (ILS) was roughly stable on the level of the previous year in 2021 with a capacity of around USD 95 billion. The further hardening of the rate level as well as the prospect of additional price increases led to cash inflows, while loss payments and dissatisfaction with the general loss situation prompted outflows. A volume of some USD 15 billion to USD 20 billion in trapped collateral for claims that have still to be settled further reduced the funds available for reinvestment. In addition, investors focused more heavily on natural catastrophe reinsurance on an excess-of-loss basis and paid less attention to quota share and aggregate covers than in previous years.

The worldwide volume of newly issued catastrophe bonds increased again. At almost USD 14 billion, it was higher than the level in the previous record year of 2020.

According to our estimates, roughly two-thirds of the ILS market can be attributed to 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 as a so-called fronting company.

Catastrophe bonds have been less impacted by losses in recent years than collateralised reinsurance. For this reason, catastrophe bonds looked somewhat more attractive than collateralised reinsurance with an eye to risk considerations – although the relative proportions did not change.

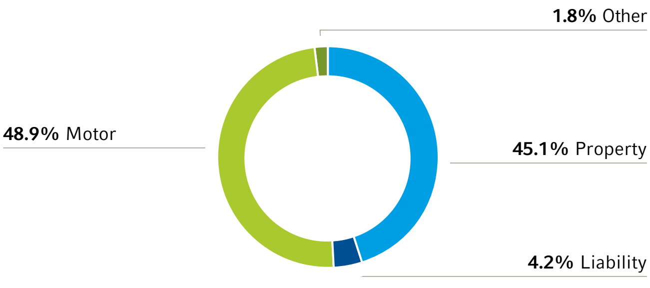
Hannover Re leverages the entire spectrum of opportunities offered by the ILS market. On the one hand, we take out reinsurance with ILS investors, while at the same time we transfer our customers' risks to the capital market as a service. This is done in the form of catastrophe bonds or through collateralised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

In 2021 the volume of new exposures that we transferred to the capital market in the form of catastrophe bonds was in the region of USD 2.7 billion split into eleven transactions. This substantially exceeded past numbers both in terms of the volume and number of transactions. The largest transactions were catastrophe bonds with volumes of USD 575 million for the Federal Emergency Management Agency to protect against flooding in the US and USD 500 million for the Texas Windstorm Insurance Association as coverage against risks from named storms and tornados.

Collateralised reinsurance, which remains by far our largest segment in the ILS sector, showed pleasing growth in the year under review.

The important role played by the capital market in our purchasing of retrocession protection was unchanged. For example, we have placed a protection cover for Hannover Re known as the "K quota share" – a modelled quota share cession consisting of non-proportional reinsurance treaties in the property, catastrophe, aviation and marine (including offshore) lines – inter alia on the ILS market since as long ago as 1994. In addition to the K quota share, we made use of the ILS market for other protection covers as well and were able overall to purchase the desired risk capacity despite the challenging environment.

Property & Casualty reinsurance: Gross premium in Structured Reinsurance and Insurance-Linked Securities by lines of business in % **M 16**



The gross premium volume in the Structured Reinsurance and ILS reporting category increased by 28.3% to EUR 4,543.7 million (EUR 3,542.8 million). The combined ratio was 96.7% (98.5%). The operating profit (EBIT) climbed to EUR 157.9 million (EUR 124.2 million).

Facultative Reinsurance

In contrast to obligatory reinsurance, we write primarily individual risks in **facultative reinsurance**. The general framework conditions for both types of reinsurance in the various markets are extensively correlated.

The tendencies towards market hardening that began in 2019 were sustained in the 2021 financial year. We saw capacity reductions on the primary insurance side and improvements in rates and conditions across virtually all lines and regions.

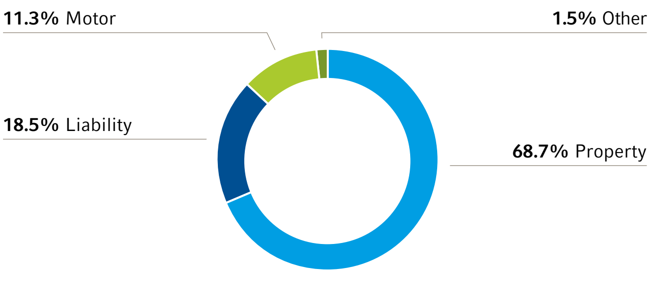
Demand for facultative reinsurance solutions stabilised on a high level in the year under review. Customers continued to attach importance to obtaining coverage for their facultative reinsurance needs from financially robust reinsurers. This development could be observed globally and enabled us to generate further substantial growth on the back of 2019 and 2020.

Whereas 2020 had been shaped primarily by pandemic-related losses, natural catastrophe and human-caused losses were increasingly evident again in 2021. Sizeable losses that impacted the result in facultative reinsurance included those resulting from winter storm Uri, the severe flooding in Europe caused by low-pressure area Bernd and hurricane Ida. On the other hand, no significant additional strains from the pandemic were observed in 2021, and hence there was no need to further strengthen the reserves established in the previous year.

Despite the increased number of loss events, facultative reinsurance can look back on a successful 2021 financial year. The market environment again opened up attractive business and growth opportunities that we acted on in keeping with our technical underwriting approach and risk appetite. The greater decentralisation of our underwriting activities has strengthened our customer relationships. Hannover Re is increasingly and actively sought after as a reinsurance partner.

Hannover Re has enshrined sustainability goals as part of its Group strategy and implements appropriate measures. In recent years, for example, we have taken a very conservative approach to the coverage of thermal coal and oilsands risks and from 2020 onwards we have no longer written any new business in these areas. Not only that, we included the sustainability issues of human rights and biodiversity in our review processes. If we identify violations of internationally recognised conventions, we decline the business in question.

Property & Casualty reinsurance: Gross premium in Facultative Reinsurance by lines of business in % **M 17**



The gross premium volume in our reporting category Facultative Reinsurance grew by 18.8% to EUR 1,064.4 million (EUR 896.2 million). The combined ratio stood at 92.3% (88.2%). The operating profit (EBIT) amounted to EUR 144.0 million (EUR 182.1 million).

Credit, Surety and Political Risks

Loss ratios were lower in **credit and surety insurance** as well as in the **political risks** segment despite the global economic challenges. This reflects wide-ranging government support programmes on the fiscal and monetary side, which were launched in 2020 and continued in 2021. The state guarantee schemes also rolled out in 2020 in favour of mostly European credit insurance business expired at the end of June 2021, although the loss-mitigating effects of the guarantees continued to be felt for a few months. The elimination of premium cessions to the government in connection with the furnished guarantees at the end of June – combined with a general economic revival – led to a visible rise in premium volumes. This trend was supported by rising demand in view of the continued uncertainties in the economic landscape. The increased price level on the insurance and reinsurance side was for the most part maintained.

The wave of insolvencies anticipated at year-end 2020 has so far failed to materialise on any appreciable scale, enabling us to reduce the corresponding reserve in the area of credit, surety and political risks at the end of 2021 and reallocate them to other segments – although we still have adequate provision for catch-up effects on the insolvency front.

The gross premium for the Credit, Surety and Political Risks reporting category increased in the financial year by 1.4% to EUR 843.3 million (EUR 832.0 million). Given that the loss experience trended lower in the reporting period, this prompted us to release reserves in some cases that had been set aside in the previous year. The combined ratio amounted to 79.9% (119.8%). The operating profit (EBIT) came in at EUR 227.7 million (EUR -103.0 million).

Aviation and Marine

The positive rate movements on the primary market for **aviation** covers continued in 2021, albeit on a significantly lower level. We expect to see a stabilisation in rates for the airline segment, which in large part is renewed in December. This is due to the recent resurgence in the risk appetite on the market as well as appreciably reduced exposures compared to the state of the market before the pandemic. In the general aviation segment, on the other hand, we still recorded rate increases. These were, however, smaller than in the previous year.

The picture was similar in product liability business, although developments in this part of the market were generally somewhat less volatile. In the space segment we observed further rate increases for both launch and in-orbit policies. Overall, though, 2021 saw a comparatively low number of launches, with corresponding implications for the absolute market premium.

The trend reversal that had already set in over the past two years on the reinsurance side was sustained in 2021. The pace slowed over the year, however, owing to renewed growth in the risk appetite and new capacities. At the beginning of the year, for example, we were still able to push through significant price increases for non-proportional business, whereas the risk-adjusted rate increases of late only barely reached the double-digit percentages. In the proportional segment, we were able to renew a large part of our portfolio based on the improvements in conditions obtained in prior years.

The upward trajectory in the **marine market** that has been clearly evident since 2020 was initially sustained in the year under review, only to stabilise in the second half of the year. This was especially true of cargo insurance but also applied to marine hull and specie insurance. Heavy competition and excess capacities to some extent put the brakes on ongoing remediation efforts by insurers. In all the various rounds of treaty renewals we were nevertheless able to secure modest improvements, both in terms of pricing and treaty conditions. Special mention should be made of the marked price increases in longer-tail liability lines such as protection & indemnity (P&I) insurance.

After a significant but short slump in global trade due to pandemic restrictions, commercial shipping and the transport of goods picked up sharply in 2021 while the cruise ship industry continued to work towards a fresh start. The year under review provided confirmation that insurers and reinsurers in the marine market were less affected by direct pandemic losses than other insurance lines.

In offshore energy business both the insurance and reinsurance markets were stable with slightly higher prices. Losses were once again moderate. Oil and gas prices surged appreciably around the world in the year under review. Efforts to explore and develop these resources were therefore stepped up after years of stagnation, hence also giving rise to increased insurance volumes and an easing in the pressure on costs. Looking to the future, a significant shift in existing customer portfolios towards alternative energies and away from the traditional offshore industry is to be anticipated against the backdrop of sustainability issues and climate protection concerns. As one of the leading reinsurers in this line, we shall continue to move forward together with our customers along the path mapped out in 2021.

Aside from catastrophe losses caused by the low-pressure area Bernd in Germany and hurricane Ida in the United States, the losses incurred in the year under review were attributable primarily to individual risks. They include a sunken drilling rig in the waters off Malaysia, a container vessel stranded in the Suez Canal and a cargo ship going down off the coast of Sri Lanka. Among other events, mention should be made of the unrest in South Africa and an oil spill off the coast of California. As had already been the case in the previous year, we were again compelled to post additional reserves for the P&I liability loss associated with a car carrier that capsized in 2019 off the coast of the US state of Georgia.

Based on our strong international positioning as one of the leading reinsurers in the marine and offshore energy segment, we were able to cement and further expand existing customer relationships. As in previous years, we systematically restructured or relinquished inadequate business and wrote promising new business.

The premium volume for our Aviation and Marine reporting category rose by 3.3% to EUR 672.5 million (EUR 651.0 million). The combined ratio was 69.8% (62.0%). The operating profit (EBIT) came in at EUR 239.3 million (EUR 235.7 million).

Agricultural risks

In the year under review we continued to grow our position in some markets for **agricultural risks**. Particularly in emerging and developing countries, the growing need for agricultural commodities and foodstuffs combined with the accumulation of extreme weather events led to stronger demand for insurance and reinsurance solutions. In this area Hannover Re offers its customers both comprehensive traditional reinsurance concepts and parametric covers that optimally complement existing insurance solutions.

The increasing number of public-private partnerships, not only in emerging and developing countries but also in more advanced economies, presents new opportunities for our company to write profitable agricultural business in markets that have still to mature. Acceptance of drought insurance products has continued to grow in recent years, not least due to the increase in extremely dry years. Given that comprehensive agricultural insurance is too expensive for many farmers, parametric covers have become established as a problem-solving approach.

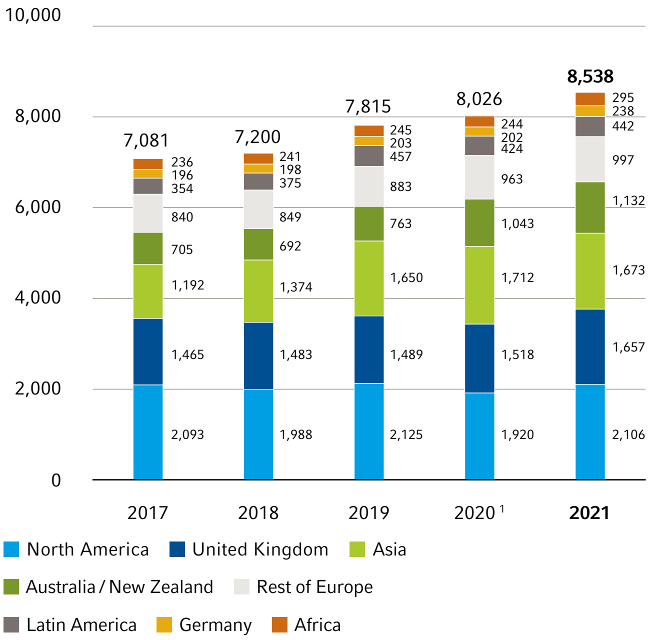
In addition, the increasingly widespread availability of new technologies – such as remote sensing by satellites – facilitates further expansion of the segment with innovative and efficient insurance products. Our team specialising in index-based and parametric covers supports our customers around the world not only with reinsurance but also in the development and implementation of parametric coverage concepts. Along with our technical know-how, we draw on our growing network of insurtechs and partners and we offer solution options that also extend beyond the bounds of traditional agricultural business.

In general terms, movements in rates and conditions in agricultural business on both the primary and reinsurance side were commensurate with the risk. Rates for catastrophe covers, such as for forest insurance, remained on a high level.

Altogether, the gross premium volume in the Agricultural Risks reporting category fell by an appreciable 14.3% to EUR 559.0 million (EUR 652.5 million). One reason here was the establishment of a new state-backed reinsurance firm in China. The combined ratio was 95.0% (106.3%). The operating profit (EBIT) increased to EUR 59.5 million (EUR -17.0 million).

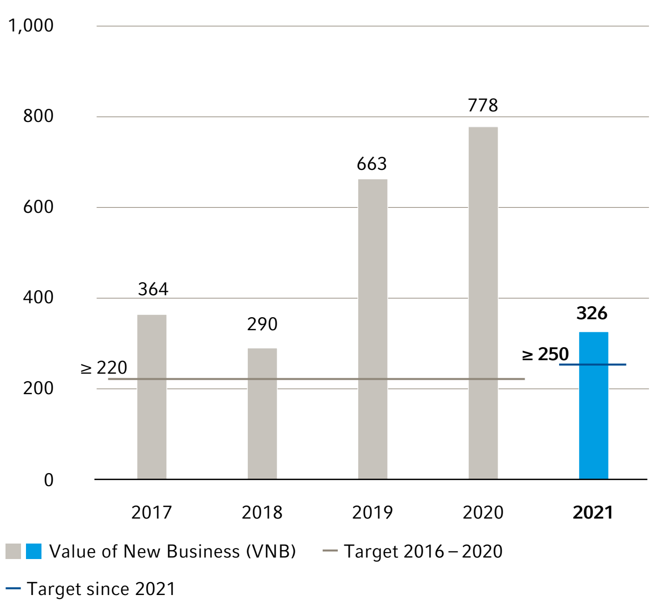
Life & Health reinsurance at a glance

Breakdown of gross premium by markets M 18
in EUR million



[1] Restated pursuant to IAS 8

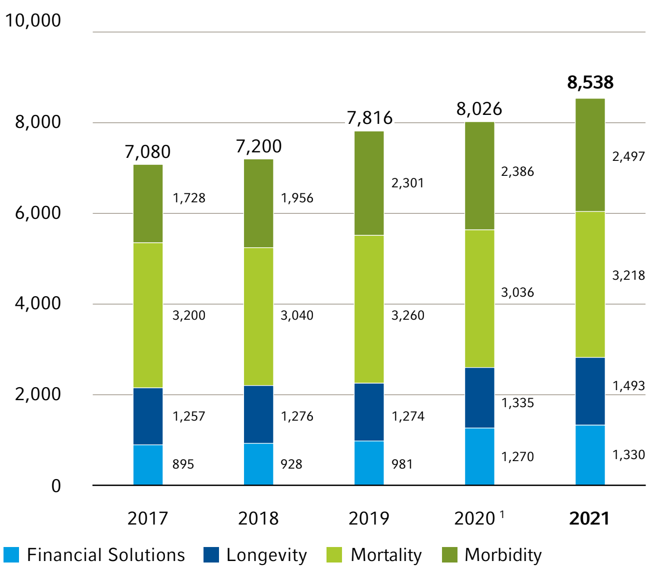
Value of New Business (VNB) growth [1, 2] M 19
in EUR million



[1] Based on Solvency II principles and pre-tax reporting

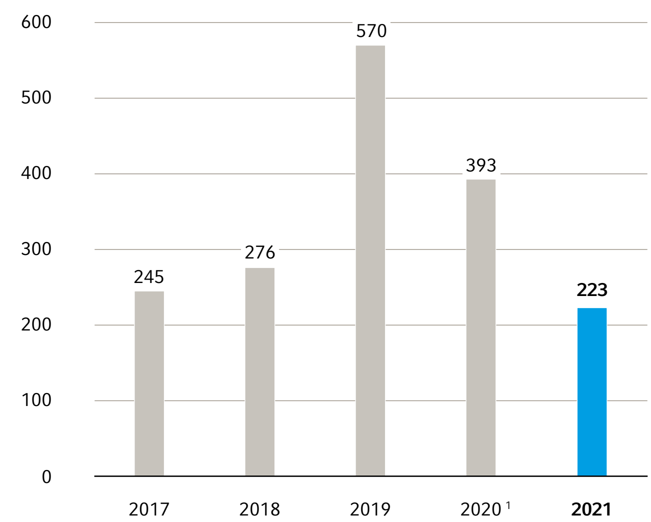
[2] This information has not been audited by the independent auditor

Breakdown of gross written premium by reporting categories M 20
in EUR million



[1] Restated pursuant to IAS 8

EBIT performance M 21
in EUR million



[1] Restated pursuant to IAS 8

Life & Health reinsurance

- Gross premium up by 6.4%
- Sustained customer interest particularly in financial solutions and longevity covers
- Strains from the pandemic amount to EUR 582.0 million
- Positive one-time effects in the US mortality portfolio and in longevity business
- Operating result down by 43.2%

Life & Health reinsurance is Hannover Re's second major business group. It contributed a 31% share of our Group gross premium in the year under review.

Covid-19 remained a dominant issue in the market for life and health reinsurance. The pandemic sadly continues to take a heavy toll on human life and remains a challenge for medical experts and society alike as new virus variants emerge and spread. We make the agreed payments to our cedants for deaths and illnesses, especially in the area of mortality covers. Altogether, we faced pandemic-related strains of EUR 582.0 million in the 2021 financial year (previous year: EUR 261.1 million). The bulk of these were attributable to the United States and South Africa.

The pandemic-related expenditures were opposed by positive one-time income from a restructuring measure in US mortality business amounting to EUR 131.7 million. In this context collateral structures were partially liquidated and assets-side funds withheld transferred to our investments under own management.

A further positive special effect of EUR 121.9 million was recorded in business with longevity covers from the revaluation of portfolios.

Leaving aside the losses due to the pandemic and the positive one-off effects, the business developed in line with our expectations.

In general terms, global life and health reinsurance markets remained intensely competitive in the 2021 financial year and were shaped by a persistent low interest rate environment in many regions. This had negative implications for the investment income generated by insurers and reinsurers. At the same time, though, it opened up additional opportunities for financially robust reinsurers such as Hannover Re – for example in the area of financial solutions.

Key figures for Life & Health reinsurance **M 22**

in EUR million	2021	+/– previous year	2020[1]	2019	2018	2017
Gross written premium	8,538.1	+6.4%	8,026.3	7,816.4	7,200.4	7,079.6
Net premium earned	7,519.5	+5.1%	7,155.2	6,931.9	6,484.8	6,472.8
Investment income	598.8	-13.9%	695.3	684.5	491.8	560.6
Claims and claims expenses	7,103.4	+10.3%	6,438.3	5,817.5	5,341.6	5,666.8
Change in benefit reserve	298.6	+188.6%	103.5	(10.8)	(50.8)	0.6
Commissions	1,263.8	+4.9%	1,204.8	1,254.8	1,263.6	1,081.8
Own administrative expenses	265.2	+4.4%	254.1	255.7	216.9	210.7
Other income/expenses	438.7	+30.5%	336.3	289.0	172.1	170.6
Operating result (EBIT)	223.3	-43.2%	393.0	569.9	275.9	245.2
Net income after tax	196.6	-40.2%	328.9	471.6	185.9	172.6
Earnings per share in EUR	1.63	-40.2%	2.73	3.91	1.54	1.43
Retention	88.2%		89.8%	89.5%	90.7%	91.7%
EBIT margin[2]	3.0%		5.5%	8.2%	4.3%	3.8%

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

When it comes to solutions for the coverage of longevity risks, stronger demand was again observed in other countries beyond the traditionally important UK market. The exacting capital requirements placed on primary insurers and pension funds in connection with such business are one of the driving factors here.

Digital insurance solutions and automation are playing an increasingly important role in virtually all market segments. This is true not only of cooperation with start-ups but also of joint projects conducted with primary insurers and other cedants.

Gross written premium in the Life & Health reinsurance business group climbed by 6.4% to EUR 8.5 billion (previous year: EUR 8.0 billion); at constant exchange rates the increase would have been 5.5%. The level of retained premium stood at 88.2% (89.8%). Net premium earned increased by 5.1% to EUR 7.5 billion (EUR 7.2 billion), corresponding to growth of 4.4% adjusted for exchange rate effects.

The result in life and health reinsurance was clearly impacted by the aforementioned pandemic-related expenditures. The underwriting result including interest and expenses on funds withheld and contract deposits therefore declined to EUR -594.5 million (EUR -467.2 million). Not included here are large parts of the result in Financial Solutions business that we disclose according to the deposit accounting method in other income / expenses on account of the minimal risk transfer. Consequently, no gross premium is booked for this business either.

The investment income for the Life & Health reinsurance business group fell by 13.9% to EUR 598.8 million (EUR 695.3 million). In the year under review we recognised positive income of EUR 43.9 million from our extreme mortality cover, tranches of which we have brought to the capital market regularly since 2013; this was recognised under the assets measured at fair value through profit or loss in the investments on the life and health reinsurance side.

The operating result (EBIT) contracted by 43.2% to EUR 223.3 million (EUR 393.0 million). The contribution made by life and health reinsurance to Group net income declined by 40.2% to EUR 196.6 million (EUR 328.9 million).

We provide below a more detailed discussion of developments in the individual reporting categories – 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 offer our customers bespoke reinsurance solutions designed to optimise their solvency, liquidity and capital position. The generally good level of demand here is supported by the persistent low interest rate environment. Our reinsurance solutions in this segment are always tailored to the customer's specific needs and hence highly diverse and individually structured. 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 and in 2021 again played a considerable part in the total result. As in previous years, new business in Asia – and especially China – continued to develop favourably.

Gross premium income in the Financial Solutions reporting category climbed by 4.7% to EUR 1,329.5 million (EUR 1,270.4 million). The operating result (EBIT) fell by 2.0% to EUR 416.0 million (EUR 424.5 million). This includes an EBIT contribution of EUR 356.2 million (EUR 329.5 million) from business with a reduced risk transfer, which we recognise in other income / expenses owing to the reduced risk transfer and for which no gross premium is booked.

Longevity Solutions

In the Longevity Solutions reporting category, we group together all reinsurance business under which the primary risk covered for our customers is the longevity risk. We develop innovative annuity products, for example, that are 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 remains the largest market for coverage of longevity risks. In addition, growing demand continues to be evident in other countries, such as Germany and the Netherlands. The exacting capital requirements faced by primary insurers and pension funds in connection with such business are a driving force here.

Overall, the market environment for longevity solutions continued to be intensely competitive. The volume of disposals for sizeable blocks of pension obligations was smaller than in the previous year. In a reflection of this, we saw an increased number of smaller and mid-sized transactions as well as a larger share of deferred annuities.

The gross premium for the Longevity Solutions reporting category rose by 11.9% to EUR 1,493.3 million (EUR 1,334.6 million). The operating result (EBIT) increased to EUR 183.5 million (EUR 77.2 million).

Mortality and 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 Solutions generate the lion's share of premium income in our Life & Health reinsurance business group. We provide reinsurance protection here for our customers against the risk that their insureds do not live as long as anticipated and hence the actual mortality negatively diverges from the originally expected mortality.

The Covid-19 pandemic and the large number of resulting deaths continued to negatively affect results. Mortality covers accounted for the bulk of pandemic losses in life and health reinsurance. Along with the United States, Hannover Re's largest single market, considerable losses were also incurred in South Africa.

With regard to the management actions initiated some years ago to improve the profitability of a large portfolio within our book of legacy US mortality business, we were able to settle one additional legal action through arbitration proceedings.

The gross premium in the Mortality Solutions reporting category rose by 6.0% to EUR 3,218.2 million (EUR 3,035.7 million).

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 long-term care insurance.

Pandemic-related losses were also reported in health business, albeit on an appreciably lesser scale than under mortality covers. The underlying business developed in line with expectations.

The gross premium for morbidity business grew by 4.7% to EUR 2,497.2 million (EUR 2,385.5 million).

The gross premium for our total mortality and morbidity portfolio increased by 5.4% to EUR 5,715.4 million (EUR 5,421.2 million). The operating result (EBIT) for the Mortality and Morbidity Solutions reporting category totalled EUR -376.2 million (EUR -108.6 million).

Underwriting Services

Under the heading of **Underwriting Services** we report on the activities and services that we provide 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.

In general terms, our customers continue to take a keen interest in issues of digitalisation and innovation. Furthermore, we are engaged in an intensive exchange with numerous start-ups and primary insurers with an eye to the development of innovative, digital coverage concepts. Our innovation platform "hr | equarium" enables our customers, on the one hand, to access a wide range of insurance-specific products and solutions. At the same time, it opens up access for insurtechs and other start-ups to our global client network.

Investments

- Very pleasing investment performance despite continued challenging market environment
- Higher income from inflation-linked bonds and private equity
- Return on investment surpasses target of more than 2.4% to reach 3.2%
- Volume of assets under own management grows by 15% to EUR 56.2 billion

Against the backdrop of the continued challenging state of global financial markets, we are highly satisfied with the performance of our investments. The ordinary investment income excluding interest on funds withheld and contract deposits amounting to EUR 1,555.6 million as at 31 December 2021 came in significantly higher than in the previous year (previous year: EUR 1,240.4 million) and was thus even slightly ahead of our expectations.

Income from fixed-income securities reflected above all sharply higher inflation expectations, leading to increased amortisation amounts in our portfolio of inflation-linked bonds. We also booked substantially higher distributions from our investments in private equity.

Our real estate and real estate funds similarly contributed to our result with slightly higher earnings.

The income recognised from measurement at equity declined to EUR 35.7 million (EUR 88.1 million), primarily reflecting special income booked in the previous year associated with measurement of one of our participating interests. Interest on funds withheld and contract deposits increased to EUR 268.3 million (EUR 221.8 million).

Impairments and depreciation totalling EUR 88.8 million (EUR 129.4 million) were taken. Of this, an amount of EUR 24.9 million (EUR 32.3 million) was attributable to private equity. An impairment loss of EUR 24.8 million (EUR 19.0 million) had to be recognised in our portfolio of real estate and real estate funds. On the whole, the sectors hardest hit by the pandemic did not play a significant role in our investment portfolio. Write-downs of EUR 0.2 million (EUR 11.8 million) were taken on other fixed-income securities. Depreciation on directly held real estate was slightly higher at EUR 38.4 million (EUR 36.6 million) due to the growth of the portfolio.

Investment income M 23

in EUR million	2021	+/– previous year	2020[1]	2019	2018	2017
Ordinary investment income[2]	1,555.6	+25.4%	1,240.4	1,380.8	1,321.7	1,289.0
Result from participations in associated companies	35.7	-59.4%	88.1	26.4	5.0	16.0
Realised gains/losses	281.0	-14.7%	329.6	273.7	127.7	377.1
Appreciation	1.1		–	–	3.6	0.9
Depreciation, amortisation, impairments[3]	88.8	-31.4%	129.4	80.6	52.7	71.9
Change in fair value of financial instruments[4]	36.1	-43.5%	64.0	72.9	31.2	38.6
Investment expenses	146.0	+13.2%	129.0	122.5	114.3	110.8
Net investment income from assets under own management	1,674.8	+14.4%	1,463.7	1,550.6	1,322.0	1,539.0
Net investment income from funds withheld	268.3	+21.0%	221.8	206.4	208.0	234.9
Total investment income	**1,943.0**	**+15.3%**	**1,685.5**	**1,757.1**	**1,530.0**	**1,773.9**

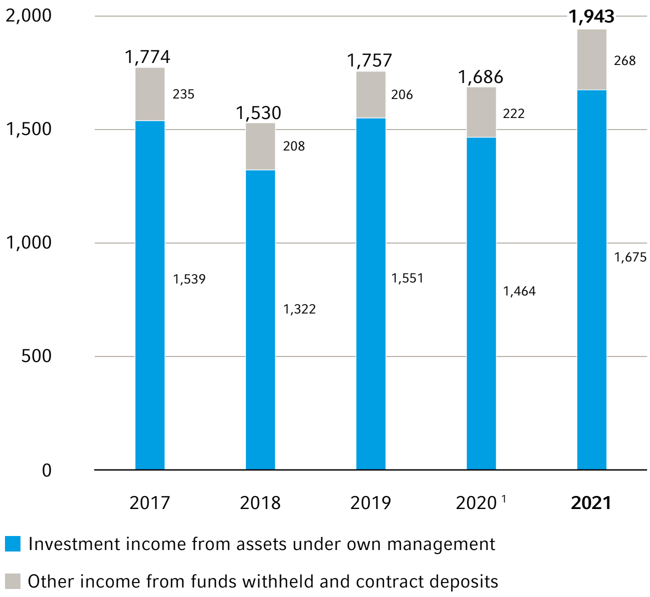
1 Restated pursuant to IAS 8
2 Excluding interest on funds withheld and contract deposits
3 Including depreciation/impairments on real estate
4 Portfolio measured at fair value through profit or loss and held for trading

Net realised gains on disposals totalled EUR 281.0 million (EUR 329.6 million). The high level of hidden reserves due to low interest rates made itself felt in our portfolio of fixed-income securities, again benefiting the net realised gains. In addition, we generated pleasing realised gains in connection with the reorganisation of our high-yield portfolio. In the United States and East Asia we also very successfully made the most of conditions on real estate markets to dispose of two large properties. The sale of some of our equity funds as part of portfolio restructuring measures at the beginning of the year was also a highly positive factor in our net realised gains.

Altogether, the unrealised gains in our assets recognised at fair value through profit or loss amounted to EUR 36.1 million (EUR 64.0 million). Our extreme mortality cover, tranches of which we have brought to the capital market regularly since 2013, is recognised under this item in a positive amount of EUR 43.9 million (EUR 3.7 million).

The investment income of EUR 1,943.0 million (EUR 1,685.5 million) was 15.3% higher than in the comparable period. Income from assets under own management accounted for EUR 1,674.8 million (EUR 1,463.7 million), producing an annualised average return (including effects from ModCo) of 3.2%. The pleasing clear outperformance of our guidance of more than 2.4% can be attributed, in the first place, to inflation expectations, which turned out to be higher than anticipated. Consequently, we booked higher amortisation amounts on our inflation-linked bonds. Secondly, we received larger distributions from our private equity investments and, furthermore, net realised gains proved to be appreciably higher than had been assumed at the beginning of the reporting period on account of the aforementioned effects.

Development of investment income **M 24**
in EUR million



1 Restated pursuant to IAS 8

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

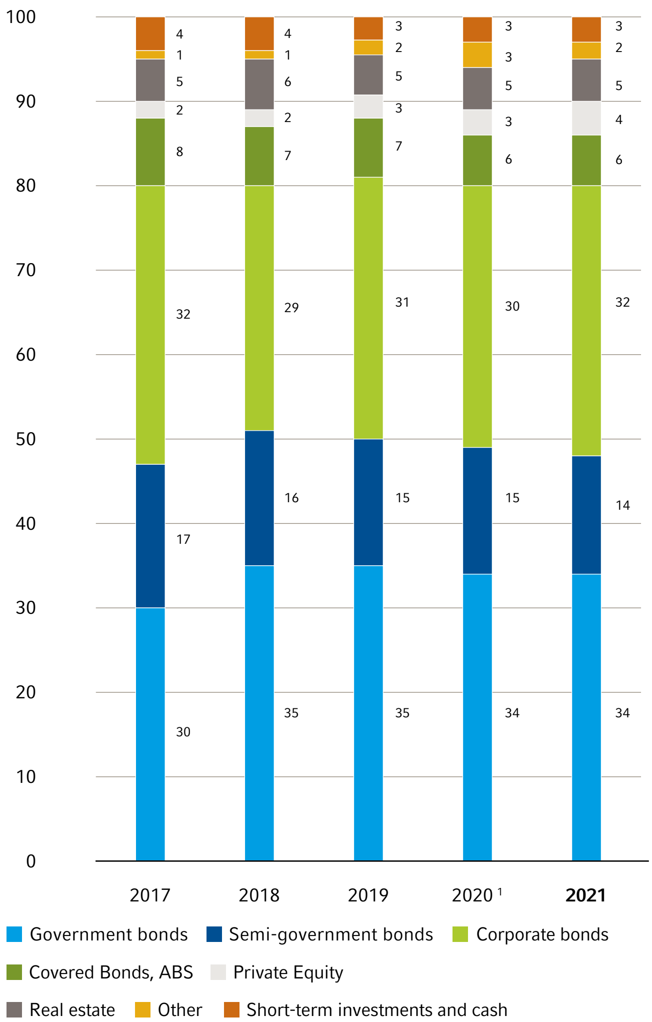
With these goals in mind, we engage in active risk management based on balanced risk/return analyses. To this end we adhere to centrally implemented investment guidelines and incorporate insights gained from dynamic financial analysis. They form the basis for investment ranges which are specified in 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 5.8 (previous year: 5.8) as at 31 December 2021. Through active and regular management of the currency spread in our fixed-income portfolio we also aim for 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 2021 we held 29.1% (31.2%) of our investments in euros, 44.2% (41.2%) in US dollars, 6.5% (7.6%) in pound sterling and 6.5% (6.9%) in Australian dollars.

Investment portfolio M 25

in EUR million	2021	2020	2019	2018	2017
Funds withheld	11,306.5	9,958.2	11,273.8	10,864.6	10,902.9
Investments under own management	56,213.2	49,001.6	47,629.4	42,197.3	40,057.5
Total	**67,519.7**	**58,959.8**	**58,903.2**	**53,061.9**	**50,960.4**

Breakdown of investments under own management M 26
in %



[1] Restated pursuant to IAS 8

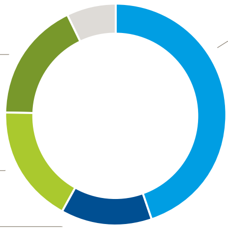
Investments

Our portfolio of assets under own management amounted to EUR 56.2 billion, a considerably higher level than in the previous year (31 December 2020: EUR 49.0 billion). With credit spreads narrowing only slightly overall, higher interest rates gave rise to declines in the fair values of our fixed-income securities. These were clearly more than offset by positive effects from currency translation – especially in connection with the US dollar and pound sterling. As additional factors, cash inflows from issuance of a bond and the one-time reallocation of technical holdings to the investments under own management as part of a restructuring move in US mortality business favourably affected the portfolio. The unrealised gains and losses on our fixed-income securities contracted sharply overall to EUR 1,446.7 million (EUR 2,558.4 million), primarily against the backdrop of rising interest rates across our main currencies.

We adjusted the allocation of our investments to the individual classes of securities in that we acted on market opportunities in the first quarter and sold parts of our equity holdings. As far as our fixed-income securities were concerned, when it came to reinvesting or making new investments we increasingly focused throughout the year on instruments that – giving due consideration to their risk profiles – offer higher returns than government bonds. We expanded our holding of inflation-linked bonds so as to adjust it to requirements from the underwriting side as part of regular portfolio maintenance. Similarly, we further expanded our exposure to the areas of infrastructure and private equity. We substantially enlarged our real estate portfolio in Asia, making the most of attractive acquisition opportunities in Singapore and Japan, as well as in Germany and Poland. In the United States and South Korea we very successfully acted on the state of the real estate market to dispose of two large properties. Overall, we thus slightly increased our real estate allocation to 5.5% (5.1%). In the high-yield bond sector we progressively realigned our portfolios away from fund structures towards direct investments. We kept the modified duration of our fixed-income portfolio stable compared to the end of the previous year at 5.8 (5.8). 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 48.0 billion (EUR 41.5 billion). As already outlined with respect to the investment portfolio as a whole, this reflects, on the one hand, interest rate increases that reduced fair values, while on the other hand currency effects and cash inflows as well as a reallocation of technical holdings to the investments led to rising total portfolios. The net hidden reserves for available-for-sale fixed-income securities, which are included in shareholders' equity, totalled EUR 1,299.1 million (EUR 2,347.4 million). This reduction can be attributed primarily to the interest rate increases seen on government bonds in 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 74.6% (76.7%) as at year-end.

Rating of fixed-income securities M 27



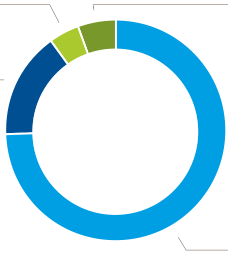
Holdings of alternative investment funds increased overall in the reporting period. As at 31 December 2021 an amount of EUR 1,747.2 million (EUR 1,300.7 million) was invested in private equity funds; a further EUR 556.5 million (EUR 635.6 million) was attributable predominantly to investments in high-yield bonds and in the credit sector – with the decrease here reflecting the aforementioned regrouping of this asset class away from funds towards direct investments. In addition, altogether EUR 805.9 million (EUR 582.3 million) was invested in structured real estate investments. The uncalled capital with respect to the aforementioned alternative investments totalled EUR 1,435.3 million (EUR 1,275.6 million).

At the end of the year under review we held a total amount of EUR 1.8 billion (EUR 1.6 billion) in short-term investments and cash. Funds withheld amounted to EUR 11.3 billion (EUR 10.0 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 2021, broken down into percentages of the balance sheet total.

Capital structure as at 31 December 2021 M 28



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 15.4% (16.6%) of the balance sheet total as well as the long-term debt and – especially – notes payable at altogether 5.3% (4.8%) 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

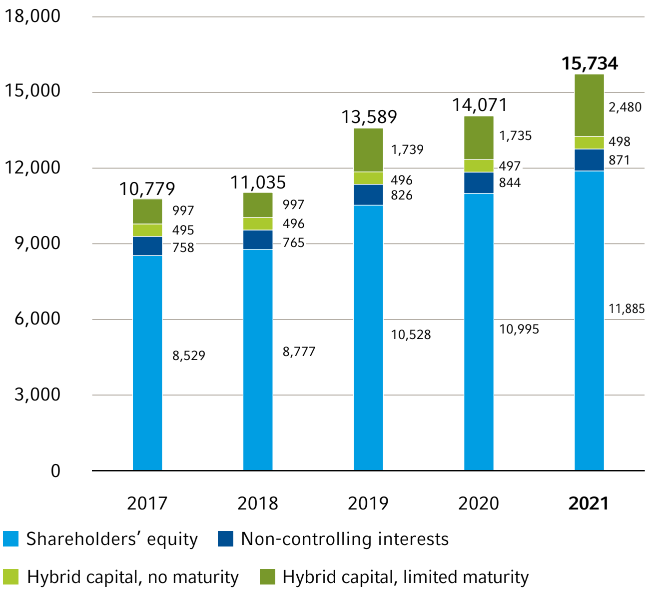
A key strategic objective of Hannover Re is long-term capital preservation. We have issued hybrid capital as an equity substitute in order to keep the cost of capital on a low level. The policyholders' surplus is an important management ratio in the context of Hannover Re's comprehensive capital management. 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 15,733.6 million (EUR 14,071.0 million) as at the balance sheet date, an increase of 11.8%. Retained earnings rose by EUR 688.7 million to EUR 8,985.8 million (EUR 8,297.1million) 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 189.3 million. In the year under review a subordinated bond in a nominal amount of EUR 750.0 million was issued.

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 27 et seq. of this report.

Development of policyholders' surplus **M 29**
in EUR million



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 86 et seq.).

Group shareholders' equity

Compared to the position as at 31 December 2020, Group shareholders' equity increased in the year under review by EUR 916.8 million, equivalent to 7.7%, to EUR 12,756.2 million. After adjustment for non-controlling interests, it rose by EUR 890.0 million to EUR 11,885.0 million. The book value per share increased accordingly by 8.1% to EUR 98.55. The changes in the shareholders' equity were shaped chiefly by the following developments:

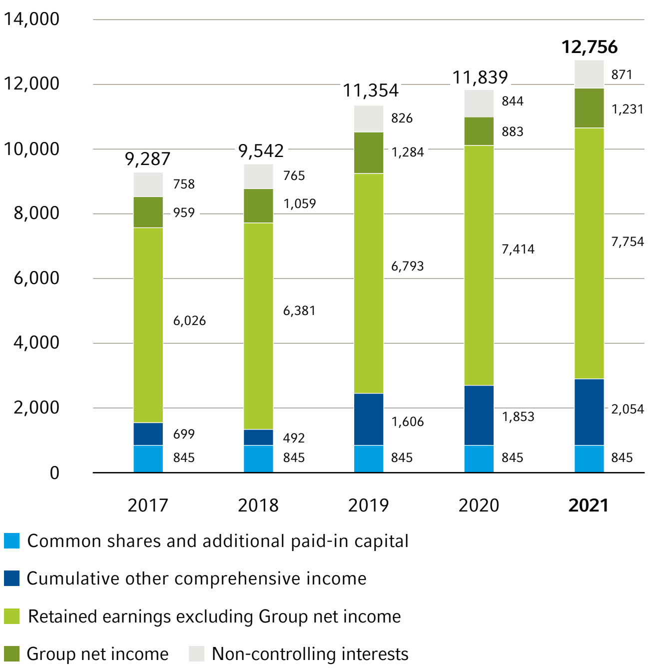
Cumulative foreign currency gains amounting to EUR 366.2 million were recorded as at the balance sheet date as a consequence of exchange rate movements of foreign currencies against the euro. Compared to the cumulative foreign currency losses of EUR 330.7 million in the previous year, this constitutes an increase of EUR 696.9 million in the foreign currency gains and losses recognised directly in equity. This increase in the currency translation reserve from the translation of the shareholders' equity of foreign subsidiaries resulted principally from the devaluation of the euro against almost all relevant currencies, especially the US dollar.

Net unrealised gains on investments stood at EUR 1,768.3 million, a decrease of EUR 507.6 million compared to the beginning of the year under review. This reflects the general rise in interest rates observed in our main currency areas in the course of the year under review.

Non-controlling interests in shareholders' equity increased by EUR 26.8 million to EUR 871.2 million as at 31 December 2021. The bulk of this – in an amount of EUR 740.1 million – is attributable to the non-controlling interests in E+S Rückversicherung AG.

The Group net income for 2021 attributable to the shareholders of Hannover Rück SE amounted to EUR 1,231.3 million (EUR 883.1 million). The non-controlling interest in the profit generated in the year under review totalled EUR 68.9 million (EUR 35.7 million).

Development of Group shareholders' equity **M 30**
in EUR million



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 is 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 4,257.7 million (EUR 3,348.4 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 six 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 31

in EUR million	Issue date	Coupon in %	2021	2020
Hannover Finance (Luxembourg) S.A., subordinated bond, EUR 500 million; 2012/2043	11/20/2012	5.00	499.2	498.9
Hannover Rück SE, subordinated bond, EUR 500 million; 2014/undated	9/15/2014	3.375	497.5	496.8
Hannover Rück SE, senior bond, EUR 750 million; 2018/2028	4/18/2018	1.125	744.9	744.1
Hannover Rück SE, subordinated bond, EUR 750 million; 2019/2039	10/9/2019	1.125	742.0	741.0
Hannover Rück SE, subordinated bond, EUR 500 million; 2020/2040	7/8/2020	1.75	495.4	494.9
Hannover Rück SE, subordinated bond, EUR 750 million; 2021/2042	3/22/2021	1.375	743.3	–
Total			3,722.3	2,975.7

Several Group companies have also taken up long-term debt – principally in the form of mortgage loans – amounting to EUR 535.4 million (EUR 372.7 million).

For further explanatory information please see our remarks in the notes to this report, section 6.12 "Financing liabilities", page 236 et seq., and section 6.13 "Shareholders' equity and treasury shares", page 238 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 261 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 170 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 32

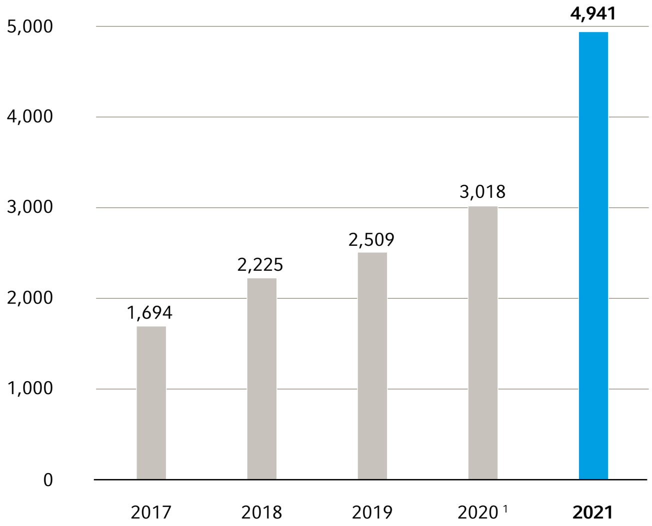
in EUR million	2021	2020[1]
Cash flow from operating activities	4.940,5	3.018,2
Cash flow from investing activities	(5.261,1)	(2.031,8)
Cash flow from financing activities	277,5	(726,0)
Exchange rate differences on cash	120,1	(73,2)
Change in cash and cash equivalents	77,0	187,2
Cash and cash equivalents at the beginning of the period	1.278,1	1.090,9
Change in cash and cash equivalents according to cash flow statement	77,0	187,2
Cash and cash equivalents at the end of the period	**1.355,1**	**1.278,1**

[1] Restated pursuant to IAS 8

Cash flow from operating activities

The cash flow from operating activities, which also includes inflows from interest received and dividend receipts, amounted to EUR 4,940.5 million in the year under review as opposed to EUR 3,018.2 million in the previous year. The increase of altogether EUR 1,922.3 million was due to the positive development of operational business.

Cash flow from operating activities M 33
in EUR million



[1] Restated pursuant to IAS 8

Cash flow from investing activities

The balance of cash inflows and outflows from operating activities and financing activities in an amount of EUR -5,261.1 million (EUR -2,031.8 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 subsection.

Cash flow from financing activities

The cash inflow from financing activities amounted on balance to EUR 277.5 million (EUR -726.0 million) in the year under review. This item includes primarily the dividends paid out in the financial year by Hannover Rück SE, E+S Rückversicherung AG and other Group companies to parties outside the Group totalling EUR 588.5 million (EUR 708.8 million) as well as the balance from the issuance and repayment of long-term debt, especially bonds, in an amount of EUR 865.5 million (EUR -17.7 million).

Overall, the cash and cash equivalents therefore increased year-on-year by EUR 77.0 million to EUR 1,355.1 million.

For further information on our liquidity management please see page 86 et seq. of the "Opportunity and 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 Rück SE on the basis of an interactive rating process and have awarded it very good ratings. The rating agencies highlight in particular the profitability, strong competitive position, capitalisation and risk management of Hannover Rück SE.

Financial strength ratings of Hannover Rück SE **M 34**

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

Financial strength ratings of subsidiaries **M 35**

	Standard & Poor's	A.M. Best
E+S Rückversicherung AG	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 South 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 Re South Africa Ltd. (HRe SA) benefits from parental guarantees issued by Hannover Rück SE (the "Guarantor"). The guarantees cover all of the payment obligations of HRe 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 third party beneficiaries of these guarantees.

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 36**

	Standard & Poor's	A.M. Best
Hannover Rück SE subordinated bond, EUR 750 million; 2021/2042	A	–
Hannover Rück SE subordinated bond, EUR 500 million: 2020/2040	A	–
Hannover Rück SE subordinated bond, EUR 750 million; 2019/2039	A	–
Hannover Rück SE senior bond, EUR 750 million; 2018/2028	AA-	–
Hannover Rück SE subordinated bond, EUR 500 million; 2014/undated	A	a+
Hannover Finance (Luxembourg) S.A. subordinated bond, EUR 500 million; 2012/2043	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. This participation is indirectly allocable to HDI Haftpflichtverband der Deutschen Industrie Versicherungsverein auf Gegenseitigkeit, Hannover, which holds the majority stake in Talanx AG.

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 (AktG). Amendment of the Articles of Association is governed by §§ 179 et seq. Stock Corporation Act (AktG) 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 (AktG). In this connection the Annual General Meeting authorised the Executive Board on 6 May 2020 pursuant to § 71 Para. 1 Number 8 Stock Corporation Act (AktG) to acquire treasury shares on certain conditions for a period of five years, ending on 5 May 2025.

We describe below 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, as well as 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 management report pursuant to § 315 Para. 5 of the German Commercial Code (HGB) in conjunction with § 298 Para. 2 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 numerous 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 website of the Companies Register. This annual financial statement can also be accessed on the company's website (www.hannover-re.com).

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

Hannover Rück SE recorded a pleasing business development in the 2021 financial year. The gross premium in total business grew by 14.2% to EUR 21.9 billion (previous year: EUR 19.2 billion). The level of retained premium increased to 69.0% (68.3%). Net premium earned climbed by 14.3% to EUR 14.8 billion (EUR 12.9 billion).

Condensed profit and loss account of Hannover Rück SE **M 37**

in EUR thousand	2021	2020
Earned premiums, net of retrocession	14,768,338	12,923,326
Allocated investment return transferred from the non-technical account, net of retrocession	187,951	189,357
Other technical income, net of retrocession	–	0
Claims incurred, net of retrocession	11,346,793	9,923,590
Changes in other technical provisions, net of retrocession	(103,362)	(101,263)
Bonuses and rebates, net of retrocession	5	17
Operating expenses, net of retrocession	3,632,733	3,296,559
Other technical charges, net of retrocession	262	374
Subtotal	**(126,866)**	**(209,120)**
Change in the equalisation reserve and similar provisions	(545,672)	(694,004)
Net technical result	**(672,538)**	**(903,124)**
Investment income	1,913,417	1,803,280
Investment charges	226,000	129,998
Allocated investment return transferred to the technical account	(197,485)	(196,977)
Other income	315,449	186,711
Other charges	356,833	366,123
Profit or loss on ordinary activities before tax	**776,010**	**393,769**
Taxes on profit and income and other taxes	74,801	6,956
Profit for the financial year	**701,209**	**386,813**
Profit brought forward from previous year	557,313	713,716
Allocations to other retained earnings	522	529
Disposable profit	**1,258,000**	**1,100,000**

The underwriting result (before changes in the equalisation reserve) came in at EUR -126.9 million (EUR -209.1 million). An amount of EUR 545.7 million (EUR 694.0 million) was allocated to the equalisation reserve and similar provisions in the year under review.

Large losses again exceeded our expectations in the 2021 financial year. Particularly notable major losses were incurred from disastrous flooding in Europe, hurricanes and other weather phenomena in the United States as well as losses from unrest in South Africa. The total net expenditure on major losses for Hannover Rück SE amounted to EUR 598.4 million (EUR 1,186.4 million).

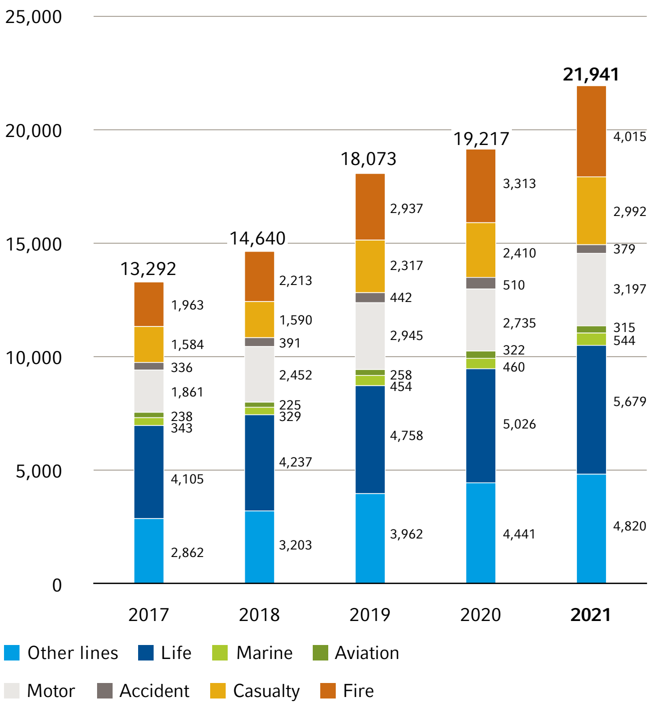
Ordinary investment income including deposit interest came in below the previous year's level at EUR 1,505.7 million (EUR 1,600.6 million), primarily due to a one-time effect from our investment holding companies in the previous year. Ordinary income from fixed-income securities totalled EUR 478.5 million (EUR 485.0 million). Net gains of EUR 280.4 million (EUR 166.2 million) were realised on disposals. The increase resulted principally from the release of substantial hidden reserves in connection with the regrouping of our equity holdings and the portfolio of high-yield bonds. Write-downs of EUR 31.6 million (EUR 34.3 million) were taken on investments, for the most part on bearer debt securities held as current assets, in the area of alternative investments and on deposits with ceding companies. The write-downs contrasted with write-ups of EUR 6.0 million (EUR 1.5 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 slightly to EUR 1,687.4 million (EUR 1,673.3 million).

The profit on ordinary activities rose to EUR 776.0 million (EUR 393.8 million). The year under review closed with a profit for the year of EUR 701.2 million (EUR 386.8 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. Since 2014 a quota share retrocession from Hannover Rück SE to E+S Rückversicherung AG has been maintained in property and casualty reinsurance.

Hannover Rück SE: Breakdown of gross premium by individual lines of business M 38
in EUR million



Fire

Gross premium income for the fire line climbed by 21.2% to EUR 4,015.5 million (EUR 3,312.7 million). The net loss ratio increased to 65.0% (63.9%). The underwriting result closed at EUR 152.9 million (EUR 114.2 million). An amount of EUR 85.6 million (EUR 128.7 million) was allocated to the equalisation reserve and similar provisions.

Liability

Gross premium in liability business rose by 24.1% to EUR 2,991.9 million (EUR 2,410.2 million). The loss ratio increased to 78.8% (71.4%). The underwriting result closed at EUR -171.4 million (EUR 4.5 million). An amount of EUR 217.1 million (EUR 311.9 million) was allocated to the equalisation reserve and similar provisions.

Accident

Gross premium income for the accident line contracted by 25.6% to EUR 379.1 million (EUR 509.7 million). The net loss ratio rose to 68.6% (42.2%). The underwriting result came in at EUR 10.3 million (EUR 48.1 million). An amount of EUR 19.4 million was withdrawn from the equalisation reserve and similar provisions, after an allocation of EUR 22.8 million in the previous year.

Motor

Gross premium for the motor line grew by 16.9% to EUR 3,197.2 million (EUR 2,734.7 million). The loss ratio climbed to 75.4% (66.5%). The underwriting result closed at EUR -75.9 million (EUR 31.3 million). An amount of EUR 46.3 million (EUR 209.1 million) was allocated to the equalisation reserve and similar provisions.

Aviation

Gross premium income fell by 2.1% to EUR 315.5 million (EUR 322.4 million). The loss ratio climbed to 55.8% (46.3%). The underwriting result closed at EUR 43.4 million (EUR 65.4 million). An allocation of EUR 16.1 million (EUR 38.0 million) was made to the equalisation reserve and similar provisions.

Marine

The gross premium volume for the marine line grew by 18.2% to EUR 543.8 million (EUR 459.9 million). The net loss ratio increased to 62.9% (55.9%). The underwriting result stood at EUR 30.3 million (EUR 31.9 million). An amount of EUR 41.6 million (EUR 25.5 million) was allocated to the equalisation reserve and similar provisions.

Life

The gross premium in the life line grew by 13.0% to EUR 5,678.9 million (EUR 5,026.2 million). 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 life reinsurance, we write financial solutions business as well as health and longevity risks on a worldwide basis. The financial year just ended was crucially shaped by the Covid-19 pandemic. This is clearly reflected in the result, which was reduced by an increased burden of losses – thereby overshadowing a number of positive developments in our strategic business segments. The underwriting result in life business amounted to altogether EUR -64.8 million (EUR -42.1 million).

Other lines

The lines of health insurance, 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 8.5% to EUR 4,819.5 million (EUR 4,441.3 million). The net loss ratio retreated to 69.7% (85.6%). The underwriting result closed at EUR -51.7 million (EUR -462.4 million). After a withdrawal of EUR 42.0 million in the previous year, an allocation of EUR 158.4 million was made to the equalisation reserve and similar provisions.

Assets and financial position

Balance sheet structure of Hannover Rück SE M 39

in EUR thousand	2021	2020
Assets		
Intangible assets	61,356	61,439
Investments	45,535,383	38,944,054
Receivables	6,227,938	4,996,983
Other assets	622,690	672,932
Prepayments and accrued income	238,500	188,787
Total assets	**52,685,867**	**44,864,195**
Liabilities		
Subscribed capital	120,597	120,597
Capital reserve	880,608	880,608
Retained earnings	630,511	630,511
Disposable profit	1,258,000	1,100,000
Capital and reserves	**2,889,716**	**2,731,716**
Subordinated liabilities	3,000,000	2,250,000
Technical provisions	39,550,449	33,704,668
Provisions for other risks and charges	326,864	346,509
Deposits received from retrocessionaires	3,714,568	3,332,731
Other liabilities	3,204,212	2,498,571
Accruals and deferred income	58	0
Total liabilities	**52,685,867**	**44,864,195**

Our portfolio of assets under own management increased to EUR 36.9 billion (EUR 31.4 billion). The balance of unrealised gains on fixed-income securities and bond funds declined to EUR 1,078.2 million (EUR 1,578.6 million). Along with the moderate realisation of reserves, this was primarily a reflection of decreases in valuations due to higher interest rates, which were not offset by very largely stable risk premiums on corporate bonds.

Deposits with ceding companies, which are shown under the investments, increased to EUR 8.7 billion (EUR 7.6 billion).

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 44,182.2 million (EUR 37,586.4 million). Among other things, the issuance of a subordinated bond had a positive effect here. The balance sheet total of Hannover Rück SE grew to EUR 52.7 billion (EUR 44.9 billion).

An ordinary dividend of EUR 4.50 per share, equivalent to EUR 542.7 million (EUR 633.3 million), was paid out in the year under review for the 2020 financial year.

It will be proposed to the Annual General Meeting on 4 May 2022 that a dividend of EUR 4.50 per share plus a special dividend of EUR 1.25 per share should be paid for the 2021 financial year. This corresponds to a total distribution of EUR 693.4 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 2022" on page 147 et seq., which also reflect the expectations for Hannover Rück SE. We expect the profit reported for the 2022 financial year under the German Commercial Code (HGB) to improve significantly on the previous year.

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]). The combined non-financial information statement presented here has, however, been reviewed 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 275 et seq.).

Introduction

The present combined non-financial information statement was drawn up in accordance with §§ 315c in conjunction with 289c to 289e German Commercial Code (HGB) as well as Article 8 of Regulation (EU) 2020/852 of the European Parliament and of the Council of 18 June 2020 on the establishment of a framework to facilitate sustainable investment, and amending Regulation (EU) 2019/2088 (hereinafter EU Taxonomy Regulation). The identification of material contents reflected the materiality definitions of the Global Reporting Initiative (GRI) and the German Commercial Code (HGB). The description of concepts is guided by the structure of the GRI Standards, Standard GRI 103-1 to GRI 103-3 (Management Approach).

The combined non-financial information statement encompasses – unless presented separately – the disclosures for the Group and the parent company Hannover Rück SE. It contains the legally required information relating to material environmental matters, employee matters, social matters, respect for human rights and fighting corruption and bribery. Within the individual aspects, the underlying concepts and internal due diligence processes are discussed and available findings are reported. The identified material issues were allocated to the aspects (see section "Materiality analysis"). In addition, the combined non-financial information statement is to be used to report on material risks pursuant to § 289c Para. 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. Information pursuant to requirements of Article 8 of the EU Taxonomy Regulation has been integrated for the first time.

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

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 in accordance with the GRI Standards.

For a description of the business model the reader is referred to the subsection "Business model" under "Foundations of the Group".

Strategic orientation

The Group strategy of Hannover Re was revised most recently in 2020. It is valid for the 2021 – 2023 strategy cycle.

In our "Striving for sustainable outperformance" strong governance, risk management, integrated compliance and corporate social responsibility constitute the foundations for our growth as a reliable global reinsurance partner. Three performance drivers – preferred business partner, innovation catalyst, earnings growth – are based on proven strengths and address the global trends affecting the insurance and reinsurance industry. Three performance enablers – empowered people, a lean operating model and effective capital management – have proven essential over the last decade for outperforming the industry average in terms of the return on equity. We have launched four strategic initiatives – Customer Excellence, the Innovation and Digital Strategy, the Asia-Pacific Growth Initiative and Talent Management – that we consider especially crucial and we intend to work on them intensively throughout the entire strategy cycle.

Altogether, our strategic programme encompasses 25 cross-functional strategy contributions that support the Group strategy. "Corporate Social Responsibility" is one of these subject areas that we shall refine in the strategy cycle 2021–2023 and in which we pursue non-financial goals, among others. Associated topics are specified more closely in our Sustainability Strategy 2021-2023. This is comprised of the four action fields Transparency, Employees, Core Business and Commitment as well as underlying measures and goals. The sustainability strategy is publicly available on our website.

The strategic programme is supported and monitored by the division Group Performance & Strategy Development and progress reports are provided to the Executive Board quarterly (reporting on strategic initiatives) and half-yearly (management reporting).

Our system of strategic targets encompasses qualitative and quantitative goals. Along with traditional, balance sheet-oriented IFRS indicators we have defined economic targets that are derived from our certified internal capital model and the Solvency II reporting.

We have also defined financial targets for the strategy cycle 2021–2023. We report on these targets and target attainment on page 27 et seq. of the section "Management system" in this combined management report.

Materiality analysis and material topics

Hannover Re regularly conducts materiality analyses in order to identify material ESG (environmental, social and governance) issues, most recently in the spring of 2020 in the form of interviews/workshops with internal and external experts. The basis consisted of a list of possible topics derived from the materiality analysis conducted in 2018, dialogues with stakeholders and non-governmental organisations, media reports and the GRI Framework. All experts were encouraged to indicate other topics.

The analysis looked at two dimensions (so-called double materiality): positive / negative impacts of Hannover Re's operations on the respective topic (inside-out perspective) and positive / negative impacts of the respective topic on Hannover Re's operations (outside-in perspective). Each topic was scored on a scale of 1 to 5 in this regard. Extensive interviews were conducted with the external experts (stakeholder group: asset managers, ESG analysts, representatives of non-governmental organisations, representatives of the trade press as well as representatives of foundations and associations). All topics that received an average score of at least 3.75 were marked as material. Four workshops were held with the internal experts (stakeholder group: employees) from various market and service units to score the topics on the list. In this case, too, the materiality threshold was set at 3.75. Some topics were clustered at the workshops. The topics were transferred to a materiality matrix as averaged values from the internal and external scores. In this context, those topics that fell below the threshold after averaging also continued to be material. As a result, 13 material topics were identified.

In view of its considerable significance, the topic of Covid-19 had already been picked up on last year as an additional topic in the non-financial reporting. In the year under review the Executive Board validated the materiality analysis and included Covid-19 as a supplementary material topic.

Allocation of the non-financial aspects to the material topics **M 40**

Non-financial aspect	Material topic	
Environmental matters	Climate change Sustainable protection ESG in insurance business ESG in asset management	Risk management
Employee matters	Attractiveness as an employer Learning and development Health and wellness of employees Diversity and equal opportunities Covid-19	
Social matters	Dialogue Sustainable protection ESG in asset management	
Respect for human rights	Human rights ESG in insurance business ESG in asset management	
Fighting corruption and bribery	Compliance Good governance	

Risk management system

In the course of its operations as a reinsurance company Hannover Re knowingly enters into many different risks. It is equipped with an adequate and effective risk management system for ongoing monitoring of these and other risks.

In the context of its risk management system Hannover Re also considers risks that arise in connection with environmental concerns, social issues or corporate governance – so-called sustainability or ESG risks. These may be associated with negative implications for the net assets, financial position and results of operations (outside-in) as well as negative implications for the ESG landscape (inside-out). Both risks can affect, among other things, the company's reputation. Sustainability risks do not constitute a risk category of their own, but can instead have implications for all risk categories. In the year under review the meta-risk of sustainability and reputational risks was added to "Other risks" in the risk register.

The Executive Board approved a framework for the management of sustainability and reputational risks with Group-wide validity in the year under review in order to underscore the importance of the topic.

For further information we would refer to the "Opportunity and risk report" in the combined Group management report.

Compliance management system

Compliance encompasses not only compliance with statutory and regulatory requirements (legal compliance) but also fulfilment of external standards such as corporate governance principles as well as internal guidelines. At Hannover Re, compliance topics are addressed in a compliance management system. This is geared to international standards and ensures that the core tasks of a compliance function are performed:

- Examining and evaluating changes in the legal/regulatory environment and determining measures (monitoring function)
- Advising the Executive Board and the employees on compliance with laws (advisory function)
- Identifying and evaluating specific current and emerging compliance risks (identification function)
- Identifying and assessing material compliance risks (risk function)

The Executive Board is responsible for and tasked with ensuring adequate and effective compliance structures. Execution falls to the Chief Compliance Officer (CCO), who reports in a direct line to the Executive Board on material compliance issues and developments. The annual compliance report is also submitted to the Supervisory Board and its Finance and Audit Committee. The CCO is supported in his work by the Compliance department, specially designated officers and a worldwide network of local compliance officers. Monitoring procedures are conducted for the management of compliance risks. Checks can also take place on an ad hoc basis where there are grounds for suspicion. The underlying compliance risk analysis is updated annually.

The CCO works closely with Risk Management to ensure a consistent approach to operational risks, which include compliance risks. Several compliance committees also exist, comprised of members from the operational business groups as well as from the areas of Group Legal, Finance, Accounting and Investments. Among other things, the compliance committees examine reinsurance treaties with a special eye to compliance with supervisory requirements and accounting standards and they take fundamental decisions on dealing with sanctions.

Attentive and trained employees are a crucial component of a functioning compliance management system – both in order to avoid unconscious violations and to recognise and prevent deliberate violations and associated risks. Hannover Re uses various training activities in order to sensitise employees to compliance-related issues. On joining the Group, all new members of staff take compliance training. In addition, focused training activities are held on various compliance topics throughout the year for specific target groups. This is supplemented by dedicated compliance pages in the intranet containing more extensive information. In 2020 Hannover Re also launched a 12-month compliance campaign to raise awareness among the workforce. This was concluded in the year under review.

Should members of staff or indeed persons outside the company become aware of compliance violations, harmful behaviour or risks, such suspicions can be reported to the CCO or the Compliance department or, if so desired, anonymously through an online speak-up system.

For further information we would refer to the "Opportunity and risk report" in the combined Group management report.

Environmental matters

In connection with environmental matters, special importance attaches to the active exploration of the causes and consequences of progressive climate change. The impacts can be felt ever more clearly. Extreme weather events and natural disasters such as heatwaves and droughts, severe precipitation events and storms, as well as continuous processes such as glacier melting and rising sea levels, have far-reaching implications for society and the economy and lead to considerable economic and insured losses. What is more, further environmental concerns, such as the proper functioning of ecosystems or the water resources of ground and surface waters, are directly affected by climate change. If the earth's temperature were to continue rising unchecked, this would increase the scale of such phenomena and risks. Yet the sought-after transition to a climate-friendly, resource-saving economy is also associated with a number of social and economic impacts.

In view of these comprehensive environmental, economic and social impacts, climate change is at the heart of numerous national and international regulatory initiatives and measures. The goals of the Paris Agreement on climate change, under which the international community committed in 2015 to limit the rise in the global average temperature to well below 2 °C, preferably to 1.5 °C, compared to pre-industrial levels, are considered a key driving force here. In the closing statement of the UN Climate Change Conference 2021 in Glasgow, known as COP26, the participating countries reconfirmed the 1.5 °C target.

Impacts on operations

Climate change goes hand-in-hand with a range of impacts on Hannover Re's operations, e.g. due to an increase in the frequency and/or severity of losses (physical risks) or changing framework conditions with implications for reinsurance business and investments (transitory risks). Furthermore, on the societal level an increase in environment-related lawsuits against businesses and public institutions can be observed (litigation risks) that may adversely affect the insurance industry.

The risks posed by climate change can affect numerous risk categories of the risk register and are extensively monitored through the risk management system. ESG topics are also addressed as part of the management of sustainability and reputational risks. For information on the corresponding concepts and implemented stress test mechanisms the reader is referred to the "Opportunity and risk report" in the combined Group management report. When it comes to evaluating impacts and risks, one advantage is that business in property and casualty reinsurance is normally renewed annually. This means that it is possible to adjust the premiums or risk appetite each year according to the conducted risk assessment and hence manage the exposure on a risk-oriented basis. For information on the industry-specific environment and the results of operations in property and casualty reinsurance, please see the section "Report on economic position".

In support of the goals of the Paris Agreement on climate change, Hannover Re also adopted concrete targets in the year under review for the achievement of net zero emissions: net zero in reinsurance business by 2050, net zero in investments by 2050 and net zero in our own business operations by 2030. These targets are associated with a range of impacts on our operations.

Impacts of our operations

Insurance business

Fossil fuels are considered to be one of the major drivers of climate change. With a view to countering this and facilitating the transformation to a lower carbon economy, Hannover Re encourages the expansion of renewable energy sources in property and casualty reinsurance that range from wind energy (both onshore and offshore) through photovoltaic energy and hydroelectric power to geothermal energy.

At the same time, Hannover Re is consistently seeking to reduce its exposure to fossil fuels. The goal is to no longer cover any risks connected with the mining of and power generation from power plant and thermal coal by the year 2038 in the entire portfolio of property and casualty reinsurance business. Work began in the year under review on the elaboration of our internal positioning for the property and casualty reinsurance sector. This will flesh out the approach in greater detail and address further issues (such as oil and gas). The position paper is applicable to both facultative and obligatory business.

Reinsurance covers for individual risks are written in facultative reinsurance, i.e. the treaties can be allocated to specific projects or policyholders. In this segment, reinsurance has no longer been provided for planned new coal-fired plants or thermal coal mines since April 2019. Moreover, from February 2020 onwards our facultative division has excluded any new business connected with thermal coal or the associated infrastructure. Thermal coal infrastructure encompasses mines, coal-fired power plants and facilities as well as port and rail operations allocable exclusively to the coal industry. In the case of mixed groups, companies are excluded that generate more than 30% of their revenues from activities in thermal coal. In addition, since 2020 the facultative division has no longer accepted any new individual risks for companies that hold 20% or more of their oil reserves in oil sands and it excludes oil sands extraction and processing operations. Oil sands extraction and processing encompass the extraction of bituminous sand (both in surface mining and in the form of in-situ extraction) from bitumen, refinement into synthetic crude oil, further processing of this synthetic crude into petroleum products and the associated transportation by pipeline or rail. The exclusions for oil and gas were expanded in the year under review. From mid-2022 onwards the facultative division will no longer take on any new covers for project policies associated with the exploration and/or development of new oil and gas reserves (upstream) or for project policies that exclusively support the transportation and storage (midstream) of new oil and gas reserves. Complementary to this, the facultative division adopted an ESG manual in the year under review that addresses other environmental concerns. Transactions are to be declined if they may entail damage to protected areas classified as IUCN category 1a/b, wetlands protected under the Ramsar Convention or world cultural heritage sites. Furthermore, the facultative division no longer accepts any new risks connected with projects for the extraction of oil and gas in Arctic regions. These are defined as the zone around the Arctic Circle which runs in a circle of latitude 66.34° north of the Equator. This includes the Arctic National Wildlife Refuge (ANWR) in the United States. In addition, no risks are written that are connected with the development of new oil and gas deposits in deep waters below 5,000 feet. The facultative underwriters at all locations were already provided with training in ESG topics and the ESG manual in 2020.

In obligatory reinsurance, large-volume portfolios with sometimes heterogenous contents are accepted. We are engaged in talks with our customers in order to obtain an overview of the CO2 intensity of the business ceded to us. In 2021 Hannover Re joined the Net-Zero Insurance Alliance (NZIA) so as to work with other participants on the development of metrics and targets. On this basis we shall identify measures for the progressive reduction of our carbon footprint.

In the year under review Hannover Re became a signatory to the UN Principles for Sustainable Insurance (UN PSI).

Investments

ESG criteria are similarly applied on the asset management side. These have been defined in writing in an internal Responsible Investment Policy, application of which is ensured by an ESG officer on the investment team.

Within the portfolio of assets under own management, fixed-income securities (government and semi-government bonds, corporate bonds and covered bonds [with the exception of collateralised debt obligations – CDOs]) and listed equities have been subject to half-yearly negative screening since 2012. Only a few niche funds or asset classes, such as real estate, private equity or structured investments, cannot be analysed using this system. Similarly, before any new investments are made corresponding screening is carried out with an eye to existing ESG criteria. Issuers who do not satisfy our criteria are actively scaled back.

In its investments, too, Hannover Re is aiming to consistently reduce its carbon footprint. We use concrete, climate-related exclusions for this purpose and exclude from our investing activities, for example, companies that generate more than 25% of their revenues from the mining of or power generation from thermal coal or extract oil through the exploitation of oil sands. In the year under review we adopted interim goals for our net zero emissions target by the year 2050. The focus is on progressive decarbonisation of the asset portfolio. We shall do this, in the first place, by reducing the carbon footprint (Scope 1 and 2) of our assets under own management from the areas of corporate bonds, covered bonds and equities by 30% by the year 2025, compared with the base year of 2019. Our decarbonisation efforts are guided by an external "carbon risk rating" that gives us an extensive overview of our investment portfolio's carbon footprint.

In addition to our negative screening, we are increasingly adding to our portfolio sustainable investments that support the transformation towards a resource-efficient economy. These include, for example, infrastructure assets such as renewable energies or clean transportation as well as dedicated impact funds. Our goal is to increase the volume by at least 10% by the end of 2023 compared to the end of 2020.

Not only that, the implementation of the best-in-class investment approach that was completed in 2019 makes possible ongoing monitoring of the existing portfolio's sustainability quality.

Since 2020 Hannover Re has been a signatory to the UN Principles for Responsible Investment (UN PRI).

Opportunities

Changing general framework conditions, increasing values and hence a greater need for protection, combined with the transition to a net zero greenhouse gas economy – inter alia in connection with the EU Action Plan for Financing Sustainable Growth and the European Green Deal –, will bring new business opportunities. Such opportunities will open up, for example, through an expansion of parametric covers, growth in natural catastrophe business and further solutions for mitigation of/adaptation to climate-related risks or increased premiums in the renewable energy sector.

Environmental matters: Selected goals M 41

Goal	Target indicator by 2023	Status 31.12.2021
Supporting the goals of the Paris Agreement on climate change	Definition of measures to reduce emissions, enhance transparency, increase adaptability and mitigate the impacts of climate change in the action fields	Cross-cutting goal, ongoing
Promoting the development of actuarial methods for the assessment of risks from natural perils and climate change	Active involvement in and financial sponsorship of various market initiatives and events	Ongoing, on target
Advancing a global energy transition through the reinsurance of renewable energy sources	Increase of 60% in the facultative premium volume for renewable energies	Increase on the planned scale not achieved, under observation
No new business in the insurance of individual risks in coal-fired power plants or mines for thermal coal	No underwriting of facultative new business in coal-fired power plants or mines for thermal coal	Exclusions further tightened, overachieved
Reducing the CO_2 load in connection with coal-fired power plants or mines for thermal coal in obligatory insurance portfolios	Phased withdrawal according to step-by-step plan – completion of the evaluation phase and beginning of the implementation phase; complete withdrawal by 2038	Development of an internal position paper and inclusion of further ESG criteria, on target
Asset management: reducing the CO_2 load in the asset portfolio	Goal tightened: reduction of the carbon footprint (corporate bonds, covered bonds, equities) by 30% by 2025 (base year 2019)	Annual reduction on target
Reducing greenhouse gas emissions at the Hannover location	Reduction of greenhouse gas emissions at the Hannover location by 25% per employee (base year 2019)	Valid evaluation of the figures not possible due to the ongoing pandemic
Increasing transparency around greenhouse gas emissions at the worldwide locations	Expansion of data recording for relevant environmental aspects to at least 75% of the global workforce. The assessed locations are to become 100% climate-neutral	Concept approved by the Executive Board, on target

Employee matters

Qualified and motivated people are at the heart of a company's business activities. Growing importance is attached to sustainability-related aspects in all phases of their employment. Most notably, the demographic shift in industrial countries is leading to intensified competition for well-qualified junior staff. It is evident that members of Generations X, Y and Z are especially likely to consider not only monetary aspects when it comes to choosing their employer. Other aspects move front and centre, such as adherence to principles of responsible corporate governance, measures to realise sustainable development in the core business, a company's reputation, culture and work atmosphere, compatibility of work and family life, the availability of development and career opportunities and other additional benefits – summed up as the "total reward". On top of this, the Covid-19 pandemic continued to present companies around the world with special challenges. At the same time, existing trends such as mobile working and virtual/hybrid meetings gained added impetus.

Employees are part of a company and part of social structures outside that company. All measures taken strengthen Hannover Re's position on the labour market while at the same time having external implications. For this reason, we have chosen not to consider the impacts separately below.

The Covid-19 pandemic, the direct and indirect effects of which affected Hannover Re and its employees, among others, was a crucial factor as in the previous year. For information about the impacts on the business development please see the section of the same name. For information about the impacts on the risk management systems please see the "Opportunity and risk report" in the combined Group management report.

Impacts on our operations and impacts of our operations

As a service provider in the insurance industry, Hannover Re operates in a highly specialised environment and at the same time finds itself faced with the framework conditions described above. A risk could arise if vacancies cannot be filled quickly enough or candidates of the necessary quality cannot be appointed. At the same time, companies benefit directly from motivated and high-performing employees.

A Talent Management initiative sponsored by the Chief Executive Officer was launched in 2020. The goal is to attract talented new people and retain them at the company, to optimally deploy, foster and develop them at all locations and to create a work environment that makes Hannover Re the employer of choice. In addition, the initiative envisages measures to promote global mobility, the optimisation of relevant support processes and systems as well as a greater interlinking of worldwide human resources activities.

For information on operational risks that can arise in connection with or independently of the activities of the workforce, the reader is referred to the "Opportunity and risk report" in the combined Group management report. This includes business interruption risks and the risk of cyber attacks in connection with Covid-19 as well as countermeasures.

For information about the requirements placed on the specialist qualifications and personal reliability (fit & proper criteria) of persons in key positions, we would refer to the Solvency and Financial Condition Report of Hannover Rück SE 2020 from page 33 onwards.

Hannover Re employed 3,346 members of staff (previous year: 3,218) Group-wide at the reference date of 31 December 2021.

Development opportunities

Hannover Re operates in a knowledge-intensive industry with a high level of specialisation. Continuous and appropriate (further) training of employees serves to assure the high quality standard of services and a positive perception of the company. At the same time, the programme of further training enables employees to continue their personal growth and it promotes life-long learning. In support of our approach to talent management, our goal is to align ongoing training activities more closely with the values, competencies and leadership fundamentals and to extend reporting to additional locations. A global leadership development programme "LEAD" was designed in the year under review and work on its implementation began. Furthermore, a global assignment policy was approved and we set about expanding the internal job market to all locations around the world.

The Covid-19 pandemic did not significantly restrict the available training opportunities because they were converted to virtual solutions at short notice.

Health and wellness

The performance capability and health of our employees are essential prerequisites for sustainable development of our business. Given that they work for a service provider, our staff members do not engage in activities that expose them to particularly high risk. Nevertheless, the transformation in the world of work, the need for efficiently structured work processes and a constant pressure for change can lead to reduced productivity and physical and/or psychological disorders – and hence to direct economic impacts on the company as well as social implications for the employees concerned, their private sphere, their colleagues and the social welfare systems.

With a view to protecting the health of the workforce, the applicable employment protection legislation as well as requirements relating to ergonomic workplace design are systematically observed and reviewed worldwide. Instruction in health and safety at the workplace is provided regularly. In addition, wellness among staff is actively encouraged through health promotion measures; these are in place worldwide, but are tailored to local needs in each case.

The issue of Covid-19 is inextricably linked to the topic of employee health. Hannover Re's interdisciplinary crisis management team swung into action once the first cases were reported in Europe and has since initiated a range of measures in close consultation with the Executive Board. These are communicated on a Group-wide basis. In order to avoid infections and help slow the spread of the virus, the technical capabilities and necessary capacities were put in place within a very short space of time to enable the global workforce to work from home. At the Hannover location, since the onset of the pandemic Hannover Re has voluntarily topped up in full missing hours for employees with children under 12 or special needs children to the individual working time, even if work was not possible or only partially possible as a consequence of the crisis situation. As a further step, even greater flexibility was introduced for daily working hours so as to optimally support the members of staff.

Diversity and equal opportunities

Supporting fair working conditions as well as a healthy and non-discriminatory working environment is part of Hannover Re's corporate culture. The Executive Board recognised the Core Labour Standards of the Initial Labour Organization (ILO) for 100% of the workforce in the year under review. Hannover Re does not tolerate discrimination or bullying in any form whatsoever and has enshrined this in a company-wide Code of Conduct. Furthermore, the right to form employee representative bodies and to engage in collective bargaining negotiations over working conditions is recognised; employees are neither advantaged not disadvantaged on account of their membership of a trade union or employee representative body.

Hannover Re and its Executive Board are committed to equal opportunities in relation to diversity criteria and on all hierarchical levels. A current focus of the measures is on supporting women in leadership positions. Of the 157 senior executives around the world, 32 are women; this is equivalent to a proportion of 20.4%. Our goal is to increase diversity on all levels of management.

Compatibility of the professional and private sphere is closely correlated with issues of diversity and equal opportunities. In the year under review the Covid-19 pandemic accelerated certain developments in the world of work that had already begun in prior years. These include, for example, greater combination of an office workspace with remote working as well as working time models tailored to the employee's individual situation. These changes are increasingly becoming an integral component of a state-of-the-art, agile working environment and enhance the company's attractiveness on the labour market as well as the satisfaction, loyalty and performance readiness of the workforce. We launched a project exploring the topic of new worlds of work in the year under review to address this development.

Opportunities

We link all measures to the possibility of recruiting, retaining and optimally fostering the best employees on the market.

Employee matters: Selected goals M 42

Goal	Target indicator by 2023	Status 31.12.2021
Recruiting, identifying, developing and retaining performance-driven employees according to requirements	Conceptual design and further refinement of powerful branding and recruitment systems	Roadmap for employer positioning under development, on target
Cultivating and developing global mobility	Adoption of a Global Mobility Guideline	Achieved
Supporting the lifelong learning of employees around the world	Alignment of our (ongoing) training activities with the values and core competencies of Hannover Re and expanded reporting on the worldwide programme of continuing training	Implementation of a new global learning management system initiated, on target
Identifying and fostering high-potentials and assuring successors for key positions	Optimisation of Group-wide talent reviews with a focus on development planning	Implementation of a global leadership development programme and roll-out underway, on target
Promoting the health and performance of employees around the world	Expansion of programmes to promote health and wellness by at least 10%	Concept under development
Increasing diversity on all managerial levels, especially in relation to women	Gender-neutral new appointments/replacements (50/50) for all vacant leadership positions on all managerial levels worldwide	Selection process for managers overhauled, on target
Enhancing equal opportunities through measures to support the compatibility of career and family	Worldwide programme of mobile working	Achieved

Social matters

Access to insurance enables people to protect themselves against fundamental personal risks and against adverse changes in their environment. Such protection against threats to their livelihood is especially important in countries where social security systems are weak or not present at all. Yet it is here, in particular, that the comparatively high vulnerability of the population contrasts with what is still overall a minimal supply of insurance solutions tailored to the relevant financial, social and cultural requirements.

In addition to protecting against personal life risks, insurance solutions also offer protection for economic activities. Consequently, they form a vital basis not only for the economic development of national economies but also for a transition from an informal economy – in which the vast majority of employees and their families enjoy scarcely any social protection – to a formal economy.

Impacts on our operations

A latent reputational risk exists in connection with the material topic of "Dialogue" as a result of potentially unclear external communication. The material topic of "Sustainable protection" brings together various activities that support the transformation to a sustainable world (e.g. expansion of sustainable insurance services or the general provision of solutions for previously inadequately insured risks). The associated underwriting risks are to be considered in the risk assessment; reference is made to the "Opportunity and risk report" in the combined Group management report. Risks above and beyond this are not anticipated. We would similarly refer to the "Opportunity and risk report" regarding impacts connected with Covid-19.

Impacts of our operations

Dialogue

The trust of stakeholders is a vital prerequisite for entrepreneurial success. With this in mind, we cultivate an active ongoing dialogue and report regularly on ESG-related topics. This is done, inter alia, through the present combined non-financial information statement as well as an annual sustainability report, into which we have integrated the United Nations Global Compact (UNGC) Progress Report since 2020.

Insurance business

In our insurance business we encourage the expansion of products in response to climate change, such as weather and energy efficiency insurances, and we also contribute to societal development in structurally deprived regions by delivering insurance solutions in areas such as microinsurance and agricultural risks. In this way, we enable people with scant financial means to protect themselves against fundamental risks such as natural disasters or crop failures. Furthermore, we are taking an active part in the development of index-based disaster finance concepts that guarantee rapid financial assistance for countries in Africa, Asia and South America in the event of natural disasters.

In life and health reinsurance we assist primary insurance partners around the world with our expertise and power of innovation in the development, launch and delivery of reinsurance solutions. These include life and annuity insurance products, solutions for critical illness, disability and long-term care as well as in some instances insurance products containing wellness and/or lifestyle components. Many of these solutions address special needs of end consumers or target groups that have hitherto not been adequately met by existing standardised products on account of specific requirements or challenges.

Investments

A budget for investments in dedicated impact funds was set up back in 2019. The primary 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. We held 15 of these specially focused funds with a volume of EUR 33.5 million in our portfolio as at 31 December 2021. In addition, we invest in renewables both through funds and direct infrastructure investments as well as in sustainable forest and agriculture funds.

Opportunities

We see opportunities in particular in the context of the continued protection gap existing between economic and insured values and on the basis of changing requirements in the life sector. Examples in property and casualty reinsurance include greater penetration of emerging markets, new/additional solutions to protect against or mitigate the impacts of natural disasters or extreme weather events, crop insurance products, parametric covers or protecting the transportation of medicines/vaccines. In life and health reinsurance, examples similarly include the cultivation of new markets as well as innovative insurance solutions connected with changing demographics, special insurance solutions for new forms of community, service offerings for seniors, digitalisation and fitness trackers.

Social matters: Selected goals M 43

Goal	Target indicator by 2023	Status 31.12.2021
Further expanding insurance protection for emerging and developing countries in relation to extreme weather events and natural disasters in property and casualty reinsurance	Expansion of NatCat aggregates in emerging and developing countries to close the protection gap	KPI under development, initial application based on 2022 data
Expanding sustainable insurance solutions to mitigate the impacts of climate disasters and natural catastrophes	Discussion and review of at least five programmes and initiatives	Achieved
Expanding insurance protection for previously inadequately insured population groups in life and health reinsurance	Premium growth in developing and emerging countries	Measurable expansion in progress, on target
Supporting our primary insurance partners with the (further) development of sustainable insurance solutions in life and health reinsurance	Expanded reinsurance of longevity risks, especially outside the United Kingdom	Measurable expansion in progress, on target
Integrating ESG criteria into the underwriting policy for the facultative reinsurance department	Approval and adoption of an internal framework	Revising and integrating further exclusions, overa- chieved
Asset management: excluding issuers that violate ESG principles	Screening of the defined portfolio, regularly	Ongoing before inclusion in the portfolio and half-yearly
Asset management: expanding investments that support the sustainable transformation	Measurable expansion by 2023	Conceptual preparation completed, on target
Signing the Principles for Responsible Investment	Signing	Achieved
Expanding corporate citizenship	Increase of 20% in the existing budget by 2023	Concept approved by the Executive Board, on target

Respect for human rights

As long as 20 years ago, human rights were one of the four subject areas defined in the United Nations Global Compact in which companies commit to behave in a responsible manner. The requirements placed on companies in relation to human rights were fleshed out in greater detail in 2011 through the endorsement of the UN Guiding Principles on Business and Human Rights by the UN Human Rights Council. Companies are urged to implement adequate safeguards in order to avoid human rights risks within their entrepreneurial scope of influence. Hannover Re issued a corresponding policy statement in the year under review.

Impacts on our operations

Reputational and compliance risks could materialise in connection with the non-financial aspect. In view of our business operations, no direct and/or severe risks were identified. Please see the "Opportunity and risk report" in the combined Group management report for further information.

The UN Guiding Principles on Business and Human Rights and the National Action Plan of the German Federal Government also have a bearing on Hannover Re. In the year under review, under the leadership of the sustainability officers and with the involvement of Risk Management and Compliance (second line of defence) as well as participants from the first line of defence, an analysis was conducted with an eye to the risks for rightsholders; particularly exposed business areas were identified and prioritised. Consideration also began to be given in the year under review to requirements connected with the Supply Chain Due Diligence Act (LkSG), which enters into force in 2023.

As a signatory to the United Nations Global Compact (UNGC), we release an annual progress report on the Ten Principles. In addition, we publish statements regarding the Modern Slavery Act 2015 (United Kingdom) and the Modern Slavery Act 2018 (Australia) on our website.

Impacts of our operations

As an internationally operating reinsurer, we consider impacts in relation to potential human rights violations from the perspective of the rightsholders.

Employees

In view of the fact that our employees are highly skilled workers and we attach the utmost priority to compliance with applicable national, collective bargaining and company regulations, we do not see any risk of serious violations of human rights. That said, issues such as discrimination, equal opportunities and oppression require constant attention and monitoring. We manage these issues in the context of our human resources management structure. For further information the reader is referred to the remarks in connection with the aspect "Employee matters". We protect employee data through rigorous compliance with statutory data protection requirements.

Suppliers

Hannover Re does not have a traditional upstream or downstream supply chain of raw and auxiliary materials or produced goods as is the case with, for example, manufacturing companies. Nevertheless, we too source a broad range of goods and services. Hannover Re has adopted its own Code of Conduct for Suppliers. This encompasses compliance with legal and ethical provisions, respect for human rights including observance of the core labour standards of the International Labour Organization (ILO) and adherence to all applicable requirements in the areas of health, safety and environmental protection.

As far as human rights due diligence is concerned, we see the greatest risk in connection with the procurement of IT hardware. For this reason, we have adopted an IT Procurement Guideline that is valid Group-wide and contains consistent rules governing the purchasing of IT products throughout the organisation. It provides for all bottleneck, leverage and strategic suppliers to be subject to monitoring. Recognition of the Code of Conduct for Suppliers or submission of the supplier's own more extensive code of conduct is mandatory. As of 31 December 2021 100% of core IT suppliers have committed to comply with the Code of Conduct for Suppliers or equivalent rules.

Insurance business

With regard to our activities in insurance business, we would refer the reader to the remarks made in connection with the aspect "Environmental matters". Based on our risk analysis, we identified the greatest risk of potentially detrimental impacts on human rights in the following, particularly exposed areas: large construction projects (incl. dams, oil and gas projects, mines and pipelines), mining operations as well as companies connected with internationally banned weapons. The facultative division's ESG manual, in which the facultative underwriters around the world receive training, provides for a screening process in order to identify and decline transactions that entail an inherent risk of severe breaches of fundamental human rights.

Investments

With regard to our activities in asset management, we would refer the reader to the remarks made in connection with the aspect "Environmental matters" and the negative screening process described there. This is based on the Ten Principles of the United Nations Global Compact (UNGC); six of these Principles explicitly address the issues of human rights and labour standards. Our investment guidelines also exclude issuers involved in the development and proliferation of internationally banned weapons.

Opportunities

We do not see any particular opportunities in connection with this non-financial aspect.

Respect for human rights: Selected goals **M 44**

Goal	Target indicator by 2023	Status 31.12.2021
Living up to duties of care in matters of human rights	Definition of measures in conformity with the United Nations Guiding Principles on Business and Human Rights	Cross-cutting goal, ongoing

Fighting corruption and bribery

Corruption, as the abuse of entrusted power for personal gain, has numerous negative repercussions. On the political and administrative level, corruption influences decision-making and the execution of approved measures in favour of individuals or parts of the population. This erodes trust in the state and can become a threat to state legitimacy as well as to democratic institutions. On the economic level, corruption distorts competition and causes business transactions to become more expensive while preventing the efficient use of resources. The fight against corruption and bribery forms part of our compliance management.

Impacts on our operations

Compliance risks may become relevant in connection with the non-financial aspect “Fighting corruption and bribery”. At the same time, integrity and lawful conduct are directly correlated with a company’s reputation and establish the basis for the trust placed in such company by business partners, investors, shareholders and the broader public and hence also the foundation for its success and competitiveness over the long term. In view of the business operations and implemented structures, no direct and/or severe risks were identified. For further information the reader is referred to the “Opportunity and risk report” in the combined Group management report.

Impacts of our operations

Governance and compliance

Any form of unlawful or corrupt behaviour inflicts considerable harm on society and impedes free and fair competition. Companies in the financial sector have an important role to play when it comes to prevention and execution. Hannover Re has an extensive Governance and Compliance Management System and adopts the “three lines of defence” approach. For details of the implemented structures please see the “Opportunity and risk report” in the combined Group management report.

Code of Conduct

Hannover Re has adopted a company-wide Code of Conduct that is publicly accessible on its website. The Code of Conduct makes it clear that active and passive corruption will not be tolerated. Additionally, it explicitly references the prohibition of money laundering and other criminal activities and contains specific instructions on appropriate behaviour 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. As a listed company, we make our employees aware at the start of their employment of the need to observe rules on insider trading and, as warranted, to respect blocking periods for share trading.

Opportunities

No particular opportunities are identified in connection with this non-financial aspect.

Fighting corruption and bribery: Selected goals M 45

Goal	Target indicator by 2023	Status 31.12.2021
Ensuring that the organisation is compliant	Average compliance score corresponding at a minimum to the targeted maturity level	Ongoing

Disclosures under Article 8 of the EU Taxonomy Regulation

Article 8 of the EU Taxonomy Regulation ([EU] 2020/852) requires reporting entities pursuant to §289 of the German Commercial Code (HGB) to publish information on how and to what extent their activities are consistent with economic activities that qualify as environmentally sustainable under the EU Taxonomy. The Taxonomy is a central element of the EU Action Plan for Financing Sustainable Growth and is intended – as a unified classification system – to foster transparency on sustainability in the financial market.

The Delegated Act supplementing Art. 8 of the EU Taxonomy Regulation ([EU] 2021/2139) currently focuses exclusively on activities that contribute to mitigating or adapting to climate change. In this context, both the investments of the Hannover Re Group and our reinsurance solutions in property and casualty business fall within the scope of consideration.

Reinsurance solutions can serve the purpose of climate change adaption if they protect against climate-related natural perils such as flood or storm damage. Such protections have always been a central theme in our business activities. The worldwide reinsurance industry increases the resilience of its customers in the face of natural catastrophes by compensating those affected. It facilitates recovery after the occurrence of damage and helps to safeguard the livelihood of people and businesses. It also ensures the continuation of major projects and the development of new technologies, thereby sustainably fostering economic growth. In this sense comprehensive reinsurance solutions support adaptation to the risks associated with climate change. In addition, our long-standing experience in risk assessment and risk management facilitates the early detection of new and emerging risks and the development of appropriate risk transfer solutions. Our investments can similarly fall under the Taxonomy if they serve the financing of Taxonomy-aligned sustainable economic activities and hence support them. As a prudent investor with a long-term horizon, we are committed to the responsible management of our investments inasmuch as we have deliberately incorporated ESG criteria into our investment policy since 2012.

In the context of our sustainability strategy we pursue various goals with a view to fostering sustainability in both our underwriting business and our investment portfolio. For more detailed information on climate-related goals and measures we would refer to the section "Environmental matters". We also provide our stakeholders with information about the latest developments through our website and our annually published sustainability report.

Taxonomy key performance indicators (KPIs)

For the financial years 2021 and 2022 reinsurance undertakings are required by the Delegated Act ([EU] 2021/2139) to disclose the following KPIs.

Reinsurance business

- The proportion of Taxonomy-eligible and Taxonomy-non-eligible premiums in the entire book of property and casualty reinsurance

Investments

- The proportion of Taxonomy-eligible and Taxonomy-non-eligible investments in the total investments
- The proportion of government bonds in the total investments
- The proportion of undertakings not subject to mandatory reporting under the Directive 2014/95/EU (Non-Financial Reporting Directive – NFRD) in the total investments
- The proportion of derivatives in the total investments

Bearing in mind the FAQ published by the EU on 20 December 2021 and with an eye to consistent and comparable reporting, we are already using for this year the definition of the denominator that is to apply to financial years from 2023 onwards. Therefore, we are comparing the stated figures with the sum total of our investments under own management.

Taxonomy eligibility defines the proportion of our economic activities that is described in the Taxonomy and for which technical screening criteria have been developed. These criteria determine the substantial contribution to the set environmental objectives, prevent harm to other environmental objectives and are intended to ensure adherence to social minimum standards. The proportions of the economic activities established using the screening criteria are aligned with the Taxonomy and must be reported for the first time for the 2023 financial year. Currently, we take the view that the information value of the KPIs is still too slight to incorporate them as an effective steering tool into our business decisions and product development processes.

Reinsurance business

In reinsurance business we consider all premiums in one of the lines of business under Solvency II described in the Delegated Act ([EU] 2021/2139) to be Taxonomy-eligible if direct covers of climate-related natural perils can be established.

As part of our natural catastrophe (NatCat) monitoring, all treaties with relevant covers are flagged in our internal systems. With the exception of earthquake, we consider all natural perils covered by us to be climate-related (in particular including weather-related and bush fire damage, for example). A NatCat-relevant treaty that covers other natural perils beyond earthquake thus signals the existence of a climate-relevant premium in the respective line of business. In order to verify this finding we have also qualitatively established a specific treaty with climate-relevant covers for each identified line of business. Subject to further specifications by the legislator, we classify all other lines of business that do not include direct climate-relevant covers or are not described in the Delegated Act ([EU] 2021/2139) as Taxonomy-non-eligible.

Taxonomy-eligibility enables us to identify those lines of business to which the technical screening criteria must be applied from the 2023 financial year onwards in order to determine sustainability within the meaning of the Taxonomy. Overall, we expect the alignment percentage of our premiums to be significantly lower than the eligibility percentage because the latter only defines the closer scope of consideration.

Results for the 2021 financial year

Given that life and health reinsurance is explicitly excluded from consideration, our disclosures encompass only activities in the entire book of property and casualty reinsurance. In this context our KPIs cover roughly 98% of our premiums (excluding Inter Hannover [No. 1] Ltd. and Argenta Holdings Ltd.).

Taxonomy-eligible premiums = 62.51%

The Taxonomy-eligible premiums are calculated according to the following formula: (sum of Taxonomy-eligible lines of business in GWP (gross written premiums)/Total GWP in property and casualty reinsurance) x 100

Taxonomy-non-eligible premiums = 37.49%

The Taxonomy-non-eligible premiums are calculated according to the following formula: (sum of not described and Taxonomy-non-eligible lines of business in GWP/Total GWP in property and casualty reinsurance) x 100

Investments

We define as Taxonomy-eligible investments that are used to finance economic activities described in the Taxonomy or linked to them. We compare them with our investments under own management for the purpose of our KPIs. The investments under own management are arrived at by deducting from our total investments the cash and cash equivalents and any funds withheld/contract deposits. The latter refers to cash or securities deposits in connection with technical provisions to which we do not have any direct access. The data used to establish the KPIs are derived from our asset manager's internal accounting systems. External data from a service provider are only used to determine the proportion of undertakings that are not subject to mandatory reporting under the NFRD, although they account for only a small part of our liquid investment portfolio.

Our investments under own management similarly serve as the point of departure for determining Taxonomy-eligibility. The Delegated Act ([EU] 2021/2139) defines under Art. 7 (1) to (3) the following exclusions when calculating the KPIs.

- All government bonds are to be excluded from the calculation of the numerator and denominator.
- All derivatives are to be excluded from the numerator.
- All exposures to undertakings not subject to mandatory EU non-financial reporting under the NFRD are to be excluded from the numerator.

These items are therefore out of scope for the calculation of the numerators (as well as the denominators in the case of government bonds) for the KPIs, but they are disclosed individually for classification of the results.

The European Commission has made it clear that only concrete information published by undertakings and investment funds in the context of non-financial reporting may be used to screen Taxonomy-eligibility. Given that this has to be disclosed for the first time in the current reporting period, data availability is heavily restricted. In the absence of these data, only a minimal part of our investment portfolio can therefore be considered as Taxonomy-eligible for the 2021 financial year.

We consider all investments connected with the purchase and ownership of real estate to be definitively Taxonomy-eligible. We include here investment property, real estate funds and mortgage loans for private households. In addition, sustainable bonds or debentures that finance a specific, Taxonomy-eligible activity (e.g. the construction of infrastructure projects such as wind farms) are included in the numerator as Taxonomy-eligible, even if the issuers are not subject to mandatory reporting under the NFRD.

As far as all other asset classes are concerned, we do not yet see any possibility to disclose investments as Taxonomy-eligible within the scope of the regulatory framework for the first reporting year. All investments in respect of which the issuing country is outside the EU or for which we have received reliable information from our data provider to the effect that they are not subject to mandatory reporting under the NFRD are definitively not in the scope of the KPIs for Taxonomy-eligibility. In the absence of concrete data on conducted economic activities and the obligation to report under the NFRD, we disclose all other investments as Taxonomy-non-eligible in the first reporting year if they are within the EU.

Results for the 2021 financial year

It is our assumption that with increasing data availability our KPIs will change in the coming reporting periods and we would again point to the considerable lack of reliable data. This initially creates a picture of the actual Taxonomy-eligibility of our investments which is heavily restricted in its information value.

Proportion of government bonds = 35.09%

The proportion of government bonds is calculated according to the following formula: (government bonds / investments under own management) x 100

Proportion of derivatives = 0.70%

The proportion of derivatives is calculated according to the following formula: (total derivatives / (investments under own management – government bonds)) x 100

Proportion of undertakings not subject to mandatory reporting under the NFRD = 73.63%

The proportion of undertakings not subject to mandatory reporting under the NFRD is calculated according to the following formula: (investments in undertakings not subject to mandatory reporting under the NFRD / (investments under own management – government bonds)) x 100

Taxonomy-eligible investments = 7.55%

The Taxonomy-eligible investments are calculated according to the following formula: (Taxonomy-eligible investments / (investments under own management – government bonds)) x 100

Taxonomy-non-eligible investments = 18.12%

The Taxonomy-non-eligible investments are calculated according to the following formula: (non-Taxonomy-eligible investments / (investments under own management – government bonds)) x 100

Opportunity and risk report

Risk report

- Hannover Re has capital resources in excess of the defined strategic threshold. The capital position is reviewed on an ongoing basis against the backdrop of possible changes in the risk profile and the impacts of the Covid-19 pandemic.
- Our risk management system constantly monitors newly added and changing risks and is able to respond flexibly to changes in internal and external factors.

Strategy implementation

In the year under review Hannover Re's Group strategy "Striving for sustainable outperformance" was adopted for the 2021–2023 strategy cycle. Our strategy is based on the interplay between solid fundamentals, performance drivers and performance enablers. Robust governance and strong risk management, integrated compliance and corporate social responsibility establish the foundation for our business operations.

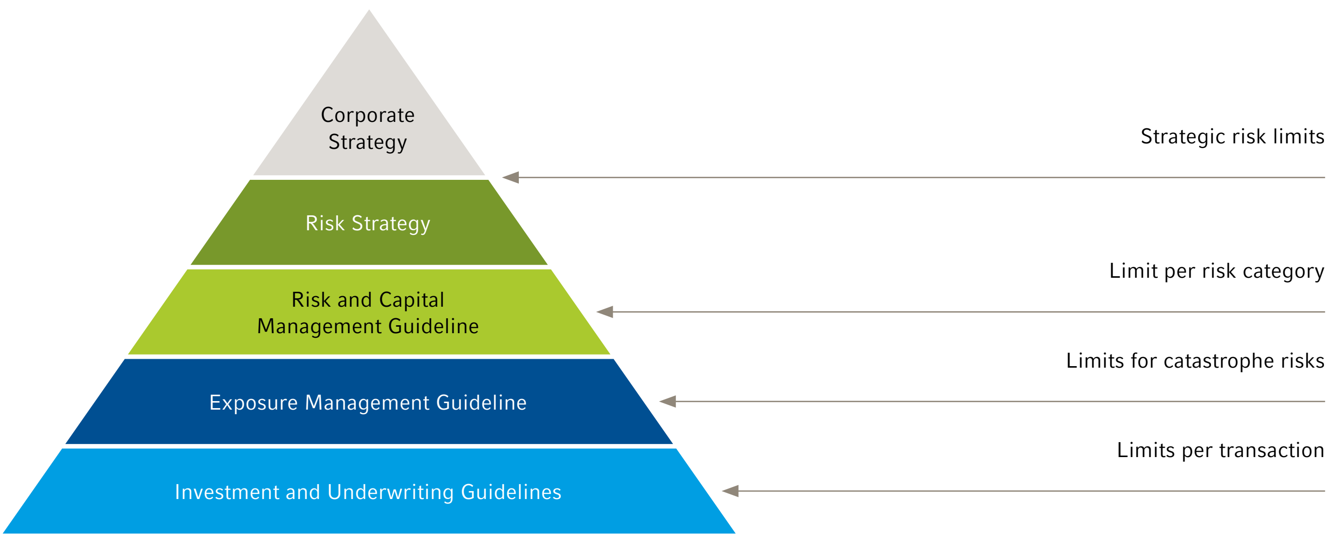
The risk strategy is the core element in our handling of opportunities and risks. It specifies more closely the goals of risk management and documents our understanding of risk. We have defined eight overriding principles within the risk strategy:

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

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 at least 90% p.a. Our solvency ratio must amount to at least 180%, although 200% is already considered to be a

Risk management through multiple levels of limits M 46



threshold; countermeasures would be triggered if the solvency ratio were to fall below this threshold. Currently, the solvency ratio (unaudited by the independent auditor) stands at 243%, i.e. above the 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.

Major external factors influencing risk management

This subsection describes external factors that were particularly relevant in 2021 and could continue to influence risk management in subsequent years.

Covid-19 pandemic: The Crisis Management Team set up in 2020 continued to manage operations prudently in 2021. Business travel remained constrained. Working from home – which applied to large parts of the workforce – went smoothly, in part thanks to the use of videoconferencing and extensively digitalised business processes. Consequently, in 2021 we once again did not identify any material impacts of the Covid-19 pandemic on our operations. After an initial, gradual return to the company's business premises in the second half of the year, employees were, once again, urged to work from home in the fourth quarter – depending on their location – due to the accelerating spread of infections around the world.

We continue to evaluate our financial strength and profitability on a regular basis using stress tests and sensitivity analyses and will take measures as needed to reduce risks or strengthen our equity resources. In this regard, the largest reserves on the reinsurance side were for coverage of business interruption, excess mortality, credit insurance and event cancellations. With the pandemic still ongoing, any forecasts are still subject to considerable uncertainty. It remains to be seen how well the vaccines and boosters currently available will work against new variants of the virus.

We are also monitoring the long-term post-infection effects. The so-called "post-Covid syndrome" would have negative implications for the coverage of sickness costs and disability. Early study results suggest that these patients suffer not only from fatigue and a general loss of energy, but also increasingly from anxiety disorders and depression.

The biometric effects of the pandemic on our reinsurance portfolios are discussed in a separate subsection.

Regulatory developments: The recommendations of the European Insurance and Occupational Pensions Authority (EIOPA) for the overhaul of the European prudential regime Solvency II were submitted to the European Commission, which then published its proposals in September 2021. In some instances the Commission diverged from EIOPA's recommendations. The European Parliament and the member states in the Council will now negotiate the final legislative texts based on the Commission's proposals. The proposals include, among other things, new macroprudential supervisory powers as well as changes to yield curves and revisions to the calculation of the risk margin. Depending on the final outcome of the ongoing legislative process, these proposals could have considerable implications for the European insurance industry.

EIOPA has also proposed extensive changes to reporting rules for insurance undertakings, namely the revision of the Quantitative Reporting Templates (QRTs) and changes to the Implementing Technical Standards (ITS).

In the year under review the European Financial Reporting Advisory Group (EFRAG) also endorsed the IFRS 17 standard, with European insurers now making preparations for its implementation.

Numerous regulatory developments relating to sustainability occurred in 2021 on the international, European and national level. In the EU they are linked to the European Green Deal strategy pursued by the European Commission. The European Commission renewed the high-level goals for sustainable finance, which were first set out in the Commission's 2018 action plan. The Commission also published a delegated act proposing how the disclosure duties under the Taxonomy Regulation are to be fulfilled, and in which the specific requirements for (re)insurance undertakings are elaborated in greater depth. Initial limited reporting pursuant to the Taxonomy Regulation is provided in the present report. Further new regulation introduced relates to the consideration given to climate change scenarios.

In the course of 2021, EIOPA carried out multiple comparative studies of internal models, in which Hannover Re participated. Aspects such as the diversification, parameters and results of the market risk models as well as those for the non-life underwriting risk were compared. The studies and their findings are intended to harmonise supervisory approaches in the EU and hence refine the supervision of internal models above and beyond the existing tools. This poses, among other issues, a systemic risk that company-specific approaches may be too heavily restricted as a consequence of the findings.

Turning to new and upcoming regulatory requirements and expectations, compliance risks are taking on ever greater significance at both the national and international level. Especially in the context of IT regulation, more exacting supervisory standards have been adopted on the security and governance of Information and Communication Technology. Furthermore, at the end of 2021 the Federal Financial Supervisory Authority (BaFin) began work on a revision of the Supervisory Requirements for IT in Insurance Undertakings (VAIT) in order to harmonise them with European laws and regulations.

Market access risks continue to emerge worldwide. Growing protectionism is a particularly unfortunate trend at a time when, a global, large and persistent gap exists between the level of economic losses (especially following catastrophic events) and the level of insured losses. In its work programme for 2022, EIOPA announced its intention to assess harmonisation of the rules for EU market access regarding third-country reinsurers as part of its mission to bring about convergence of international supervisory standards. Should Europe decide to impose more exacting restrictions, there is a risk that this may lead to reciprocal actions by international jurisdictions.

Corporate taxes: In 2021 the OECD presented its so-called model rules for reform of the international tax system to assist in implementation of a minimum 15% global corporate income tax rate. The OECD model rules are intended to serve as a template for adoption into national law by the individual member states. The OECD is proposing implementation as early as 2023.

Risks from the processing of electronic data: Recent years have seen the increasing emergence of risks relating to electronic data and systems. Hannover Re, in common with other companies, is at risk of outside attacks on its own IT systems and has put in place extensive safeguards. Furthermore, Hannover Re offers reinsurance coverage for risks connected with electronic systems and data (cyber risks). The systems used to manage these cyber risks are continuously refined so that the risks can be appropriately limited. In this context, care is taken to ensure that cyber risks are largely assumed deliberately in reinsurance treaties and not unknowingly included as incidental risks under the cover provided (silent cyber).

Natural catastrophe risks and climate change: In 2021 Hannover Re was again impacted by natural catastrophe events in various parts of the world (Europe, the United States, Australia). Particularly noteworthy in the year under review were winter storm Uri, intense rainfall event Bernd, Hurricane Ida and a series of tornados in the US.

Natural disasters should be viewed as inextricably linked to climate change. The associated impacts present a major challenge for risk management. We use both external and internal risk models to simulate the impacts of catastrophic events. The monitoring of risks resulting from natural perils is complemented by stress tests as well as scenario and sensitivity analyses. Further specifics are provided in the separate section “Climate change”.

Capital market environment: The persistently low level of interest rates is a major external factor influencing the return that can be generated on our investments. Interest rate increases – which in some instances were very marked – were recorded not only for euro-denominated bonds but also in the US dollar and sterling markets in the first quarter of the year. Despite renewed modest declines subsequently seen in the area of the US dollar and British pound, we benefit from the higher rate level overall when making new investments and in our reinvesting activities. Yields on euro area government bonds were negative well beyond the 10-year maturity point. Credit spreads also retreated from the beginning of the year onwards for bonds issued by developing countries and in the case of lower-quality issuers, while in other sectors they remained very largely stable or showed at most modest declines over a long period. Here, too, however, emerging nervousness on financial markets in connection with new variants of the coronavirus was reflected in slightly higher risk premiums by year-end. All in all, the economic repercussions of the Covid-19 pandemic on financial markets continued to be extensively cushioned by fiscal and monetary backstopping. This was reinforced by the vaccination progress made worldwide and a slow easing in the consumption backlog. This impressive development is also reflected in rising raw materials and transport costs. These, in turn, are passed on in the form of generally higher prices. The systematic inflation concerns of other market participants currently still appear fragile when it comes to their potential longevity. It is still too soon to make any definitive judgement on the indications of structural and protracted higher inflation. As growth normalises and the kinks in the supply chain are ironed out again, it is our expectation that inflation may fade and secondary effects such as wage pressures can be curbed. We are nevertheless keeping close track of the situation with an eye to any opportunities that may arise. The economy continues to enjoy strong support from central banks in our main currency areas, which largely pressed ahead with their expansionary interest rate policy adopted in the prior year. Both the Federal Reserve and the European Central Bank left their key rates on the previous year's low level. The Bank of England, on the other hand, was the first major central bank to modestly increase its key lending rate in December – primarily in response to inflationary tendencies. The ECB – in common with the Fed and the Bank of England – continued its extensive asset purchase programme for bonds issued by governments and corporate entities in order to support them in this time of crisis. Overall, then, the policies pursued by central banks in our main currency areas were essentially consistent – supplemented by significant fiscal interventions –, although they varied in scale and the measures taken. We view these worldwide interventions by governments and central banks with their enormous money supply as a not inconsiderable challenge because in some ways they divorce the financial world from the natural, reciprocal control mechanisms of the financial markets and it is unclear to what extent the current or future valuation levels are supported by fundamentals. The worldwide progress of vaccination campaigns and their effectiveness will be pivotal to economic development going forward. In conjunction with continued catch-up effects and higher inflation, this may still lead to very high – but potentially unstable – valuation levels on credit and equity markets.

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. Thus, for example, we also view the need to take higher write-downs in the previous year on isolated assets in response to the Covid-19 pandemic not as a reflection of a generally elevated risk in the market, but rather in the context of the risk profile specific to this asset class and set of company characteristics. The write-downs taken in the period under review were already back to the average level of previous years. The significance of real estate risks remains substantial for us 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.

The pandemic has proven to be an additional factor directly affecting the conditions and dynamics on real estate markets. If the economic weakness results (temporarily) in reduced demand for space, this could give rise to flat or declining rental income or rising vacancy rates. Taken in combination with modified expectations for contractual conditions as well as probabilities of lease extensions or new leases, these changed market parameters are reflected in adjusted fair values for real estate. Pandemic-related developments are therefore factored into the real estate valuations. This is true not only of the directly held portfolio but also – with the usual slight time delay – of the real estate fund holdings.

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 our current investment posture. For further information please see the "Investments" section of the management report on page 55 et seq. Geopolitical tensions and armed conflict, as currently seen in Ukraine, pose corresponding risks to the political balance of power in Europe. Adverse impacts on financial markets are possible. Resulting increases in energy prices may push inflation even higher.

Inflation on the underwriting side: The higher rates of inflation worldwide have the potential to affect multiple factors in our business activities, including for example the premium calculation, the loss reserves, the large loss budget, the investments (as described in the previous section) and the management expenses. We have developed measures to deal with inflation in all these respects. It should be borne in mind here that the general rise in inflation (e.g. as measured by the US CPI) needs to be differentiated from the drivers of claims and cost inflation relevant to our company. The Hannover Re-specific claims inflation index is a blend of different regions and currencies and dependent on the line of business. Mention should be made here of wages and salaries for liability business, construction costs for property insurance including natural perils and medical expenses for life and health insurance. Inflation is considered in our reserving process. Essentially, this process is based on average past inflation rates; we work with loadings if there are indications of a future rise in inflation. Adequate reserving processes are especially important in long-tail lines because multiple underwriting years can be affected at the same time. We monitor inflation drivers over the entire course of the business and reduce them by, among other things, making appropriate allowance in the premium calculation and by means of index clauses and sliding-scale commissions.

Supply chain risks: It has become clear over the course of the current pandemic that global supply chains – especially in combination with lower inventories – pose risks to the continuity of operations in many sectors. This can result in higher claims expenditures on account of increased procurement costs or business interruptions.

Increasingly exacting regulatory requirements governing corporate responsibility for human rights and other sustainability concerns, especially as they relate to supply chains, will continue to grow in importance for the international business community over the coming years.

Biometric risks: We continuously monitor the development of our mortality business (especially in the United States) as well as of our worldwide morbidity business, particularly with an eye to the impacts of the Covid-19 pandemic. It is to be anticipated that the Covid-19 pandemic will lead to further strains in 2022. Mention should be made here of not only the US portfolio but also, most notably, the book of South African and South American mortality business.

Risk capital

In the interests of our shareholders and clients we strive to ensure that our risks remain commensurate with our equity 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 valuation 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 categories 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 publicly 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. The Hannover Re Group 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 99.5%. This corresponds to the requirements of 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. It remains the case that the limit and threshold are clearly exceeded.

Own funds and required risk capital M 47

in EUR million	31.12.2021[1]	31.12.2020
Available economic capital	17,464.1	15,210.9
Eligible own funds	16,783.7	14,557.5
Solvency capital requirement/ Required risk capital at the confidence level of 99.5%	6,904.2	6,190.4
Excess capital (Solvency II)	9,879.5	8,367.1
Capital adequacy ratio (Solvency II)	243.1%	235.2%

[1] The figures regarding the available economic capital are based on the Solvency II reporting as at 31 December 2021. The relevant Solvency II audit procedures conducted by the independent auditor have still to be completed. The solvency capital requirement and the non-eligible non-controlling interests (and hence the eligible own funds) involve information that has not been audited by the independent auditor.

The eligible own funds for regulatory purposes are lower than the available economic capital because the non-controlling interests under Solvency II are in part treated as non-eligible. The available economic capital and the eligible own funds include the static volatility adjustment, whereas the required risk capital includes the dynamic volatility adjustment. These risk indicators refer to the Hannover Re Group.

In addition, Hannover Rück SE is subject to regulatory capital requirements. 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.

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 Standard & Poor's and A.M. Best consider Hannover Re's risk management to be a very important aspect in the evaluation of financial strength and rate it as very good. 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 requirements.

Against the backdrop of the planned growth of our business in property and casualty reinsurance and selected areas of life and health reinsurance, we continuously track the impacts on capital adequacy and our rating. In order to ensure our capital adequacy and our rating we initiate measures promptly and also consider the issuance of further hybrid capital subject to an appropriate capital market environment.

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 discussed and published 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 plan, do, check and adjust cycle of 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.

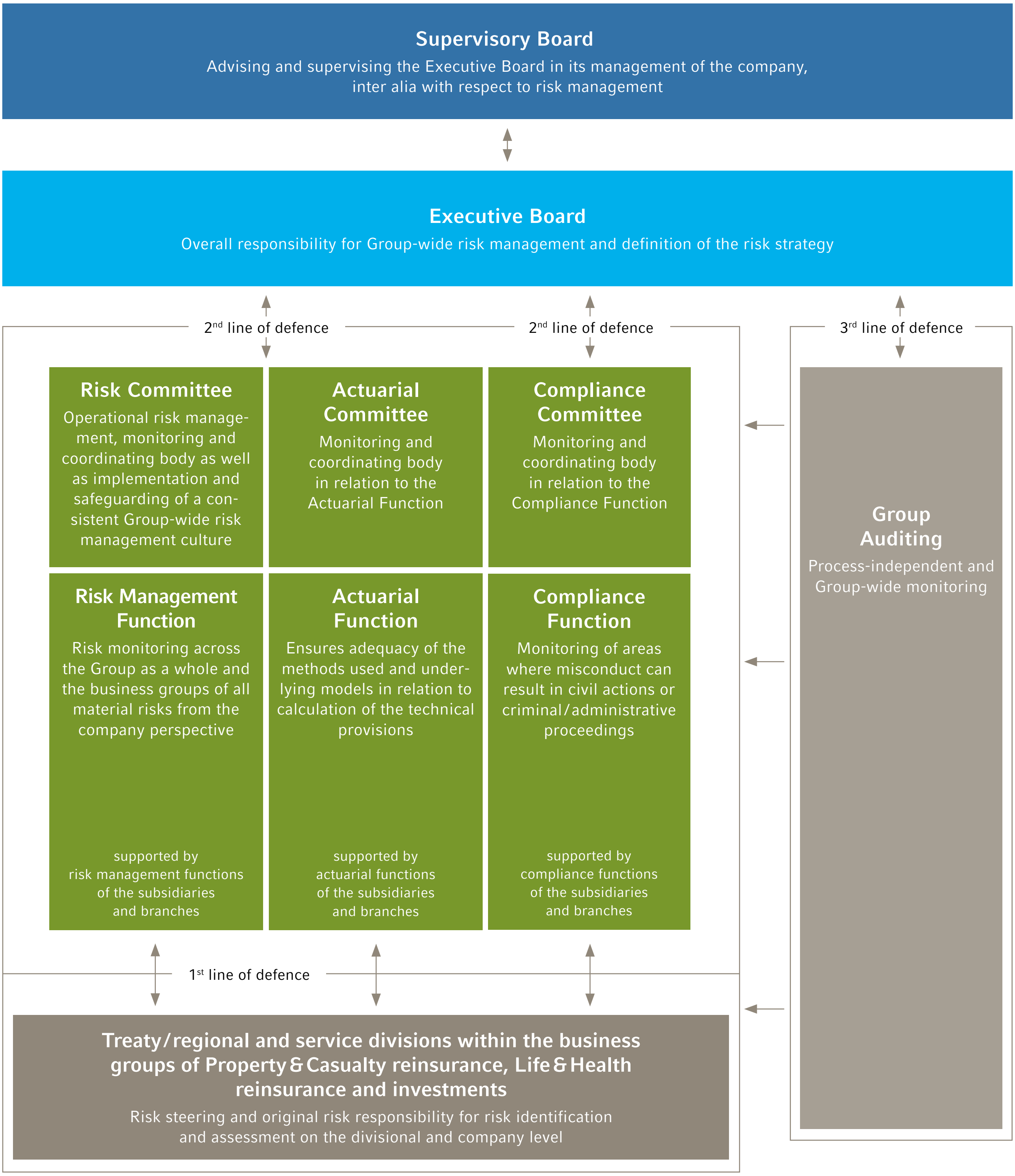
This guideline describes, among other things, the major tasks, rights and responsibilities, the organisational framework conditions and the risk control process. The rules, which are derived from the corporate strategy and the risk strategy, additionally take account of the regulatory requirements for 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. Individual risks and the risk position as a whole are measured 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. Risks are identified through, among other things, interviews and scenario analyses as well as in the evaluation of new products and large transactions. External insights from bodies and working groups are incorporated into the process. Risk identification is important for ensuring that our risk management consistently remains up-to-date.


Supervisory Board
Advising and supervising the Executive Board in its management of the company, inter alia with respect to risk management
Executive Board
Overall responsibility for Group-wide risk management and definition of the risk strategy
2nd line of defence
2nd line of defence
3rd line of defence
Risk Committee
Operational risk management, monitoring and coordinating body as well as implementation and safeguarding of a consistent Group-wide risk management culture
Actuarial Committee
Monitoring and coordinating body in relation to the Actuarial Function
Compliance Committee
Monitoring and coordinating body in relation to the Compliance Function
Risk Management Function
Risk monitoring across the Group as a whole and the business groups of all material risks from the company perspective
supported by risk management functions of the subsidiaries and branches
Actuarial Function
Ensures adequacy of the methods used and underlying models in relation to calculation of the technical provisions
supported by actuarial functions of the subsidiaries and branches
Compliance Function
Monitoring of areas where misconduct can result in civil actions or criminal/administrative proceedings
supported by compliance functions of the subsidiaries and branches
Group Auditing
Process-independent and Group-wide monitoring
1st line of defence
Treaty/regional and service divisions within the business groups of Property & Casualty reinsurance, Life & Health reinsurance and investments
Risk steering and original risk responsibility for risk identification and assessment on the divisional and company level

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 primarily assessed qualitatively. This encompasses strategic risks, sustainability and reputational risks and emerging risks. Qualitative assessment can take the form of, for example, expert evaluations. Quantitative assessment of 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 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, increased 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 and investment guidelines incl. the 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 place, for example, through internal and external risk reports, in the context of committee and project work, through information on current risk complexes in the intranet and by way of training activities for staff.

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 in relation to the accounting. The risk management system is rounded off with process-integrated procedures and rules, such as those of the internal control system.

Internal control system

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. The guideline defines concepts, stipulates responsibilities and provides a guide for the description of controls. 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 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 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.

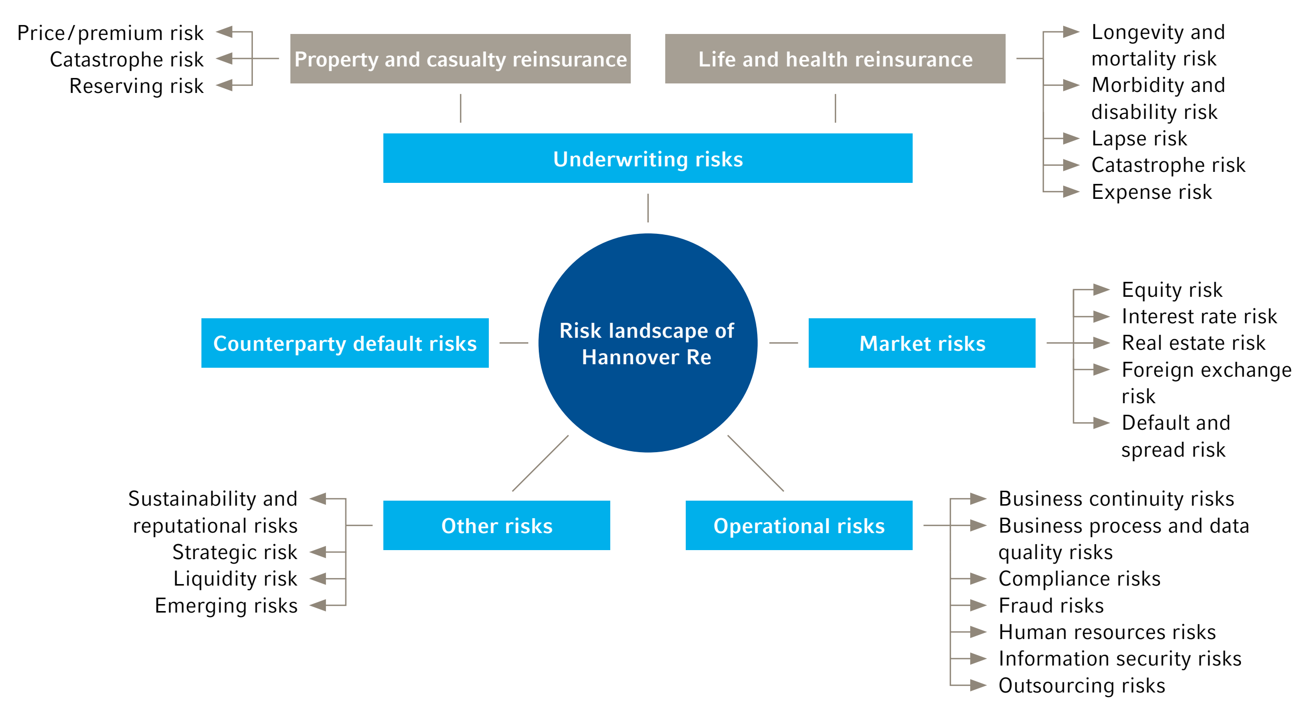
Within the scope of our control system the Group companies are responsible for Group-wide adherence to the accounting policies and the internal control guidelines. The managing directors and chief financial officers of the Group companies defined as material in our control system affirm to the Executive 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.

At a time when the workforce is teleworking from home on account of Covid-19, it is particularly important to perform the controls that would otherwise have been performed in person using electronic means.

Risk landscape of Hannover Re

In the context of its business operations the Hannover Re Group is confronted with 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. 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.

Risk landscape of Hannover Re M 49



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
- sustainability and reputational risks, liquidity risks, strategic risks and emerging risks.

Sustainability risks can affect all areas of our risk landscape in connection with environmental, social and governance (ESG) issues. Examples include the implications for property and casualty insurance of potentially more widespread natural disasters due to climate change or the decline in value of certain investments in conjunction with the changeover to a world free of greenhouse gas emissions in the future.

It has become common practice to differentiate between the risks caused by ESG issues to which a company is exposed (outside-in perspective) and the impacts that a company has on people and the environment (inside-out perspective). Sustainability risks corresponding to the outside-in perspective are financial risks due to the potential financial repercussions of environmental, social and governance (ESG) issues on Hannover Re. These financial risks encompass market, underwriting, counterparty default and operational risks and are integrated into the risk management processes for such risks. The inside-out perspective refers to situations in which the activities of Hannover Re would be harmful to the environment or social norms or would reflect a failure of governance. Reputational risks form the bridge between the outside-in and the inside-out perspective. Due to a – perceived or real – external impact of the company, a reputational risk arises for the company from the inside-out perspective. As a general principle, we integrate sustainability risks (outside-in) into our regular risk management processes. According to the inside-out perspective, reputational risks relate to transgressions against environmental and social concerns, governance failings are defined as a failure to comply with internal guidelines, codes of conduct and other internal policies.

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 longevity risks within the underwriting risks of life and health reinsurance.

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

Internal risk assessment

In this subsection we compare the available economic capital with the required risk capital.

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 increased by the 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 17,461.1 million as at 31 December 2021, compared to EUR 15,210.9 million as at 31 December 2020. In life and health reinsurance the operating performance was adversely affected by Covid-19 and changes in assumptions, while favourable developments were driven by new business above target. For property and casualty reinsurance we experienced large losses above the budgeted level, which were cushioned by a positive effect from the actuarial assumption changes.

The economic investment income was above expectations, especially in the areas of private equity and real estate. Unfavourable movements in interest rates were offset by positive exchange rate effects and effects associated with credit spreads.

In the first quarter Hannover Re issued a new hybrid bond with a volume of EUR 750 million, resulting in a further increase in the available economic capital.

Reconciliation (economic capital/shareholders' equity)[1] **M 50**

in EUR million	31.12.2021[1]	31.12.2020[2]
Shareholders' equity including minorities	12,756.2	11,839.4
Adjustments for assets under own management	626.6	585.3
Adjustments for technical provisions[3]	3,364.7	2,398.4
Adjustments due to tax effects and other	(1,591.5)	(1,389.0)
Economic equity	**15,156.0**	**13,434.1**
Hybrid capital	3,029.7	2,363.5
Foreseeable dividends	(721.6)	(586.7)
Available economic capital	**17,464.1**	**15,210.9**

1 The figures are based on the Solvency II reporting as at 31 December 2021. The relevant Solvency II audit procedures conducted by the independent auditor have still to be completed.
2 Minor differences for 31 December 2020 compared to Annual Report 2020 only in the allocation of adjustments for assets under own management and technical provisions.
3 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% rose over the course of the year. This was driven principally by the larger business volumes, which have led to an increase in underwriting risks and market risks. The weaker euro against foreign currencies also contributes to a higher risk.

The increase in the market risk is a reflection first and foremost of the larger volume due to higher fair value measurement and new investments in the areas of private equity and real estate. The larger volumes of fixed-income securities on account of growth in the business are a further factor here.

The underwriting risks in property and casualty reinsurance increased primarily as a consequence of higher premium and reserves. The enlarged volumes are driven by the business growth, the large loss expenditure and accompanying higher reserves as well as stronger foreign currencies.

The underwriting risks in life and health reinsurance increased primarily due to the business expansion in the areas of longevity and morbidity risks as well as the appreciation of foreign currencies. The rise in counterparty default risks can be attributed principally to a higher volume of receivables due from retrocessionaires.

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

The loss-mitigating effect from taxes and the diversification effect remain largely stable.

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%[1] M 51

in EUR million	31.12.2021	31.12.2020
Underwriting risk property and casualty reinsurance	5,473.5	4,591.4
Underwriting risk life and health reinsurance	3,329.7	3,144.9
Market risk	4,874.8	4,395.7
Counterparty default risk	468.0	449.0
Operational risk	626.9	548.4
Diversification	(5,238.5)	(4,624.3)
Tax effects	(2,630.2)	(2,314.7)
Required risk capital of the Hannover Re Group	**6,904.2**	**6,190.4**

[1] This information has not been audited by the independent auditor.

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

Climate change

Climate change, defined as naturally occurring or human-caused climatic changes, and the associated effects are already influencing our lives today. This was made clear at the UN Climate Change Conference in Glasgow (COP26) and in the publications of the Intergovernmental Panel on Climate Change (IPCC) last year. Climate change already poses a significant macroeconomic risk and has wide-ranging implications for the (re)insurance industry in common with many other sectors.

In order to combat climate change the international community reached agreement in 2015 on ambitious goals to protect the climate at the UN Climate Change Conference in Paris. Signed by 195 countries, the Paris Agreement seeks to limit the rise in the global average temperature to well below 2 degrees, preferably to 1.5 degrees Celsius, compared to pre-industrial levels. The path to achieving the Paris climate goal depends on a fundamental shift in the economic system and in human habits.

This transformation and the transition to a world largely free of greenhouse gas emissions also entails risks. Shares or bonds issued by corporate entities could, for example, gradually or abruptly drop in value if the company's profitability declines.

The consequences of climate change affect all areas of our business, not only in property & casualty and life & health reinsurance but also in our investing activities. At the same time, the implications of climate change represent the most significant sustainability risk for our company and are therefore closely analysed, monitored and controlled. The focus of climate change risk analysis is currently on changes in the frequency and severity of natural catastrophes (physical risks). In addition, we analyse investments and liability treaties in relation to risks from climate change.

Physical risks affect us as a risk carrier primarily in property and casualty reinsurance, but also in life and health reinsurance, Climatic changes and weather events can, for example, cause higher and more frequent losses in property and casualty reinsurance as well as elevated numbers of deaths among the insured groups of persons. Many forecasts in this connection are subject to uncertainty, especially if they refer to periods further in the future. In order to assess the possible consequences, we have developed scenarios to enable us to evaluate the implications of climate change for all our business activities and initiate appropriate measures for steering the business. Various natural catastrophe scenarios are modelled, such as floods, regional droughts and tropical cyclones. Our interdisciplinary team for natural hazards modelling takes account of the insights gained in pricing for reinsurance solutions and in risk management. In addition, we conduct internal studies and explore the issue in international working groups so as to assess the risks posed by climate change. Currently, we primarily look at two scenarios (rise in temperature of 2 degrees Celsius or 4 degrees Celsius), under which we focus on the windstorm, flood and wildfire perils in the context of physical risks. The results of the analyses are presented to the Risk Committee and included in the Own Risk and Solvency Assessment (ORSA).

In addition, ESG risks – in common with compliance risks that are generally associated with laws and regulations relating to environmental law or ESG standards – are subject to scrutiny under every New Products Process (NPP). Our Risk & Capital Management Guideline, which contains supplementary work instructions and definitions regarding climate change and other ESG issues, is applicable throughout the Group. The Property & Casualty Executive Committee, the Investment Committee and the Environmental Officer similarly develop and discuss climate-related strategic goals and operational measures. Our deci sion to join the Net-Zero Insurance Alliance in the year under review should be mentioned in this context as part of an industry-wide effort to fight climate change.

Climate change can result in shifts that are reflected in stronger demand for reinsurance products to protect against natural catastrophes and also in new opportunities. Hannover Re offers a wide range of products that help customers to protect themselves against increased losses and damage (both in terms of frequency and severity) from natural disasters. What is more, changes in temperature extremes around the world can lead to higher rates of mortality, which in turn may trigger stronger demand for our products in life and health reinsurance.

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.

For risk management purposes 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). Particularly 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 capital[1] for underwriting risks in property and casualty reinsurance **M 52**

in EUR million	31.12.2021	31.12.2020
Premium risk (including catastrophe risk)	3,910.9	3,344.6
Reserve risk	3,225.8	2,595.0
Diversification	(1,663.2)	(1,348.2)
Underwriting risk property and casualty	**5,473.5**	**4,591.4**

[1] Required risk capital with a confidence level of 99.5%; information not audited by the independent auditor

A large 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 five of our largest natural hazards scenarios:

Required risk capital[1] for the five largest natural hazards scenarios **M 53**

in EUR million	2021	2020
Hurricane US	2,355.4	2,027.0
Earthquake US West Coast	1,784.2	1,389.1
Winter storm Europe	1,148.3	792.5
Earthquake Japan	1,477.2	873.5
Earthquake Chile	1,387.5	945.4

[1] Required risk capital with a confidence level of 99.5% on an aggregate annual loss basis; information not audited by the independent auditor

The reserve risk, i.e. the risk of under-reserving already incurred or foreseeable 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 lines and regions. The segment reserve established by the Hannover Re Group amounted to EUR 9,379.3 million (EUR 8,095.6 million) in the year under review.

In calculating the reserves, we use actuarial methods based on run-off triangles. Run-off triangles show the changes in the reserve over time due to paid claims and in the recalculation of the reserves to be established 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 in the form of an external analysis. For further remarks on the reserve risk please see our comments in section 6.7 "Technical provisions" on page 225 et seq.

Asbestos- and pollution-related claims account for only a small share of the Hannover Re Group's loss reserves. It is particularly difficult to reliably estimate future loss payments for such claims. 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 54**

	2021			2020		
in EUR million	Individual loss reserves	IBNR reserves	Survival ratio in years	Individual loss reserves	IBNR reserves	Survival ratio in years
Asbestos-related claims/ pollution damage	15.0	78.9	26.5	13.5	75.0	32.2

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 help to provide partial protection for 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 experience of our own specialist departments. 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 55**

Aggregate annual loss in EUR million	2021	2020
	Effect on forecast net income	
Hurricane US		
100-year loss	(1,452)	(1,107)
250-year loss	(1,959)	(1,594)
Earthquake US West Coast		
100-year loss	(839)	(554)
250-year loss	(1,615)	(1,184)
Winter storm Europe		
100-year loss	(667)	(377)
250-year loss	(1,009)	(631)
Earthquake Japan		
100-year loss	(758)	(347)
250-year loss	(1,203)	(747)
Earthquake Chile		
100-year loss	(493)	(223)
250-year loss	(1,277)	(777)

Within the scope of this process for the management of natural catastrophes, the Executive Board defines the risk appetite and the limit for natural perils once a year on the basis of the risk strategy.

Risk management considers numerous scenarios and extreme scenarios, determines their effect on portfolio and performance data, evaluates them in relation to the planned figures and identifies alternative courses of action.

For the purposes of risk limitation, maximum amounts are also stipulated for various extreme loss scenarios and return periods; the limits set take into account the profitability of the business in question. 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.

Net expenditure on major losses in the year under review amounted to EUR 1,250.2 million (EUR 1,594.9 million). Our company incurred the following catastrophe losses and major claims in the 2021 financial year:

Catastrophe losses and major claims[1] in 2021 **M 56**

in EUR million	Date	Gross	Net
Flood "Bernd", Europe	8–16 July	801.8	208.4
Hurricane "Ida", Caribbean, USA	26 August–4 September	790.5	304.9
Winterfreeze , USA	11–21 February	310.5	156.0
8 Man-made losses		222.6	218.9
Storm "Volker", Germany	21–25 June	113.3	69.6
Tornados, USA	10–11 December	111.9	65.6
3 Marine Losses		47.9	30.2
Floods, China	16–22 July	42.1	34.8
Thunderstorm Australia	25–30 October	35.3	23.1
2 Aviation Losses		32.5	15.9
1 Credit Loss		21.5	21.5
Wildfire "Dixie" Northern America, USA	13 July–25 October	18.4	11.5
Hail/Storm/Flood, Australia	18–23 March	17.6	12.7
Storm "Filomena", Spain	7–8 January	16.6	15.1
Earthquake Fukusihma, Japan	13–14 February	14.8	14.3
Cyclone "Seroja", Australia	11–14 April	14.3	13.4
Drought Canada	1 April	14.0	13.1
Storm "Xero", Germany, Austria, Switzerland	28 June–1 July	13.1	10.6
Frost France	7 April	10.7	10.6
Total		**2,649.4**	**1,250.2**

[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:

Ensuring the quality of our portfolios **M 57**

Step 1

Calculation of the loss expectancy
- Historical loss and exposure analysis
- Changes in the quality of underlying risks
- Changes in the quantity of underlying risks
- Discounting of future cash flows

Step 2

Cost estimation
- Commissions
- Broker fees
- Internal administration

Step 3

Calculation of the cost of capital
- Level of capital allocation determined by volatility of the business covered and contribution to diversification
- Expected return on equity
- Capital structure

In addition, Hannover Re's regional and treaty departments prepare regular reports on the progress of their respective renewals. They report on, among other things, significant changes in conditions, risks (e.g. in relation to the premium level) and also on emerging market opportunities as well as the strategy pursued in order to accomplish targets. The development of the combined ratio in property and casualty reinsurance in 2021 and prior years is shown in the table below:

Combined and catastrophe loss ratio **M 58**

in %	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
Combined ratio (property and casualty reinsurance)	97.7	101.6	98.2	96.5	99.8	93.7	94.4	94.7	94.9	95.8
Thereof catastrophe losses [1]	7.5	11.2	7.5	7.9	12.3	7.8	7.1	6.1	8.4	7.0

[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

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 226 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 insured portfolio such as the Covid-19 pandemic in 2021.

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. Morbidity risks are also playing an increasingly significant role. 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 capital[1] for underwriting risks in life and health reinsurance **M 59**

in EUR million	31.12.2021	31.12.2020
Mortality risk[2]	2,116.3	2,176.3
Longevity risk	2,505.9	2,302.5
Morbidity and disability risk	1,671.6	1,488.3
Lapse risk	353.7	396.8
Expense risk	163.2	222.8
Diversification	(3,481.0)	(3,441.8)
Underwriting risk life and health	**3,329.7**	**3,144.9**

1 Required risk capital with a confidence level of 99.5%; information not audited by the independent auditor
2 Mortality risk incl. catastrophe risk

The monitoring of the risk exposure is complemented by regular stress tests performed with regard to selected underlying underwriting risk factors. The impact (in % of the available economic capital) is within the following ranges:

Sensitivities of the underwriting risks (impact corridors in % of the available economic capital) **M 60**

	2021	2020
Mortality +5% (excluding annuity business)	-8 to -5	-10 to -7
Morbidity +5%	-4 to -2	-4 to -2
Mortality -5% (annuity business only)	-5 to -2	-5 to -2
Lapse rate +10%	-2 to 0	-2 to 0
Costs +10%	-1 to 0	-1 to 0

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 at the subsidiary level. 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. We are currently engaged in arbitration procedures with a small number of individual cedants in respect of the implemented rate increases. Another arbitration procedure with a cedant was successfully concluded in the past year. Based on the information currently available to us, we take a favourable view of our legal position for the remaining proceedings.

Rate increases for further selected treaties were initiated in the course of 2021.

The actual risk experience for the portfolio in question was again influenced by the Covid-19 pandemic in 2021. We are monitoring the further development of the underlying mortality, especially as the Covid-19 pandemic unfolds, 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.

We monitor developments in the worldwide morbidity portfolio on an ongoing basis.

The impacts of Covid-19 on the rest of our morbidity portfolio have been limited to date. We continuously track the potential implications of the Covid-19 pandemic for our worldwide life and health reinsurance business. It is to be anticipated that the Covid-19 pandemic will lead to further strains in 2022. Along with US business, particular mention should be made here of the South African and Latin American mortality portfolio. Special protection covers have been taken out to limit the mortality risk.

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, spread and default 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 assume 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 61**

in EUR million	31.12.2021	31.12.2020
Default and spread risk	2,818.9	2,902.0
Interest rate risk	1,082.2	767.7
Foreign exchange risk	1,593.4	1,024.1
Equity risk[2]	2,048.3	1,618.9
Real estate risk	755.4	646.5
Diversification	(3,423.4)	(2,563.5)
Market risk	**4,874.8**	**4,395.7**

1 Required risk capital with a confidence level of 99.5%; information not audited by the independent auditor
2 Including private equity

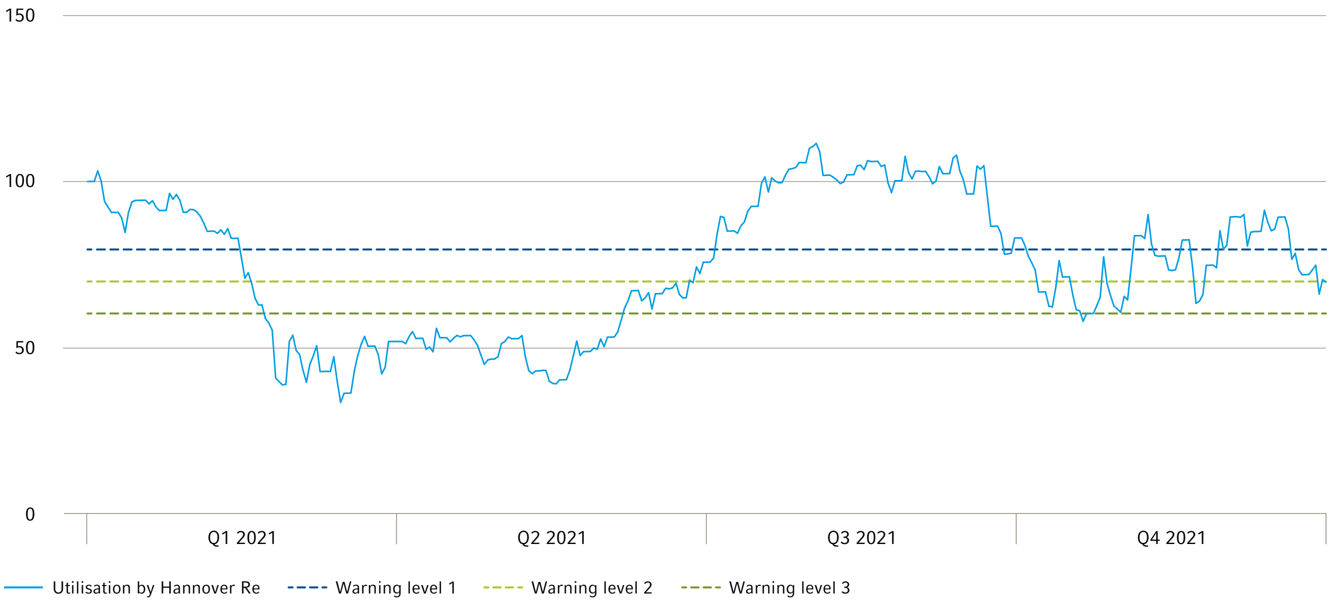
With a view to preserving the value of our assets under own management, we constantly monitor adherence to a trigger mechanism based on a clearly defined traffic light system that is applied across all portfolios. This system defines clear thresholds and escalation channels for the cumulative fluctuations 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 markets were again highly volatile over the course of the year under review. In contrast to the previous years, which had seen continued declines in the rate level, rates moved higher in the year under review across virtually all maturities in our main currency areas. While the increases in euro rates were on the modest side, they were in some instances appreciable on the US dollar and pound sterling markets. After the very sharp rises and highest-ever level of volatility recorded in the previous year, risk premiums on corporate bonds remained relatively stable throughout the entire period under review on the low level seen prior to the coronavirus. Overall, a substantial decrease in the hidden reserves for fixed-income securities was booked over the year as a whole.

The predefined discussion and analysis mechanisms upon triggering of the escalation levels of the early-warning system were activated in the course of the year under review on account of interest rate volatility as well as possible central bank moves in response to inflationary tendencies. In accordance with our guidelines, the Investment Committee therefore regularly discussed the potential implications for our invested asset classes and the current portfolio composition in each case. Thanks to the broad diversification and conservative posture of our investments, there was no need to modify the strategic orientation of our portfolios towards a more defensive investment strategy during the reporting period.

Utilisation of the trigger system
in %

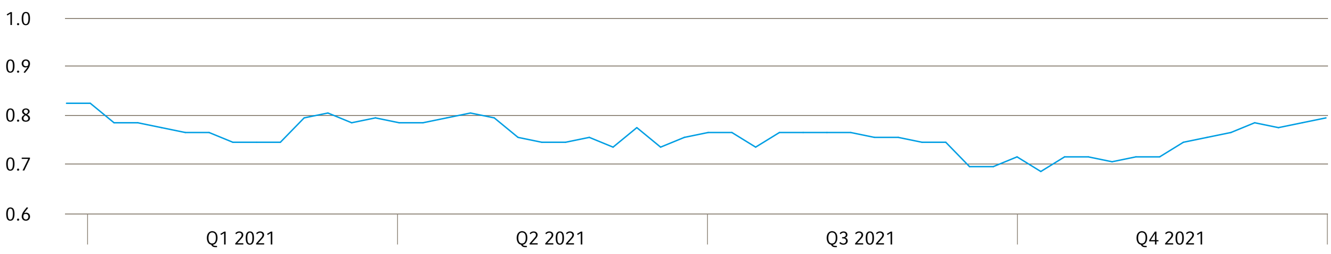
M 62



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 a very turbulent capital market and interest rate environment, volatilities – especially of fixed-income assets – again reached a high level at times 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: 0.8%) as at the end of the reporting period.

Value at Risk[1] for the investment portfolio of the Hannover Re Group **M 63**

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 64**

in EUR million	Scenario	Portfolio change on a fair value basis	Change in equity before tax
Equity securities and private equity	Share prices -10%	-206.2	-206.2
	Share prices -20%	-412.3	-412.3
	Share prices +10%	+206.2	+206.2
	Share prices +20%	+412.3	+412.3
Fixed-income securities	Yield increase +50 basis points	-1,422.2	-1,375.8
	Yield increase +100 basis points	-2,766.8	-2,675.9
	Yield decrease -50 basis points	+1,508.5	+1,460.4
	Yield decrease -100 basis points	+3,113.3	+3,014.6
Real estate	Real estate market values -10%	-310.6	-130.0
	Real estate market values +10%	+310.6	+80.6

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 actively 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 204 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 acted on market opportunities to dispose of equity funds in what was already our minimal portfolio of equities and equity funds going into the year under review. Our equity allocation thus stands at just 0.5%. 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 204 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 204 et seq.

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.

The pandemic also has implications for real estate markets. Against a backdrop of travel restrictions and business closures, the hardest hit areas have been the restaurant, hotel and retail industries, and to some extent also the office sector. In our real estate portfolio we are seeing concrete impacts on directly held properties, above all in the retail sector and especially in relation to lessees in the restaurant industry. Rent reductions and defaults here in the financial year just ended led to shortfalls in regular income of EUR 3.1 million. Overall, though, an increase in the vacancy rate was not observed in this connection. Hannover Re is not directly invested in the hotel sector. Exposures are solely through diversified funds and account for less than 2% of the total real estate portfolio.

The realities and dynamics of real estate markets are indirectly subject to another influencing factor as a consequence of the pandemic. If the economic softness (temporarily) reduces demand for space, this could result in flat or even declining rental price trends or indeed a rising vacancy rate. In combination with modified expectations as regards contract conditions and the likelihood of lease extensions or new leases, these changes in parameters will be reflected in adjusted fair values of the properties. Pandemic-related developments have therefore been factored into the real estate valuations. This applies to both the directly held portfolio and – with the usual slight time delay – the portfolio of real estate funds.

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.

Since 2019 we have entered into term repurchase agreements as a supplementary liquidity management tool. The holdings exchanged in this context are fully collateralised.

Insurance derivatives connected with the technical account are also recognised under the investments due to IFRS financial reporting requirements. For a more detailed presentation of the underlying underwriting risks we would refer to the subsection "Derivative financial instruments in connection with reinsurance" in section 8.1 "Derivative financial instruments and financial guarantees".

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

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

Rating structure of our fixed-income securities[1] **M 65**

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	75.4	14,546.4	53.2	4,125.0	0.7	120.5	59.8	2,044.7
AA	9.8	1,884.8	23.9	1,852.5	10.7	1,886.1	13.5	462.0
A	9.2	1,778.0	7.9	613.7	34.6	6,088.2	12.7	435.8
BBB	4.1	796.7	1.6	121.0	43.4	7,634.1	11.5	393.5
< BBB	1.5	297.1	13.4	1,037.0	10.5	1,844.6	2.5	85.1
Total	**100.0**	**19,303.1**	**100.0**	**7,749.3**	**100.0**	**17,573.5**	**100.0**	**3,421.3**

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 6,465.2 million of the corporate bonds held by our company were issued by entities in the financial sector. Of this amount, EUR 5,158.4 million was attributable to banks. The vast majority of these bank bonds (75.3%) 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 capital[1] for the counterparty default risk **M 66**

in EUR million	31.12.2021	31.12.2020
Counterparty default risk	468.0	449.0

1 Required risk capital with a confidence level of 99.5%; information not audited by the independent auditor

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 measures, by reviewing 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. The Security Committee decides on measures where necessary to secure receivables that appear to be at risk of default. This process is supported by a 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. Overall, retrocessions conserve our capital, stabilise and optimise our results and enable us to act on market 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 67

in %	2021	2020	2019	2018	2017
Hannover Re Group	89.5	90.1	90.0	90.7	90.5
Property and casualty reinsurance	90.1	90.3	90.3	90.7	89.7
Life and health reinsurance	88.2	89.8	89.5	90.7	91.7

Alongside traditional retrocessions in property and casualty reinsurance we also transfer risks to the capital market. Any counterparty default risks associated with investors in a capital market transfer are collateralised via LOCs or a trust account (e.g. using cash) in favour of Hannover Re.

61.4% 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.

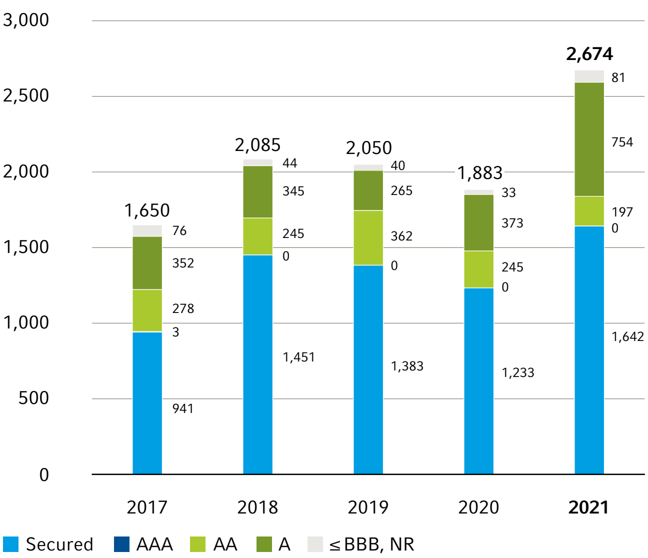
In terms of the Hannover Re Group's major companies, EUR 537.6 million (7.5%) of our accounts receivable from reinsurance business totalling EUR 7,207.7 million were older than 90 days as at the balance sheet date.

The average default rate over the past four years was 0.2%.

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 2,674.1 million (EUR 1,883.3 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 68
in EUR million



The volume 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.

Counterparty default risks, among other risks, are also relevant to our investments and in life and health reinsurance 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.

As the parent company, Hannover Re provides a guarantee to clients for a 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 that arises from inadequate or failed internal processes, or from personnel and systems, or from external evetns. Within the overall framework of operational risks, we pay particularly close attention to business continuity risks, business process and data quality risks, compliance risks, fraud risks, human resources risks, information security risks and outsourcing risks.

Management of operational risks

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. With the aid of half-yearly Group-wide self-assessments, in which all relevant corporate operations are actively involved, we determine the maturity level of our risk management system for operational risks and define action fields for improvements. The assessment is carried out by evaluating the maturity level of the corporate governance, the risk management function and the respective risk identification, analysis, evaluation, steering, monitoring and reporting. The assessment of the maturity level 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 take the findings as a basis for specifying the parameters for the stochastic model. In this context, experts across all disciplines establish assumptions for the loss frequency and losses in joint workshops. In addition, internal loss events and near-losses are systematically recorded and examined with an eye to possible measures for improving the control system. The internal data are enhanced with insights gained from external events, which either become known through public channels or were reported through a loss data consortium of which we are a member.

Regular quarterly risk reporting to the Risk Committee and the Executive Board takes place with regard to all operational risks. In the context of the reporting, risks are also evaluated on the basis of risk indicators.

Required risk capital[1] for operational risks **M 69**

in EUR million	31.12.2021	31.12.2020
Operational risk	626.9	548.4

1 Required risk capital with a confidence level of 99.5%; information not audited by the independent auditor

Unlike market, counterparty default and underwriting risks, operational risks are categorised as non-financial risks. We discuss below the subcategories of operational risks. Risks connected with ESG issues can occur in particular in the subcategories of business continuity, compliance, human resources, information security and outsourcing.

Business continuity risks

Business continuity risks arise from natural or man-made hazards that threaten or disrupt the business operations. The risk also includes IT service continuity risks. Our Business Continuity Management (BCM) system reduces the risk through preventive measures, such as an emergency power supply, alternative infrastructures and contingency plans that are regularly tested. A special organisational and operational structure has been set up to deal reactively with a crisis event. This has proven itself, inter alia in connection with the current Covid-19 pandemic, and there were no material impacts on our business operations.

Overall, our focus in BCM is on the following five scenarios:

- non-availability/shortage of personnel, e.g. as a consequence of a pandemic
- loss of the workplace environment
- failure of local/central IT
- failure of external infrastructures/service providers
- security incidents (life and limb of employees at risk)

Business process and data quality risks

Business process risks are associated with the risk of inadequate or failed 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 very critical success factor, especially in risk management, because for example the validity of the internal model is largely based on the data provided. As part of our data quality management, we have defined extensive automatic routines that continuously determine data quality in central systems.

Compliance risks

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.

We report on our compliance management system as part of our combined non-financial information statement on page 70 et seq. For further information on compliance-related topics, including for example lawsuits, contingent liabilities and commitments, please see section 8.6 "Lawsuits" on page 261 and section 8.7 "Contingent liabilities and commitments" on page 261 et seq.

Fraud risks

Fraud risks refer to the risk that results from intentional violations of laws or rules from own employees and/or from third parties in order to gain an advantage. 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. Should an instance of fraud nevertheless occur, established escalation processes to involve all relevant functions are in place and a risk-specific analysis (e.g. forensic investigation) is conducted including determination of appropriate measures.

Human resources risks

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. These measures are supported by ongoing talent management and regular employee surveys.

Hannover Re has at its disposal specific indicators for the early detection and monitoring of material risks. Along with a determination of the weighted level of maturity, this also encompasses continuous succession planning, ensuring the timely (re)staffing of vacant positions and monitoring turnover rates based on industry benchmarks.

Information security risks

Information security risks arise, inter alia, out of the risk of inadequate integrity, confidentiality or availability of information as well as impacts from or on other assets such as systems, processes, buildings/premises or persons. 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/ransomware are material to the Hannover Re Group. Given the broad spectrum of such risks, a diverse range of technical 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 aware of such security risks through practically oriented tools provided online in the intranet, by way of training opportunities and through targeted information.

Outsourcing risks

Outsourcing risks can result from the outsourcing of functions, services and/or organisational units to third parties. They also include intra-group outsourcings. Mandatory rules have been put in place to limit this risk; among other things, they stipulate that a risk analysis and partner assessment are to be performed prior to outsourcing. In the context of these analyses a check is carried out to determine, inter alia, which specific risks are associated with the outsourcing and what risk management measures need to be taken. The results of the analyses are subject to regular review.

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 distribution channel risk forms an integral part of management of the outsourcing risk.

Cyber attacks and loss of sensitive data

Cyber attacks and the loss of sensitive information can be associated with considerable financial losses and also reputational risks. In our highly networked world it has therefore become increasingly important in recent years to protect information and defend against cyber attacks. This has become all the more true during the Covid-19 pandemic given extensive working from home and the associated changed risks.

With a view to protecting against these risks, Hannover Re has implemented an Information Security Management System (ISMS) that is closely aligned with international standards – principally ISO 27001 – and harmonised with other management systems such as data protection or outsourcing management. The central document is the "Information Security Policy", which is valid for all locations worldwide. Together with specific guidelines and standards, it regulates all technical and organisational measures including those relating to the confidentiality, integrity and availability of information assets. Consideration is given to all types of digital and physical information assets. Appropriate allowance has been made in the IT processes.

The Executive Board bears overall responsibility for information security. It is supported by the Risk Committee. The Information Risk & Security Committee (IRSC) is a sub-committee of the Risk Committee and is comprised of the Head of Risk Management, the Chief Information Security Officer (CISO) and the Head of IT. The IRSC evaluates and monitors the corresponding risks and steers any conflicts of interest in relation to information and IT security. It acts – in common with the risk management function and the CRO – independently of any instructions. The full Executive Board is provided with information at least annually by way of an information security report and also within the year if necessary. The Risk Committee receives information on a quarterly basis.

The CISO, as the main process owner, is responsible for the planning, implementation and ongoing development of the ISMS as well as for coordinating the corresponding tasks within the Hannover Re Group. He is supported by local contacts and additionally bears responsibility Group-wide for the definition and monitoring of controls. The CISO cooperates closely with Information Risk Management (IRM), the central Compliance function and the Data Protection Officer. Both the CISO and the other specified functions form part of the second line of defence. Furthermore, every single member of staff is responsible for adhering to the relevant guidelines and instructions. To this end, all employees receive training in information security topics annually and at the time of their appointment and receive awareness-raising within the year.

When it comes to a transfer of knowledge in relation to our own (operational) risks in connection with cyber risks (cyber resilience), we participate in various cooperative projects undertaken by our industry and engage in a regular dialogue with, among others, the Bundesverband der IT-Anwender e. V. in the context of the Cyber Security Competence Center.

Cyber risks in underwriting practice

Hannover Re offers reinsurance protection for cyber risks. The risks stemming from the cyber portfolio are monitored and managed using, among other things, the internal model. The management approach also encompasses cyber exposures from insurance contracts that do not primarily cover this risk (silent cyber risk), although these diminished in importance last year due to the implementation of exclusions. In addition, part of the risk is ceded through an external protection cover.

The issues of information security and cyber security as well as the associated risks in underwriting practice are also addressed by our working group on emerging risks, which supports monitoring across the various departments.

Other risks

Under other risks we include emerging risks, strategic risks, sustainability and reputational risks as well as liquidity risks.

Management of other risks

Other risks are managed primarily using qualitative methods and on the basis of risk indicators. Risk management monitors and reduces the other risks through mitigation measures such as company-wide working groups and guidelines. 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.

Within the risk management processes we also take into account the impacts on operational and reputational risks of aspects of environmental management, employee matters, social concerns, 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).

Reputational risks are included under non-financial risks. Risks connected with ESG topics can arise, in particular, in the subcategories of emerging and strategic risks as well as sustainability and reputational risks.

Emerging risks

Emerging risks are risks that are in the process of forming or may shortly become relevant due to current developments. Emerging risks evolve gradually from weak signals to unmistakable tendencies. They can directly impact our treaty portfolio in both property & casualty and life & health reinsurance and influence our investments. A further hallmark is that their risk content cannot be reliably assessed, especially with respect to our treaty portfolio. Emerging risks include, for example, scarcity of resources and shortage of water as well as the loss of biodiversity.

Early detection and subsequent evaluation of risks are crucially important when it comes to emerging risks. For this reason, we deploy Hannover Re's internal, interdepartmental and multi-line expert working group on "Emerging Risks & Scientific Affairs" and we ensure its linkage to risk management. The analyses performed by this working group are used Group-wide in order to pinpoint any necessary measures. The working group is currently exploring around 20 megatrends so as facilitate the identification and adequate evaluation of not only existing but also emerging risks. Megatrends are defined as developments with a trend cycle of at least 30 years. They are not presently associated with direct impacts on operations, but may potentially evolve in this direction. The monitored megatrends of ESG relevance include, among others, the decline in biodiversity, global warming and scarcity of resources. Megatrends are considered in connection with emerging risks and resulting opportunities. Thus, for example, the megatrend towards a decline in biodiversity can be viewed in conjunction with emerging risks associated with scarcity of resources, air pollution, genetically modified organisms or food security and availability – but also goes hand-in-hand with a need for innovative (insurance) solutions and services. Action on climate change means new or refined technologies, such as renewable energies or hydrogen concepts and their various possible applications, for which insurance coverages are needed.

Another observed trend is urbanisation. The steady increase in urbanisation means the growth and change of cities. Those leaving the countryside and moving to the city are mostly young, hence altering both rural and urban age distributions. Correlated trends such as the ageing society and new types of mobility, increasingly against a backdrop of sustainability, are throwing up major questions. The significance of these trends and the speed of change are compelling the insurance industry to plan which role it wants to play in helping to shape the future. In this context it is important to consider both business opportunities and risks. Given that all this is affected by climate change, people's property – especially when value concentrations form in future megacities – will have to be insured against natural perils. In a worst-case scenario, this could mean that certain regions and risks become uninsurable if adequate urban planning – taking account of natural hazards – is neglected in the spread of large cities around the world. Urbanisation not only means new buildings, technologies and lifestyles that have to be insured; rather, living close together also has implications for people's physical and mental well-being, which is relevant to our portfolio of life and health insurance.

Hannover Re publishes position papers on various emerging risks which can be accessed on our website. In the year under review the papers on pandemics, medical advances and microplastics, among others, were updated. A position paper on social media was made available for internal purposes.

Hannover Re, represented by members of staff from Risk Management and other units, is a member of the Chief Risk Officer (CRO) Forum and a constant participant in the CRO Forum's Emerging Risk Initiative, which continuously tracks and analyses various emerging risks, publishes information on megatrends and associated risks and conducts corresponding impact analyses. The megatrends considered include ageing and health, consumer habits and digitalisation, economic stability, environment and climate change, shifting geopolitical landscapes, technological advances as well as urbanisation and social changes. New topics added in the year under review were digital misinformation, plastics & microplastics as well as the skills shortage and retraining. The "pandemic" issue was upgraded from "first significant impacts expected in 1-5 years" to "significant impacts on insurance claims". The publications are publicly accessible on the CRO Forum website. An exploration of the carbon intensity of insured portfolios (Carbon footprinting methodology for underwriting portfolios) is also available there.

Strategic 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. The process for the management of strategic risks continues to be assessed annually as part of the monitoring of business process risks.

Sustainability and reputational risks

Reputational risks refer to the risk that the trust put in our company by clients, shareholders, employees or the public at large may be damaged. This risk has the potential to significantly 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 mitigation, 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.

Above and beyond the general influence that sustainability risks have on a number of other risk categories (outside-in perspective), we also see a correlation between reputational and ESG risks (inside-out perspective). Risk Management and Corporate Communications work together closely to identify ESG and reputational risks. This applies both to the assessment of ESG risks and to the monitoring of media reports, the analysis of NGO activities and the dialogue cultivated with relevant stakeholder groups.

In the year under review we therefore extensively updated our Framework Guideline on Sustainability and Reputational Risk Management with an eye to the ESG perspective.

Liquidity risks

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 larger 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 6.7 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.

Opportunity report

Speed is one of the qualities used to measure a successful knowledge transfer. The name of the game is quick and effective solutions and staying one step ahead of the competition. 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 ensure holistic opportunity and risk management. Of significance here is the interplay without overlaps of the various functions within opportunity and risk management, which is assured 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 141 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. New business opportunities that promise access to innovative technologies and enhance our appeal in the eyes of customers are specifically pinpointed. 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 and the goals pursued by these innovation units have been put on a strategic footing. The interplay between these units is based on a dedicated approach that enhances the activities with specific expertise and efficiency. In concrete terms, new accelerator units have been established in the areas network, business (in each case in the P&C and L&H business group), technology and parametrics. The tasks performed by these organisational units include, among others, global scaling of existing regional products and solutions, developing new sector- and customer-specific digital assets as well as providing systematic support for insurtechs as they build their digital business models. This broad spectrum of tasks is geared to the clearly defined goals of generating new premium potential for the Group, cultivating new strategic partnerships and acquiring new capabilities in the fields of digitalisation and data analytics.

Closing the protection gap

The economic costs of natural disasters have risen sharply as catastrophes have grown in number and severity. The heightened risk is primarily due to economic development and population growth, a greater concentration of assets in exposed regions and increasingly also to climate change. The gap between uninsured and insured losses is particularly large in emerging and developing countries. Against this backdrop, Hannover Re is stepping up its involvement through cooperation with both the public sector and private enterprise so as to further close the insurance gap for protection against natural disasters – especially those that are climate-related – in developing and emerging countries. By way of example, this is achieved in selected exposed countries in the context of the trilateral agreement between the Insurance Development Forum, the Federal Ministry for Economic Cooperation and Development and the United Nations Development Programme. In substantive terms, we provide capacity for the Natural Disaster Fund and participate in regional risk pools against natural perils as well as a number of other programmes with a bearing on reinsurance. For example, Hannover Re is currently involved in projects for the development of insurance products in Jordan, Argentina and Colombia.

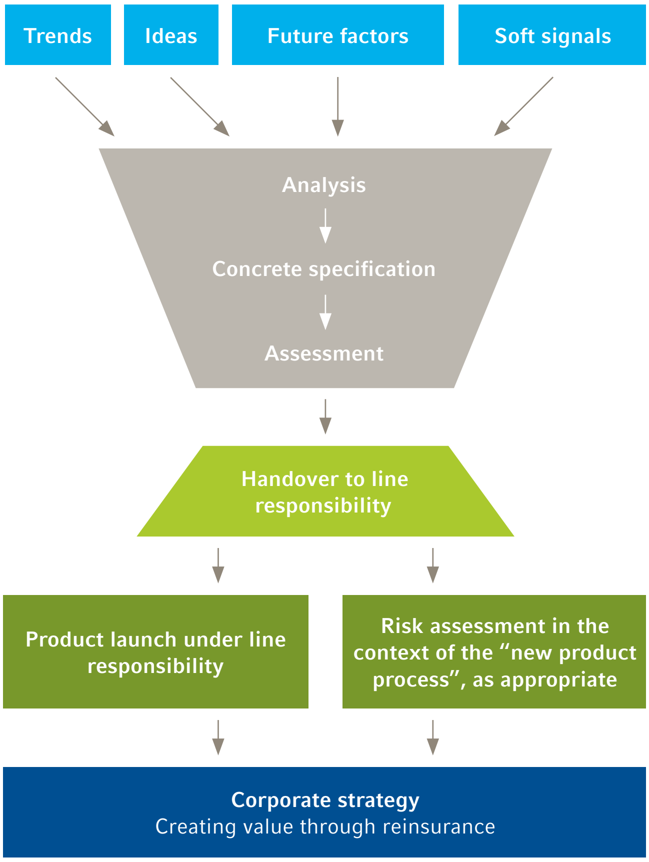
The dynamic networking of the members of staff active in the field of innovation at Hannover Re gives rise to close links with other projects, working groups and bodies, such as with the working group on "Emerging Risks und Scientific Affairs" in regard to emerging risks and opportunities (see page 113 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. Analyses are compiled here exploring how Hannover Re can counter megatrends such as climate change, digitalisation or shifting demographics with novel (re)insurance products or capital investments. In the year under review, for example, issues such as "Social media", "Demographics", "Long Covid" and "Supply chain risks in medicine" 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 business 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.

Opportunity management process **M 70**



Overall assessment by the Executive Board

Based on our currently available insights arrived at 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 sustainable and 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.

Our own evaluation of the manageability of existing risks is confirmed by various financial indicators as well as by external assessments of rating agencies. 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. 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. We have 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 its position as one of the leading, most profitable reinsurance groups operating worldwide. 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 and are guided by them in 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 are reviewed and revised regularly, most recently in May 2021. 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 formulated 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 defines current best practices for corporate governance and is intended to make the German system of corporate governance transparent and comprehensible. It seeks to foster the trust of international and national investors, customers, employees and the general public in the management and supervision of German listed 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. Supplementary to the present declaration, the Declarations of Conformity pursuant to § 161 Stock Corporation Act (AktG) regarding compliance with the German Corporate Governance Code for recent years are published on our website (https://www.hannover-re.com/200801/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 one recommendation, since a justified deviation from the recommendations of the Code may – as in the present case – be very much in the interests of good corporate governance tailored to a particular company, i.e. by reflecting enterprise- and industry-specific features.

Based on such a high degree of fulfilment of the recommendations and suggestions of the Code, Hannover Rück SE continues to place well overall among the companies listed on the DAX and MDAX – as is borne out again this year 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

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 and Consumer Protection or to explain which recommendations of the Code were/are not applied and why this is the case.

The Executive Board and Supervisory Board therefore declare pursuant to § 161 Stock Corporation Act (AktG) that in its fulfilment of the German Corporate Governance Code Hannover Rück SE diverges in one respect from the recommendations contained in the version of the Code dated 16 December 2019 (published in the Federal Gazette on 20 March 2020):

Code Recommendation C.10 in conjunction with Recommendation C.7
Independence of the Chair of the Audit Committee from the company and the Management Board

Pursuant to Recommendation C.10 of the Code, the Chair of the Audit Committee shall be independent of the company and the Management Board. Pursuant to Recommendation C.7 of the Code, when assessing the independence of the Supervisory Board's members from the company and the Management Board, the shareholder representatives shall particularly take into consideration whether the respective Supervisory Board member has belonged to the Supervisory Board for more than twelve years. Mr. Haas, the Chair of the Finance and Audit Committee, was first elected to the Supervisory Board of Hannover Rück SE on 24 May 2002 and has therefore already belonged to it for more than twelve years.

In the period from 1994 to 2002 Mr. Haas 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. His additional long-standing experience on the company's Supervisory Board – in part also as Chair – similarly marks him out for fulfilling with the utmost diligence both the preparatory tasks of the Committee and the tasks that were assigned to the Committee by law or by the full Supervisory Board at its own responsibility. In electing him as Chair of the Committee, the Supervisory Board took into account Mr. Haas' wealth of experience and considered this to be valuable.

Mr. Haas is optimally suited to chairing the Audit Committee, and in the opinion of Hannover Rück SE it is therefore in the interest of the company to diverge from Recommendation C.10 in conjunction with C.7.

Aside from this divergence discussed above, the company will also continue in future to comply with all recommendations of the Code in the version dated 16 December 2019.

Hannover, 3 November 2021

The Executive Board, The Supervisory Board

Remuneration

Remuneration of the Executive Board

The applicable system of remuneration for the members of the Executive Board of Hannover Rück SE was adopted by the Supervisory Board at its meeting on 4 August 2020. This was further presented to the Annual General Meeting on 5 May 2021, where it was approved by a majority of 76.31%. The remuneration system was developed by the Supervisory Board with the support of an independent consultant and is in conformity with the requirements of the Stock Corporation Act (AktG) as well as the recommendations of the German Corporate Governance Code (DCGK) as amended on 16 December 2019 (published in the Federal Gazette on 20 March 2020).

The agenda and the invitation to the Annual General Meeting 2021, incl. the description of the remuneration system under agenda item 8, can be viewed on the company's website, https://www.hannover-re.com/1671472/invitation-agenda.pdf.

The remuneration report 2021 can be found on page 124 et seq. and at
https://www.hannover-re.com/remuneration-report-2022.

Remuneration of the Supervisory Board

The system of remuneration for the members of the Supervisory Board is geared to the legal requirements and reflects the recommendations and suggestions of the German Corporate Governance Code. It is governed by § 14 of the company's Articles of Association, https://www.hannover-re.com/34118/statute-hannover-ruck-se.pdf.

The remuneration of the members of the Supervisory Board is balanced overall and commensurate with the responsibility and tasks of the Supervisory Board members and the position of the company, with consideration also given to the remuneration arrangements of comparable listed companies. The remuneration arrangements as well as the remuneration system are regularly reviewed by the Supervisory Board with an eye to their adequacy, in which regard the advice of external consultants may also be sought. The Annual General Meeting considers the remuneration of the Supervisory Board members at least every four years and if changes to the remuneration arrangements are proposed. This was most recently the case at the Annual General Meeting on 5 May 2021. The Annual General Meeting can confirm the existing system of remuneration for the Supervisory Board or adopt a resolution to amend it.

The agenda and the invitation to the Annual General Meeting 2021, including the description of the remuneration system under agenda item 9, can be viewed on the company's website, https://www.hannover-re.com/1671472/invitation-agenda.pdf. The individual remuneration of the members of the Supervisory Board for the 2021 financial year is itemised on page 148 et seq. of the Annual Report.

Remuneration of senior executives below the Executive Board

The structure and system underlying the remuneration scheme for senior executives below the Executive Board (management levels 2 and 3) and for the domestic key function holders belonging as a matter of principle to the ranks of senior executives are specified in greater detail on pages 151 et seq.

Information on share-based payment is provided in the section of the notes "Share-based payment" on page 256 et seq. and in the remuneration report with respect to the members of the Executive 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.

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 86 et seq.

Sustainability of enterprise management

In the year under review it was again evident that ESG issues continued to take on greater strategic and regulatory significance. The associated risks and opportunities go hand-in-hand with increasing expectations placed on the role of corporate governance. Requirements derive from, among other things, the G20/OECD Principles of Corporate Governance, Solvency II, the Corporate Sustainability Reporting Directive (CSRD), the BaFin Guidance Notice on Dealing with Sustainability Risks, the German Corporate Governance Code (DCGK) as well as the recommendations made by the Task Force on Climate-Related Financial Disclosures (TCFD). It is envisaged that corporate governance will assume a prominent role in shaping ESG topics and integrate them into enterprise management.

The Executive Board is responsible for the underlying strategies, the implementation of corresponding structures and provision of appropriate resources as well as the definition of responsibilities in the organisational guidelines. The Supervisory Board is tasked with providing advice and oversight for the Executive Board in its leadership of the company, inter alia with an eye to the handling of sustainability risks.

The Executive Board adopted a new ESG governance structure in the year under review with a view to strengthening governance as it relates to ESG-relevant issues. Core elements are the newly created "Sustainability Function" and the "ESG Management Team". The tasks of the sustainability function, which is assigned to the Chief Executive Officer's scope of responsibility, include inter alia central coordination of all ESG activities, identifying, analysing and evaluating ESG topics, leading ESG projects (e.g. for implementation of the EU Taxonomy), advising the specialist units on ESG issues, presenting proposals for long-term ESG goals to the Executive Board, regular reporting to the Executive Board and coordinating an annual ESG programme. The ESG management team is composed of high-calibre participants from a range of different departments. The ESG management team ensures coordinated dovetailing with the Group strategy and serves as the interface to local units as well as the central point of contact for fulfilment of ESG-related regulatory requirements. The described ESG governance structure provides for quarterly reporting to the Executive Board. Furthermore, ESG and the sustainability strategy were topics of discussion in the year under review at the meetings of the Supervisory Board and its Finance and Audit Committee.

In view of the special significance of sustainability issues and ESG risks, there is also close cooperation with Group Risk Management. The meetings of the Risk Committee are routinely presented with information on ESG-related and reputational risk topics. The Executive Board also approved a "Sustainability/RepRisk Framework" in the year under review. For more extensive information on risk management and the integration of ESG topics, we would refer to the "Opportunity and risk report" from page 86 onwards.

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. Further details of the compliance management system are provided in the combined non-financial information statement contained in this Annual Report on pages 70 et seq. The results of our compliance activities are documented annually in the compliance report, which is submitted to the Finance and Audit Committee of the Supervisory Board and the full Supervisory Board; in the regard please see the Report of the Supervisory Board on pages 278 et seq.

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 supervise 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 Chairman 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 (including period of membership) is set out on page 18 et seq. and page 283 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 a sufficient number of independent members on the shareholder side shall belong to the Supervisory Board. 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. A regular self-assessment is intended to survey the general efficiency of its working approach and assure it on a lasting basis. In the year under review this self-assessment was conducted in accordance with the German Corporate Governance Code. For this purpose, the individual assessments of the Supervisory Board members were first surveyed in advance. The consolidated anonymised evaluation of this survey then established the basis for exploration of the insights gained at the next meeting of the Supervisory Board. All in all, the picture that emerged from the self-assessment was extremely satisfactory.

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 (further details of the names of the members and background information on the individual committee members can be found on page 283 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 number of meetings of the committees in the period under review as well as the attendance of the committee members are discussed in greater detail in the Report of the Supervisory Board on page 278 et seq.

The Finance and Audit Committee was made up of Mr. Herbert Haas (Chairman), Mr. Torsten Leue and Dr. Ursula Lipowsky as an independent financial expert in the reporting period. The 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, the fee agreement and the quality of auditing. 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.

Mr. Torsten Leue (Chairman), Mr. Herbert Haas and Dr. Erhard Schipporeit came together in the period under review as the Standing Committee. The body 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. A systematic approach is taken in this regard and a list of potential candidates with their associated development periods is maintained, regularly updated and discussed by the committee in light of the diversity targets. This routinely 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 – Mr. Torsten Leue (Chairman), Mr. Herbert Haas and Dr. Andrea Pollak – 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 in the year under review, please see the explanatory remarks provided in the Report of the Supervisory Board on page 278 et seq.

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

Five members of the Supervisory Board of Hannover Rück SE were women in the year under review. 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 its Nomination Committee. The proportion of women serving on the Supervisory Board was therefore 56% in 2021. 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.

On the level of the Executive Board, the goal continues to be to appoint another women as a member of the company's Executive Board by the year 2024. Currently, one woman serves on the body, which has altogether seven members.

The target for the two levels of senior management below the Executive Board is 18% (corresponding to 16 women), again to be reached by 30 June 2022.

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 2021 financial year

Diversity on the Supervisory Board and Executive Board continued to be a major focus in the 2021 financial year. Since the end of the Annual General Meeting on 8 May 2019 altogether five women have belonged to the Supervisory Board. It remains the case that female members of the Supervisory Board sit on two of the three Supervisory Board committees. One woman serves on the Finance and Audit Committee and one is a member of the Nomination Committee.

Furthermore, the Supervisory Board considers it important that an adequate number of Supervisory Board members are independent as defined by the German Corporate Governance Code (DCGK). In its own assessment, the Supervisory Board currently meets the target set by the Code because Dr. Lipowsky, Dr. Ollmann and Dr. Pollak are independent within the meaning of Code Recommendation C.6. Dr. Schipporeit similarly largely fulfils the independence criteria according to 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 longer than twelve years.

The diversity of the Executive Board with respect to female members remained unchanged in 2021. The goal of appointing at least one additional woman as a member of the company's Executive Board by the year 2022 is factored into succession planning as far as possible.

The age diversity on the Executive Board ranged from 51 to 61 in the 2021 financial year. On the Supervisory Board the age range was from 48 to 72.

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 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 management, 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. Members of the Executive Board are initially appointed for no more than three years.

Remuneration report

The remuneration report describes the structure and system of the remuneration for the Executive Board and Supervisory Board and provides detailed information about the individual remuneration of present and former members of the Executive Board and Supervisory Board of Hannover Rück SE that is granted and owing to them for their work in the 2021 financial year.

Due to the entry into force of the Act Implementing the Second Shareholders' Rights Directive (ARUG II) on 12 December 2019, the Executive Board and Supervisory Board have drawn up the remuneration report for the 2021 financial year for the first time on the basis of the new regulatory requirements of § 162 Stock Corporation Act (AktG). The report is in conformity with the recommendations and suggestions of the German Corporate Governance Code (DCGK) as amended on 16 December 2019 and takes account of relevant regulatory provisions.

Remuneration of the Executive Board

Modification of the remuneration system effective 1 January 2021/ Procedure for determining and implementing the remuneration system

The changed legal and regulatory requirements for the remuneration system of the Executive Board due to the entry into force of the Act Implementing the Second Shareholders' Rights Directive (ARUG II) and the revised version of the German Corporate Governance Code (DCGK) prompted the Supervisory Board of Hannover Rück SE to review and comprehensively overhaul the system of remuneration for the members of the Executive Board. In his context the Supervisory Board also took into account the expectations of our investors and other key stakeholders.

In its elaboration of the current remuneration system the Supervisory Board was supported by the Standing Committee, which in particular put forward recommendations for the organisation of the system in light of the defined guidelines. As part of the elaboration and determination of the remuneration system, the Supervisory Board made use of its option to call upon the services of an external remuneration consultant who is independent of the Executive Board and the company.

The new remuneration system for the Executive Board was decided on by the Supervisory Board at its meeting on 4 August 2020 and – in view of the material changes – presented to the General Meeting on 5 May 2021 for its approval. The General Meeting approved the new remuneration system of the Executive Board with a majority of 85.54%.

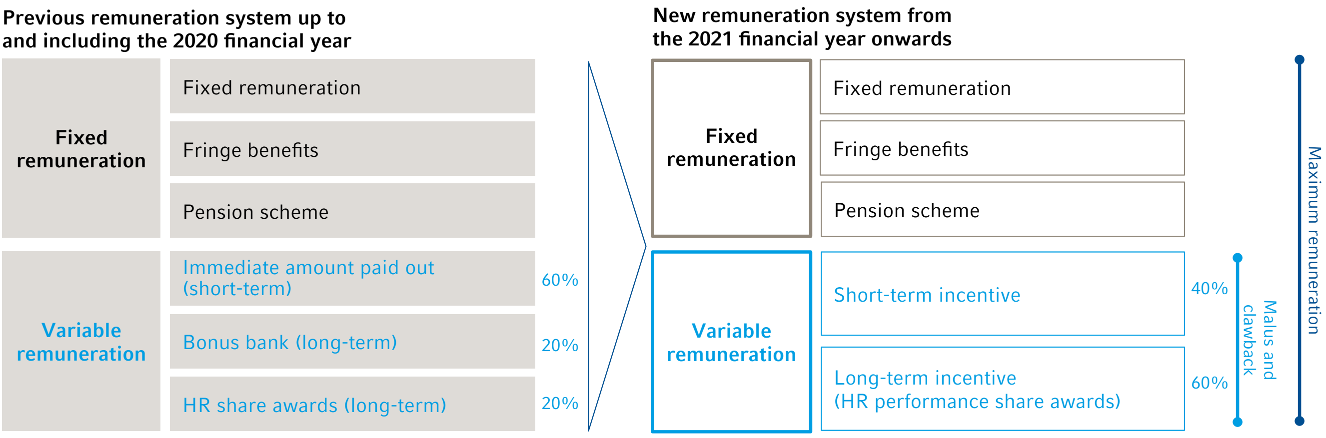
Insofar as no material changes are made to the remuneration system, the system of remuneration will be resubmitted to the General Meeting at least every four years for its approval.

The new remuneration system has been applicable to all members of the Executive Board with effect from 1 January 2021. It is in full conformity with the amended legal and regulatory requirements and the recommendations of the German Corporate Governance Code (DCGK).

Due to the reduction in the number of variable remuneration components and the focus on altogether fewer, yet at the same time central financial and non-financial performance criteria derived from Hannover Re's Group strategy, the remuneration system is structured more transparently and comprehensibly overall. The considerable relevance of the variable remuneration and the reinforcement of the concept of "pay-for-performance" remain front and centre in this regard. The measurement of performance also takes account of sustainability criteria. In addition, the remuneration of the Executive Board is geared even more closely to the interests of our investors through a stronger share correlation based on the use of a Performance Share Plan and relative measurement of the Hannover Re share's performance in comparison with our competitors. Furthermore, the implementation of malus und clawback provisions makes it possible to reduce or claw back variable remuneration components in the event of serious compliance violations.

The material modifications to the system of Executive Board remuneration applicable until 2020 are summarised in the following overview:

Changes in the remuneration system of the Executive Board M 71



HR = Hannover Re

Remuneration of the Executive Board in the 2021 financial year

Basic principles for determining the remuneration

The strategy of the Hannover Re Group is geared to sustainable outperformance in the interests of the Group's stakeholders (in particular investors, clients and employees). In remunerating the Executive Board our focus is therefore on the principles of continuity, financial strength and profitability. With a rigorous underwriting policy, partnership-based customer relationships, a lean operating model and our highly efficient risk and capital management, we aim to preserve our outstanding position as one of the world's leading and most profitable reinsurance groups on an enduring basis and be the market leader in terms of profitability, earnings growth and cost efficiency. In our "Striving for sustainable outperformance", governance, risk management, compliance and corporate social responsibility constitute the foundations for our growth as a trusted global reinsurance partner.

Risk management and corporate social responsibility are defined more closely in specific strategies derived from the Group strategy. For further information about the risk management system we would refer to the "Opportunity and risk report" from page 86 onwards. For further information on corporate social responsibility and the compliance management system please see the non-financial information statement from page 70 onwards. We report on the basic principles of our corporate governance from page 118 onwards.

The remuneration of the Executive Board makes a substantial contribution to the advancement of our Group strategy and the long-term and sustainable development of the Hannover Re Group. The remuneration ensures a transparent, performance-related incentive, strongly focused on the company's long-term success, which in particular depends on performance criteria derived from the Group strategy and on the performance of the Hannover Rück SE share, including in comparison with our competitors. In addition, an excessive risk appetite is discouraged.

The members of the Executive Board are remunerated in light of the company's position and according to their performance and their scope of activity and responsibility. The requirements of the Stock Corporation Act (AktG), the provisions of Article 275 of Delegated Regulation (EU) 2015/35 with amendments by Delegated Regulation (EU) 2016/2283 and of the Insurance Supervision Act in conjunction with the Regulation on the Supervisory Law Requirements for Remuneration Schemes in the Insurance Sector (VersVergV) as well as the recommendations for the remuneration of the management board contained in Section G of the German Corporate Governance Code (DCGK) establish the regulatory framework.

In determining the remuneration for the Executive Board of Hannover Re, the Supervisory Board followed the guidelines set out below:

Guiding principles for the Executive Board remuneration of Hannover Re M 72

Promoting the corporate strategy	• Performance criteria derived from the corporate strategy
Long-termism and sustainability	• Variable remuneration largely share-based with a multi-year orientation • Sustainability targets (ESG) integrated into the measurement of variable remuneration
Pay-for-performance	• Bulk of target direct remuneration comprised of variable remuneration components • Adequate and ambitious defined performance criteria • Variable remuneration can fluctuate between zero and a cap
Adequacy of remuneration	• Remuneration of Executive Board members commensurate with the tasks and performance of the respective Board member and the position of the company • Allowance for internal and external remuneration ratios • Caps on the individual variable remuneration components and total remuneration
Linkage to shareholder interests	• Harmonisation of the interests of the Executive Board with those of our shareholders • Malus and clawback provisions apply to entire variable remuneration • Relative performance measurement creates incentives for long-term outperformance of our competitors on the capital market
Allowance for market practice and regulatory compliance	• Allowance for current market practice of relevant peers in the Board remuneration • Ensuring conformity with legal and regulatory requirements relevant to Hannover Re
Transparency	• Ex-post disclosure of target values and target attainment • Ex-post disclosure of the individual premium/deduction per Board member

Remuneration structure

The idea of "pay-for-performance" and the long-term orientation are paramount concepts central to the remuneration system for the Executive Board of Hannover Re.

In order to reinforce the concept of pay-for-performance, the target direct remuneration (sum of fixed remuneration and target amounts of the variable remuneration components in the event of 100% target attainment) is comprised of 40% fixed remuneration and 60% variable remuneration components. The variable remuneration consists of a short-term incentive (STI) and a long-term incentive (LTI) with a performance period of four years.

The remuneration structure is geared to the sustainable and long-term development of the Hannover Re Group. The STI accounts for 40% of the variable remuneration components and thus contributes 24% to the target direct remuneration. The LTI, which accounts for a 60% share of the variable remuneration components, represents 36% of the target direct remuneration.

Review of the appropriateness of the Executive Board remuneration

The remuneration of the members of the Executive Board is determined by the Supervisory Board on the basis of the remuneration system in accordance with the recommendations of the Standing Committee. When determining the remuneration of the members of the Executive Board, the Supervisory Board considers the responsibility and tasks of the individual members of the Executive Board, their individual performance, the economic situation and the success and future prospects of the company.

The customary nature of the remuneration in comparison to other similar companies (horizontal comparison) and in terms of the amount of remuneration as well as the remuneration structure within the company (vertical comparison) was reviewed as part of the overhaul of the remuneration system in 2020. Companies listed on the DAX and MDAX (excluding Hannover Re) as at 1 May 2020 were used on a combined basis as a peer group for the horizontal comparison of remuneration. The vertical comparison is based on the proportion of the remuneration of the Executive Board relative to the remuneration of the total workforce of Hannover Re in Germany. Both the status quo and the development over time of the remuneration ratios were taken into consideration. The remuneration ratios between the Executive Board and the total workforce were also compared with the remuneration ratios of selected peers from the insurance industry, where available.

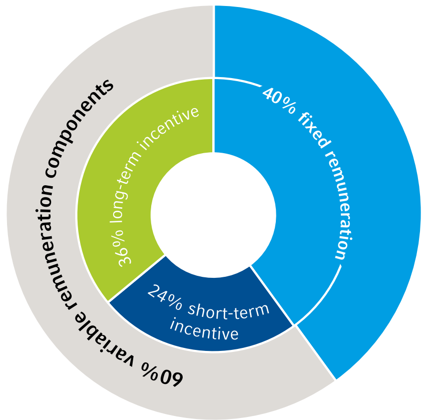
Determination of target remuneration

Every member of the Executive Board is given a contractual commitment to customary target remuneration. This is aligned with their scope of responsibility and with their expertise and experience that are relevant to the role.

In the context of the overhaul of the remuneration system, the Supervisory Board also modified the amount of target remuneration of the members of the Executive Board with effect from 1 January 2021, i.e. at the same time as the entry into force of the new remuneration system. This was done on the basis of the development of remuneration at the major peers used for comparative purposes as well as the development of business at the company. In keeping with the pay-for-performance concept and the long-term focus of the Executive Board remuneration, the remuneration modification centred on the LTI as the remuneration component with a long-term orientation and multi-year structure. As a consequence of the remuneration modification, the target remuneration of the members of the Executive Board is in the customary range for a company the size of Hannover Re.

The following tables show the target remuneration for each member of the Executive Board for the 2021 financial year. The target remuneration encompasses the remuneration commitment for the financial year that is granted in the event of 100% target attainment.

Structure of the target direct remuneration M 73



Target remuneration **M 74**

	Jean-Jacques Henchoz (Chief Executive Officer)		Sven Althoff (Board member with divisional responsibility/ Coordinator of the Property & Casualty reinsurance business group)	
	2021		2021	
	in EUR thousand	in %	in EUR thousand	in %
Basic remuneration	840.0	37.4	520.0	39.5
Fringe benefits [1]	14.1	0.6	16.1	1.2
Signing bonuses	130.0	5.8	–	0.0
Fixed remuneration components	**984.1**	**43.8**	**536.1**	**40.7**
One-year variable remuneration (STI)	504.0	22.5	312.0	23.7
Multi-year variable remuneration (LTI) [2, 3] (performance share awards 2021)	756.0	33.7	468.0	35.6
Variable remuneration components	**1,260.0**	**56.2**	**780.0**	**59.3**
Total target remuneration	**2,244.1**	**100.0**	**1,316.1**	**100.0**
Service cost [4]	215.0		288.7	

	Claude Chèvre (Board member with divisional responsibility)		Clemens Jungsthöfel (Chief Financial Officer)	
	2021		2021	
	in EUR thousand	in %	in EUR thousand	in %
Basic remuneration	520.0	39.6	400.0	39.7
Fringe benefits [1]	15.0	1.1	8.0	0.8
Fixed remuneration components	**535.0**	**40.7**	**408.0**	**40.5**
One-year variable remuneration (STI)	312.0	23.7	240.0	23.8
Multi-year variable remuneration (LTI) [2, 3] (performance share awards 2021)	468.0	35.6	360.0	35.7
Variable remuneration components	**780.0**	**59.3**	**600.0**	**59.5**
Total target remuneration	**1,315.0**	**100.0**	**1,008.0**	**100.0**
Service cost [4]	148.7		103.2	

[1] Excluding insurance under group contracts
[2] The LTI tranche 2021 (Hannover Re performance share awards 2021) is allocated at the start of the 2022 financial year. The LTI amount payable is determined and paid out at the end of the four-year performance period in the 2026 financial year under the terms of the plan (see detailed description of the LTI).
[3] In the 2021 financial year the members of the Executive Board received further benefits from multi-year variable remuneration that refer to earlier financial years. This table shows the target remuneration for the 2021 financial year without entitlements from previous years.
[4] For details of the service cost see the table "Pension commitments" on page 142.

	Dr. Klaus Miller (Board member with divisional responsibility)		Dr. Michael Pickel (Board member with divisional responsibility)	
	2021		2021	
	in EUR thousand	in %	in EUR thousand	in %
Basic remuneration	520.0	40.0	520.0	39.8
Fringe benefits [1]	0.7	0.0	7.0	0.5
Fixed remuneration components	**520.7**	**40.0**	**527.0**	**40.3**
One-year variable remuneration (STI)	312.0	24.0	312.0	23.9
Multi-year variable remuneration (LTI) [2, 3] (performance share awards 2021)	468.0	36.0	468.0	35.8
Variable remuneration components	**780.0**	**60.0**	**780.0**	**59.7**
Total target remuneration	**1,300.7**	**100.0**	**1,307.0**	**100.0**
Service cost [4]	136.1		203.9	

	Silke Sehm (Board member with divisional responsibility)	
	2021	
	in EUR thousand	in %
Basic remuneration	400.0	39.6
Fringe benefits [1]	10.4	1.0
Fixed remuneration components	**410.4**	**40.6**
One-year variable remuneration (STI)	240.0	23.8
Multi-year variable remuneration (LTI) [2, 3] (performance share awards 2021)	360.0	35.6
Variable remuneration components	**600.0**	**59.4**
Total target remuneration	**1,010.4**	**100.0**
Service cost [4]	188.7	

[1] Excluding insurance under group contracts

[2] The LTI tranche 2021 (Hannover Re performance share awards 2021) is allocated at the start of the 2022 financial year. The LTI amount payable is determined and paid out at the end of the four-year performance period in the 2026 financial year under the terms of the plan (see detailed description of the LTI).

[3] In the 2021 financial year the members of the Executive Board received further benefits from multi-year variable remuneration that refer to earlier financial years. This table shows the target remuneration for the 2021 financial year without entitlements from previous years.

[4] For details of the service cost see the table “Pension commitments” on page 142.

Adherence to maximum remuneration

The Supervisory Board has determined an upper limit for each member of the Executive Board based on the amount for the total of fixed remuneration, fringe benefits, STI and LTI as well as pension service cost ("maximum remuneration") in accordance with § 87a Para. 1 Sentence 2 No. 1 Stock Corporation Act (AktG). The maximum remuneration limits all payments that result from the commitment for a financial year, irrespective of the date of receipt. The maximum remuneration is EUR 5,000,000 for the Chief Executive Officer and EUR 3,000,000 for all other members of the Executive Board.

It is only possible to report definitively on adherence to the maximum remuneration for the 2021 financial year after the LTI tranche awarded for 2021 has been paid out, which will occur in 2026. Should the payment made from the LTI lead to the maximum remuneration being exceeded, the amount paid out will be reduced accordingly so as to ensure adherence to the maximum remuneration.

Application of the remuneration system in the 2021 financial year

The following table provides an overview of the components of Hannover Re's remuneration system in the 2021 financial year and the associated targets:

Remuneration components and their target M 75

Remuneration component/ Remuneration condition		Measurement basis/parameter	Target
Fixed remuneration components	Fixed remuneration	The fixed remuneration is paid in cash in twelve equal monthly instalments.	• Attracting and retaining the most suitable Board members • Remunerating the scope of responsibility, expertise and experience of the individual Board members
	Fringe benefits	Vehicle for business and personal use, accident, luggage and D&O insurance in an appropriate amount	• Granting customary fringe benefits and pension schemes to attract and retain the most suitable Board members
	Pension scheme	Defined contribution commitment: annual funding contribution amounting to 25% of the defined measurement basis Dr. Pickel: continuation of a defined benefit commitment (legacy commitment): commitment to a pension calculated as a percentage of the pensionable fixed annual remuneration	
Variable remuneration components	Short-term incentive (STI)	**Target bonus model** Performance criteria: • Hannover Re Group ROE • Individual performance criteria (financial and non-financial, including ESG targets) Cap: 200% of the STI target amount	• Incentivising attainment or outperformance of the annual corporate and business group targets and remuneration of the individual contribution to the result and to sustainability
	Long-term incentive (LTI)	**Performance Share Plan ("Hannover Re Performance Shares")** Four-year performance period LTI allocation value is dependent on the determined target attainment for: • Hannover Re Group ROE of the financial year • Individual performance criteria of the financial year Performance criteria: • Performance of the Hannover Re share (plus dividends) • Relative Total Shareholder Return (TSR) compared to relevant peers Cap: 400% of the LTI target amount (max. 200% LTI allocation value + max. 200% measured by the TSR)	• Recognising the performance in the financial year • Incentivising the creation of long-term shareholder value • Motivating outperformance of peers
Further provisions	Maximum remuneration	Chief Executive Officer: EUR 5,000,000 Other Board members: EUR 3,000,000	• Limiting the total remuneration promised for a financial year • Fulfilment of regulatory standards of the Stock Corporation Act (AktG)
	Malus and clawback	Option of the Supervisory Board to partially or fully withhold ("malus") or claim back ("clawback") the variable remuneration in the event of gross misconduct or an incorrect consolidated financial statement In addition, reduction or elimination of the variable remuneration is possible if required by the regulator	• Strengthening the position of the Supervisory Board in the event of severe compliance violations

Fixed remuneration components

Fixed remuneration

The fixed remuneration is paid out in cash in twelve equal monthly instalments. It is aligned in particular with the scope of tasks and professional experience of the respective member of the Executive Board.

Fringe benefits

The members of the Executive Board additionally receive certain non-performance-based fringe benefits in the customary scope; these are reviewed at regular intervals. A vehicle is made available for company and personal use for the duration of the Board appointment. The member of the Executive Board is responsible for paying tax on the pecuniary advantage associated with personal use of the company car. In addition, the company grants the members of its Executive Board an appropriate amount of insurance protection under group policies (accident, luggage and D&O insurance).

Retirement provision

With the exception of Dr. Pickel, whose annual pension is based on a defined benefit commitment, the members of the Executive Board have defined contribution commitments. Further information in this regard is provided in the subsection "Benefits on leaving the company".

Variable remuneration components

The variable remuneration components consist of a short-term incentive (STI), which is assessed on the basis of the respective financial year, and a long-term incentive (LTI) with a performance period of four years.

The performance criteria for measuring and evaluating target attainment are derived from Hannover Re's corporate strategy. To this end, the variable remuneration components are structured in such a way as to promote the long-term development of the Hannover Re Group. The following overview shows the close linkage between the performance criteria and other aspects of the variable remuneration and the corporate strategy and explains how the variable remuneration promotes Hannover Re's long-term development.

Performance criteria for the variable remuneration and their relevance to the corporate strategy/development **M 76**

Remuneration component	Performance criterion/aspect	Strategy relevance/Promotion of long-term development
Short-term incentive (STI)	Group ROE	• ROE: one of Hannover Re's strategic KPIs • Target value consistent with the target set for attainment of sustainable value creation
	Individual targets (premium/deduction)	• Allowance for the individual contribution made by Board members and the results of the areas under their responsibility • Implementation of sustainability targets in Board remuneration
Long-term incentive (LTI)	Allocation value depending on STI target attainment	• Higher incentivising for target attainment in the STI • Strengthening of the pay-for-performance concept
	Share performance	• Linkage of share performance and Board remuneration • Harmonisation of the interests of the Board and those of shareholders
	Four-year performance period	• Orientation towards long-term success and assuring the long-term development of Hannover Re
	Relative TSR	• Incentivising long-term outperformance of relevant peers on the capital market

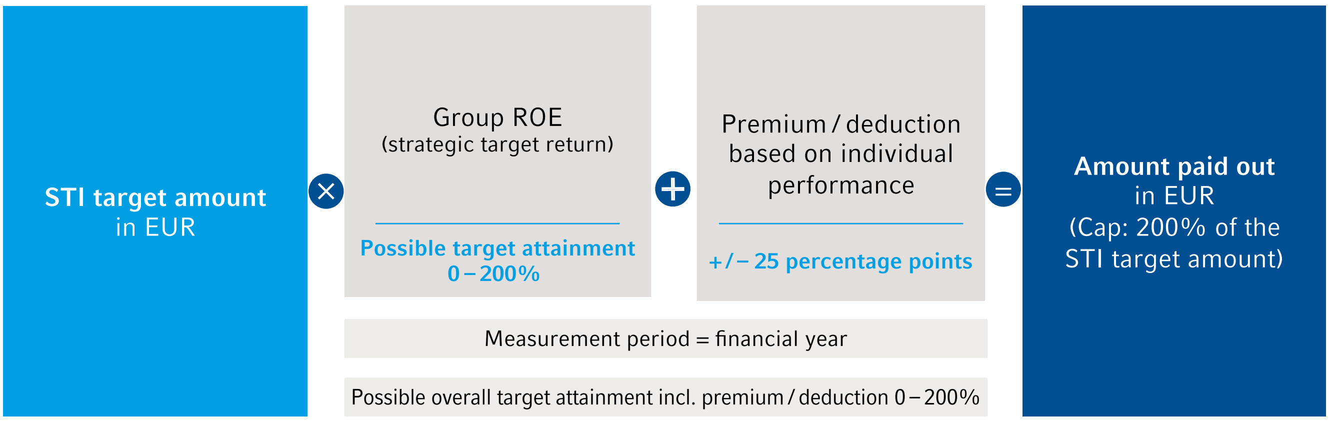
Short-Term Incentive (STI)

I. Fundamentals

The STI is geared to Hannover Re's commercial success in the relevant financial year. In addition to the financial performance criterion of the return on equity (RoE) generated by the Hannover Re Group pursuant to the consolidated financial statement of Hannover Rück SE ("Group RoE"), an individual premium or deduction is considered in the determination of the amount paid out which comprises both financial and non-financial performance criteria, in particular sustainability targets, and makes allowance for the respective divisional responsibilities of the individual members of the Executive Board in addition to the overall responsibility of the Executive Board. In this way, the STI addresses the goal of a high and stable return on equity for the Hannover Re Group, promotes action on Board- or division-specific focus topics and integrates the interests of our clients, employees and other key stakeholders.

The basis for payment of the STI consists of the contractually defined STI target amount, which is based on overall target attainment of 100%. The overall target attainment (including the individual premium or deduction) can reach values between 0% and 200% of the STI target amount. The amount that can be paid out under the STI is thus limited to 200% of the target amount.

Calculation of the short-term incentive (STI) M 77



II. Financial performance criterion

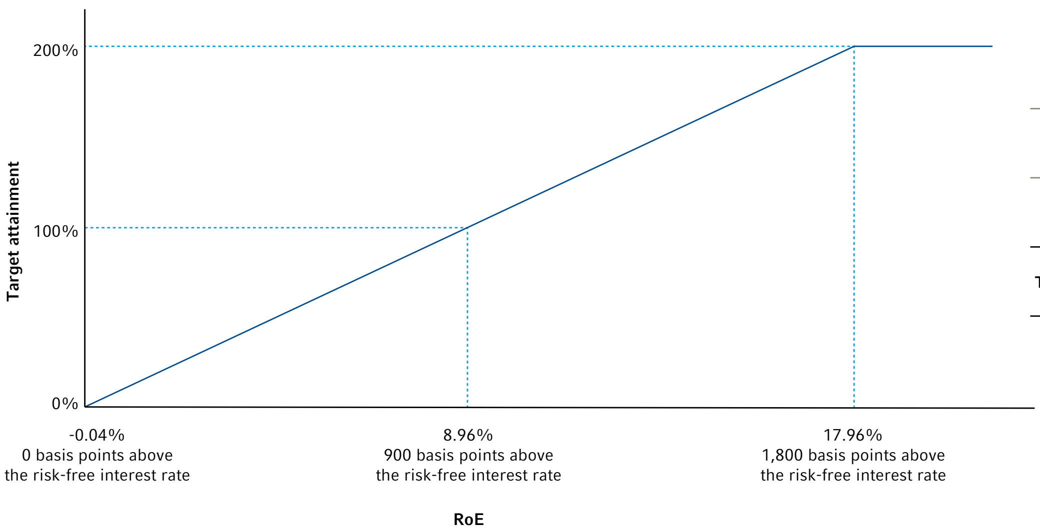
The determinative financial performance criterion for the STI is – with a weighting of 100% – the Group RoE for the financial year in comparison with a strategic target return, which is established on the basis of the risk-free interest rate on a 5-year average plus an ambitious spread. The risk-free interest rate is the average market rate over the past five years for ten-year German government bonds, with the average being calculated on the basis of the respective interest rate at year-end. The Group RoE is one of the central performance indicators in Hannover Re's management system and as such is also implemented in the remuneration of the Executive Board. Hannover Re pursues the goal of generating a high return on equity. The Group's focus here is on long-term value enhancement. The use of the Group RoE as a determinative performance criterion for the STI creates incentives for accomplishment of this goal.

The target value for the Group-RoE as well as the target corridor with upper and lower thresholds are in each case defined in advance by the Supervisory Board for the coming financial year. In this context, the target value is aligned with the strategic target return of the Hannover Re Group at the time when it was determined.

For the 2021 financial year the Supervisory Board defined a target value (100% target attainment) of 900 basis points above the riskfree interest rate for the Group RoE. This is consistent with the company's strategic target of generating sustainable value creation through a return on equity of at least 900 basis points above the risk-free interest rate. The lower threshold was defined as the risk-free interest rate without a spread, while the upper threshold was set at 1,800 basis points above the risk-free interest rate.

The risk-free interest rate on 10-year German government bonds over a five-year average amounted to -0.04% as at the end of 2021. For the 2021 financial year the target Group RoE therefore stands at 896 basis points. In the 2021 financial year a Group RoE of 10.8% (1080 basis points) was generated. This corresponds to target attainment of the performance criterion Group RoE of 120.5%.

Target attainment Group RoE in the 2021 financial year **M 78**



Group RoE	10.8%
Risk-free interest rate	-0.04%
Target RoE	8.96%
Target attainment	**120.5%**

III. Individual targets (premium or deduction)

By applying an individual premium or deduction to target attainment of the performance criterion Group RoE, the Supervisory Board can consider – in addition to the financial success of the Hannover Re Group – the individual contribution made by the member of the Executive Board and, as appropriate, the division under their responsibility to the result as well as the attainment of sustainability targets in the context of the STI. The amount of the premium or deduction, which can range from -25 percentage points to +25 percentage points, is determined by the Supervisory Board at its reasonable discretion. The criteria and indicators for determination of the individual premium or deduction are in each case defined in advance by the Supervisory Board for the coming financial year and communicated to the members of the Executive Board.

For the 2021 financial year the Supervisory Board determined for the individual members of the Executive Board the following criteria and indicators as well as – on this basis – the following individual premiums and deductions subsequent to the financial year:

Individual targets and target attainment of the member of the Executive Board

	Individual contribution to the result		
Member of the Executive Board	Performance	Dividend continuity/distribution	Strategic target
Jean-Jacques Henchoz	Covered by performance criterion Group RoE	Dividend continuity of Hannover Rück SE	Successful launch of strategy cycle 2021–2023; Implementation of the strategic initiatives
Sven Althoff	IVC [2] Property & Casualty reinsurance	Dividend continuity of Hannover Rück SE	Successful launch of strategy cycle 2021–2023 with concentrations on ongoing development of P&C [3] strategy, implementation of strategic initiative APAC [4] P&C [3]
Claude Chèvre	IVC [2] Life & Health reinsurance	Dividend continuity of Hannover Rück SE	Successful launch of strategy cycle 2021–2023 with concentrations on implementation of strategic initiative APAC [4] L&H [6], Client Excellence, innovation & digital strategy
Clemens Jungsthöfel	Covered by performance criterion Group RoE	Dividend continuity of Hannover Rück SE	Successful launch of strategy cycle 2021–2023 with concentrations on implementation of IFRS 17, development of IT strategy and support for HDI Global Specialty
Dr. Klaus Miller	IVC [2] Life & Health reinsurance	Dividend continuity of Hannover Rück SE	Successful launch of strategy cycle 2021–2023 with concentration on expansion of Financial Solutions business, inforce management
Dr. Michael Pickel	IVC [2] Property & Casualty reinsurance	Dividend continuity of Hannover Rück SE	Successful launch of strategy cycle 2021–2023 with concentration on implementation of strategic initiative Client Excellence
Silke Sehm	IVC [2] Property & Casualty reinsurance	Dividend continuity of Hannover Rück SE	Successful launch of strategy cycle 2021–2023 with concentration on implementation of strategic initiatives Client Excellence and innovation und digital strategy

1 OHC (Organisational Health Check) = Employee survey that measures the health of an organisation and hence provides an indicator of how an organisation aligns itself, optimally executes its plans and innovates in order to achieve its targets on a lasting basis.
2 IVC (Intrinsic Value Creation) = A tool of value-based enterprise management used to measure the attainment of long-term targets on the level of the Group, the business groups and the operational units.
3 P&C = Property & Casualty reinsurance
4 APAC = Asia-Pacific region
5 ESG = Environmental, Social and Governance
6 L&H = Life & Health reinsurance

M 79

Sustainability		
Leadership/Commitment (OHC[1])	Contribution to the sustainability strategy	**Individual premium/deduction in %**
Change in OHC score 2020/2021; relative improvement of the OHC[1] score in certain focus areas	Ongoing development of the HR sustainability strategy; Implementation of catalogue of measures	15.0
Change in OHC score 2020/2021; relative improvement of the OHC[1] score in certain focus areas	Promoting sustainability in the action fields “ESG[5] in insurance business” and “Sustainable protection”	15.0
Change in OHC score 2020/2021; relative improvement of the OHC[1] score in certain focus areas	Promoting sustainability in the action fields “ESG[5] in insurance business” and “Sustainable protection”	5.0
Change in OHC score 2020/2021; relative improvement of the OHC[1] score in certain focus areas	Promoting sustainability in the action field “ESG[5] in asset management”	15.0
Change in OHC score 2020/2021; relative improvement of the OHC[1] score in certain focus areas	Promoting sustainability in the action fields “ESG[5] in insurance business” and “Sustainable protection”	0,0
Change in OHC score 2020/2021; relative improvement of the OHC[1] score in certain focus areas	Promoting sustainability in the action fields “ESG[5] in insurance business” and “Sustainable protection”	5.0
Change in OHC score 2020/2021; relative improvement of the OHC[1] score in certain focus areas	Promoting sustainability in the action fields “ESG[5] in insurance business” and “Sustainable protection”	15.0

IV. Overall target attainment and amount paid out under the STI 2021

The following table shows the overall target attainment as well as the resulting amount paid out to each member of the Executive Board for the STI 2021:

Overall target attainment and amount paid out under STI 2021 M 80

Member of the Executive Board	Target amount in EUR thousand	Target attainment Group RoE	Individual premium/ deduction	Overall target attainment	Amount paid out in EUR thousand
Jean-Jacques Henchoz	504	120.5%	15.0%	135.5%	682.9
Sven Althoff	312	120.5%	15.0%	135.5%	422.8
Claude Chèvre	312	120.5%	5.0%	125.5%	391.6
Clemens Jungsthöfel	240	120.5%	15.0%	135.5%	325.2
Dr. Klaus Miller	312	120.5%	0.0%	120.5%	376.0
Dr. Michael Pickel	312	120.5%	5.0%	125.5%	391.6
Silke Sehm	240	120.5%	15.0%	135.5%	325.2
Total	**2,232**				**2,915.3**

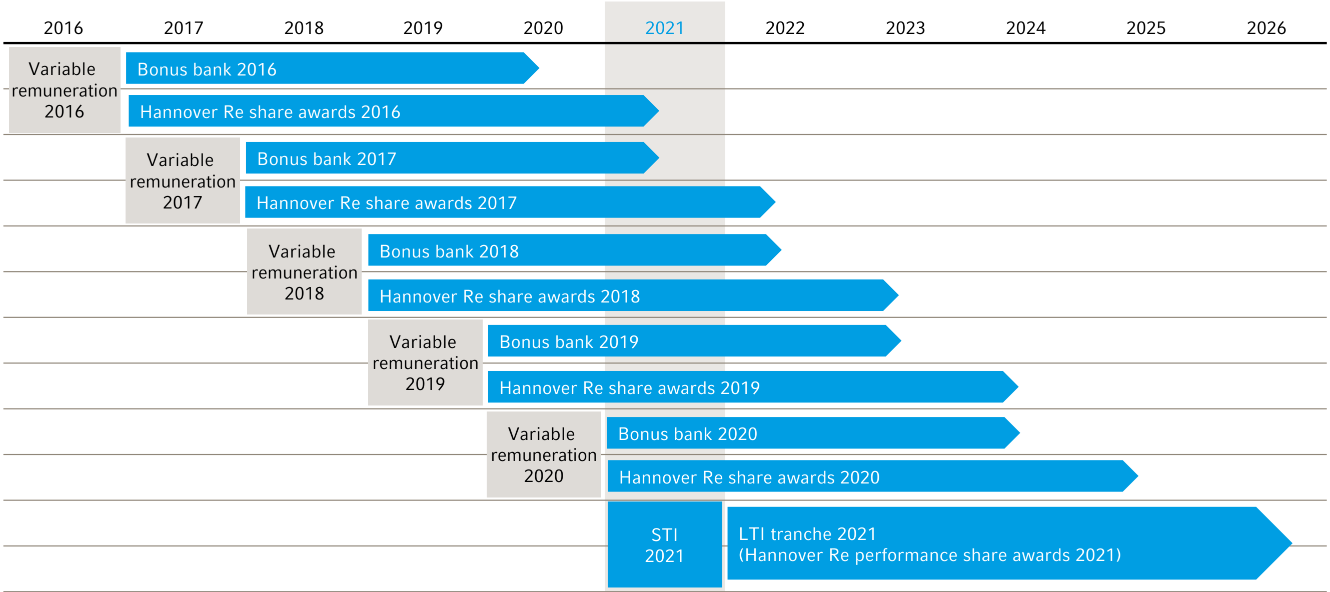
Multi-year variable remuneration components

In the new remuneration system the multi-year variable remuneration consists of a long-term incentive (LTI), which is structured as a Performance Share Plan. The amount of the LTI allocation depends on the overall target attainment determined for the respective financial year in connection with the short-term incentive (STI). The allocation of the LTI tranche 2021 (Hannover Re Performance Share Awards 2021) therefore takes place at the beginning of the 2022 financial year. The LTI tranche 2022 will be paid out in the 2026 financial year following the four-year performance period.

Within the 2021 financial year, payments due under multi-year variable remuneration components of the legacy remuneration system were made. The Hannover Re share awards allocated on the basis of the target attainment for the 2016 financial year in the 2017 financial year (Hannover Re share awards 2016) as well as the amount contributed to the bonus bank on the basis of the target attainment for the 2017 financial year in the 2018 financial year (bonus bank 2017) were paid out. Details are provided under “Amounts paid out under multi-year variable remuneration components” on page 140 et seq.

The following chart provides an overview of the multi-year variable remuneration components that are still to be paid out in subsequent years:

Multi-year variable remuneration components **M 81**



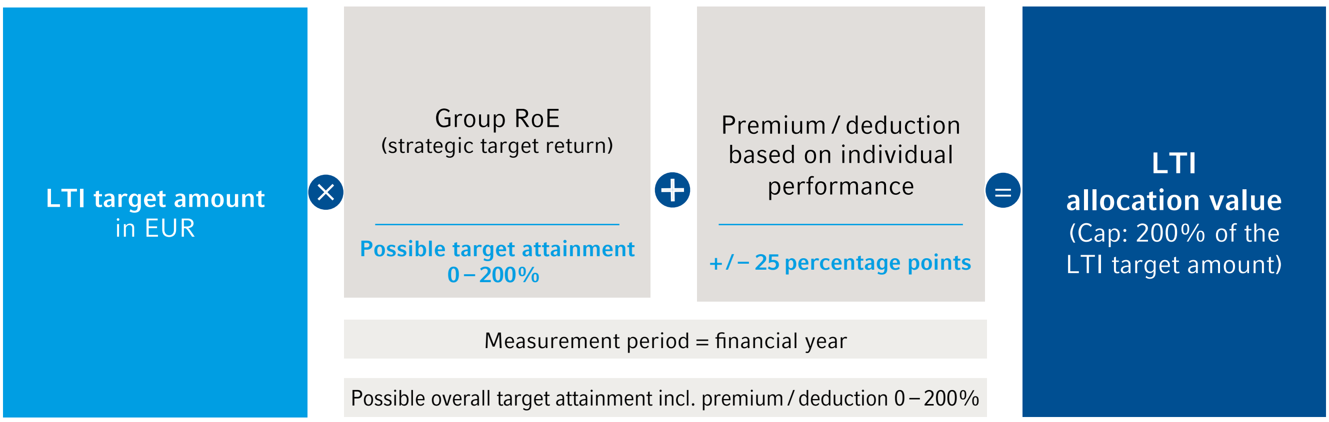
I. Long-Term Incentive (LTI)

a) Fundamentals

The LTI plays a key role in aligning the interests of the Executive Board with those of our shareholders. Through relative measurement of the Hannover Re share performance incentives are created for long-term outperformance of our competitors on the capital market.

The LTI is structured in the form of a performance share plan and thereby incentivises increases in the value of the Hannover Re share in the interests of our investors. The amount of the LTI allocation value is based on the contractually agreed LTI target amount (target attainment 100%) and depends on the target attainment for the financial performance criterion Group RoE determined in the context of the STI for the respective financial year as well as the individual premium or deduction defined by the Supervisory Board for the financial year.

Calculation of the long-term incentive (LTI) allocation value **M 82**



The LTI tranche 2021 is allocated in the 2022 financial year on the basis of the overall target attainment for the STI 2021 (Hannover Re performance share awards). The number of allocated Hannover Re performance shares is determined from the LTI allocation value as well as the average Hannover Re share price over a period extending from 15 trading days before to 15 trading days after the meeting of the Supervisory Board that approves the consolidated financial statement. The Hannover Re performance shares have a total term of four years ("performance period"). The LTI tranche 2021 will be paid out in the 2026 calendar year following the four-year performance period.

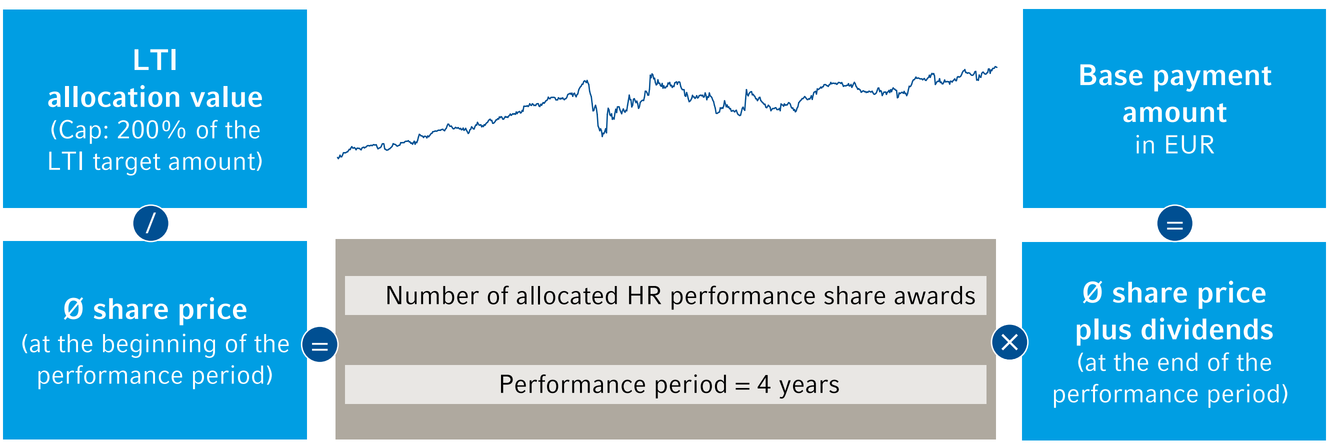
The following table presents the most important aspects of the allocation of the LTI tranche 2021.

LTI 2021 allocation M 83

Member of the Executive Board	Target amount in EUR thousand	Overall target attainment of the STI 2021	Allocation amount in EUR thousand
Jean-Jacques Henchoz	756.0	135.5%	1,024.4
Sven Althoff	468.0	135.5%	634.1
Claude Chèvre	468.0	125.5%	587.3
Clemens Jungsthöfel	360.0	135.5%	487.8
Dr. Klaus Miller	468.0	120.5%	563.9
Dr. Michael Pickel	468.0	125.5%	587.3
Silke Sehm	360.0	135.5%	487.8
Total	**3,348.0**		**4,372.6**

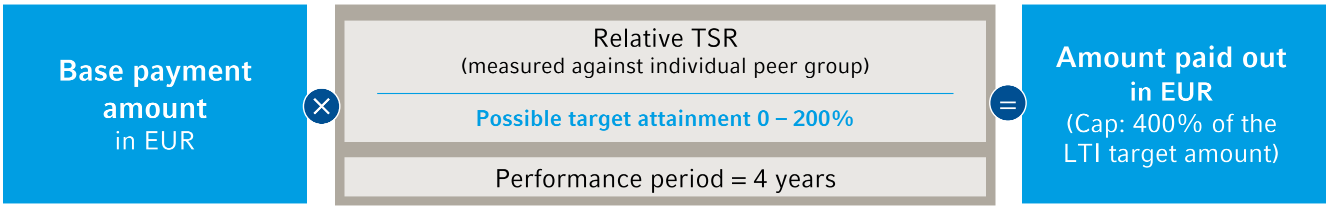
At the end of the four-year performance period the base payment amount is initially calculated on the basis of the Hannover Re share price performance. This base amount is determined from the allocated number of Hannover Re performance shares and the average share price of Hannover Rück SE over a period extending from 15 trading days before to 15 trading days after the meeting of the Supervisory Board that approves the consolidated financial statement in the year when the performance period ends plus the dividends paid out during the performance period. The performance thus fully reflects the total shareholder return.

Calculation of the LTI base payment amount M 84



The final amount to be paid out is determined from the base payment amount and the target attainment of the relative total shareholder return ("relative TSR") measured against a peer group. The amount paid out for the LTI is limited to 200% of the LTI allocation value and can thus amount to altogether at most 400% of the LTI target amount (max. 200% LTI allocation value + max. 200% measured by the relative TSR) – provided that the sum total of all remuneration components does not exceed the maximum remuneration pursuant to § 87a Para. 1 Sentence 2 No. 1 Stock Corporation Act (AktG).

Calculation of the LTI amount paid out M 85



b) Financial performance criterion

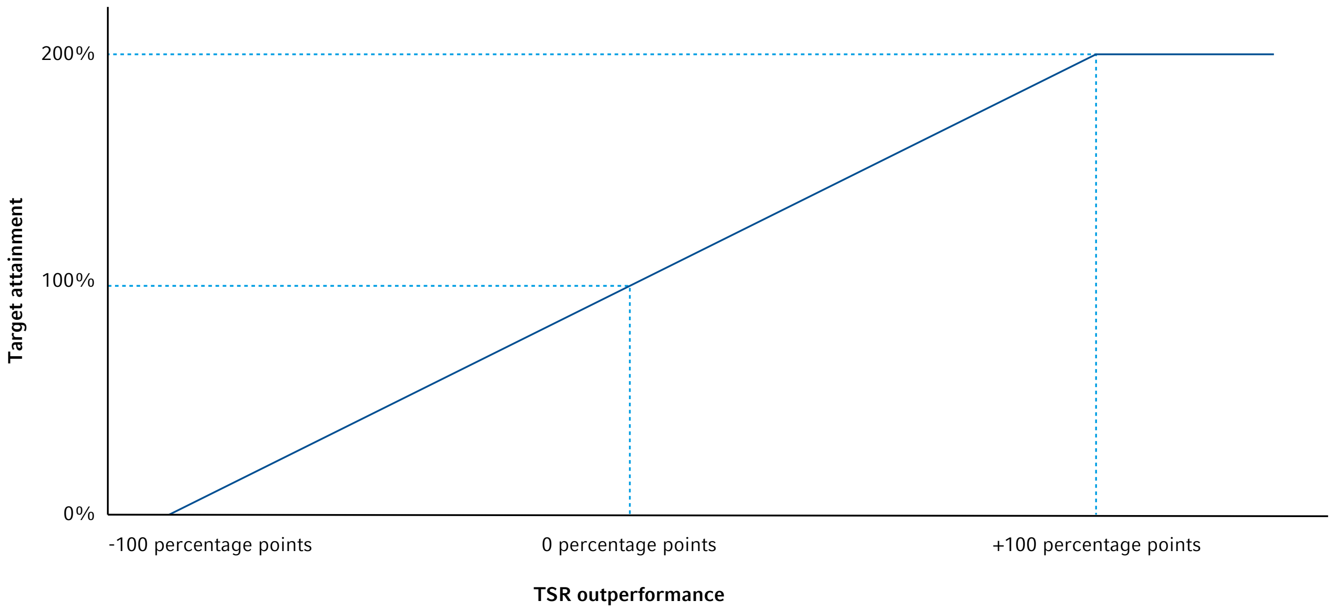
The determinative performance criterion for the final LTI amount to be paid out is the relative TSR. By means of the relative TSR, an external performance criterion geared to the capital market is integrated into the variable remuneration that facilitates relative performance measurement as well as alignment of the interests of the Executive Board and those of shareholders. The relative TSR maps the development of the Hannover Re share price during the four-year performance period including gross dividends in comparison with a peer group comprised of relevant competitors in the insurance industry. In this way, the LTI creates incentives for the strong performance of the Hannover Re share on the capital market on a long-term and sustainable basis.

The target attainment for the relative TSR is established by comparing the TSR of the Hannover Re share with the shares of companies in the peer group during the four-year performance period. For this purpose, the TSR of the Hannover Re share in the respective performance period is compared with the unweighted average TSR of the peer group. The Supervisory Board reviews the peer group before the start of each performance period of a new LTI tranche. For the LTI tranche 2021 it is composed of the following companies:

- Munich Re
- Swiss Re
- Everest Re
- RGA (Reinsurance Group of America)
- SCOR

If the TSR of the Hannover Re share corresponds to the unweighted average TSR of the peer group, the target attainment for the relative TSR amounts to 100%. Each percentage point by which the TSR of the Hannover Re share exceeds or falls short of the unweighted average TSR of the peer group results in a corresponding increase or reduction in the target attainment (linear scaling). If the TSR of the Hannover Re share exceeds the unweighted average TSR of the peer group by 100 percentage points or more, the target attainment for the relative TSR amounts to 200%. Any further increase in the relative TSR will not lead to a further increase in the target attainment. If the TSR of the Hannover Re share is 100 percentage points or more below the unweighted average TSR of the peer group, the target attainment for the relative TSR amounts to 0%.

Target attainment curve relative TSR M 86



The target attainment for the LTI tranche 2021 will be disclosed in the 2026 remuneration report after the end of the performance period.

II. Amounts paid out from multi-year variable remuneration components

In the old remuneration system that applied until the end of the 2020 financial year, the variable remuneration for a financial year consisted of a Group bonus and an individual bonus as well as – in the case of members of the Executive Board with responsibility for a certain division – a divisional bonus. 60% of the amount determined for each member of the Executive Board was paid out after the end of the respective financial year, while 20% was allocated as virtual shares (Hannover Re share awards) and a further 20% was contributed to a so-called bonus bank. The Hannover Re share awards allocated in the 2017 financial year on the basis of the target attainment for the variable remuneration of the 2016 financial year (Hannover Re share awards 2016) as well as the amount contributed to the bonus bank in the 2018 financial year on the basis of the target attainment for the variable remuneration of the 2017 financial year (bonus bank 2017) were paid out in 2021.

a) Hannover Re share awards 2016

After the variable remuneration had been established for the 2016 financial year, Hannover Re share awards were automatically allocated in the equivalent amount of 20% of the determined variable remuneration. The value per share upon allocation in 2017 was established on the basis of the unweighted arithmetic mean of the XETRA closing prices over a period of five trading days before to five trading days after the meeting of the Supervisory Board that approved the consolidated financial statement in March 2017. After a vesting period of four years the value of the Hannover Re share awards calculated at the payment date was paid out in 2021. In this context, the value of the share was established on the basis of the unweighted arithmetic mean of the XETRA closing prices over a period of five trading days before to five trading days after the meeting of the Supervisory Board that approved the consolidated financial statement in March 2021. In addition, the sum total of all dividends per share distributed during the vesting period was paid out in accordance with the remuneration system.

The following table provides an overview of the Hannover Re share awards 2016:

HR Share Awards (HR SA) 2016 M 87

Member of the Executive Board	Allocation value 20% of the variable remuneration 2016 in EUR thousand	Average share price on allocation 2017 in EUR	Number of allocated HR SA	Average share price on payout 2021 in EUR	Total distributed dividends per share in EUR	Amount paid out 2021 in EUR thousand
Jean-Jacques Henchoz since 1 April 2019	–	–	–	–	–	–
Sven Althoff	121.2	107.15	1,132	150.42	20.75	193.8
Claude Chèvre	158.0	107.15	1,475	150.42	20.75	252.5
Clemens Jungsthöfel since 1 September 2020	–	–	–	–	–	–
Dr. Klaus Miller	130.6	107.15	1,219	150.42	20.75	208.7
Dr. Michael Pickel	136.0	107.15	1,270	150.42	20.75	217.4
Silke Sehm [1] since 6 March 2019	–	–	–	–	–	141.6
Total	**545.8**		**5,096**			**1,014.0**

[1] The amount paid out to Ms. Silke Sehm refers to HR SA that were allocated to her for her work as a senior executive before her appointment as a member of the Executive Board.

b) Bonus bank 2017

Following determination of the variable remuneration for the 2017 financial year, 20% of this remuneration was contributed to a bonus bank in the 2018 financial year.

The positive amount contributed to the bonus bank in 2018 was due to be paid out in 2021, insofar as it did not exceed the balance of the bonus bank after allowance for credits/debits during the three-year performance period (2018 - 2020). The variable total bonus could be negative in the remuneration system applicable until 2020. This minus value would potentially have been carried over in full to the bonus bank, meaning that the level of the bonus bank could be reduced even without an amount being paid out.

The amounts contributed for 2017 were paid out in full. Pending payments not covered by a positive balance in the bonus bank would have lapsed.

The amounts paid out correspond to the values contributed in 2018 (20% of the variable remuneration for 2017) because the level of the bonus bank at the time of payment in 2021 was sufficient for the contributed values to be paid out in full.

The following table provides an overview of the bonus bank 2017:

Bonus bank 2017 M 88

Member of the Executive Board	Amount contributed (2018) (20% of the 2017 variable remuneration) in EUR thousand	Amount paid out 2021 in EUR thousand
Jean-Jacques Henchoz since 1 April 2019	–	–
Sven Althoff	109.6	109.6
Claude Chèvre	125.8	125.8
Clemens Jungsthöfel since 1 September 2020	–	–
Dr. Klaus Miller	105.8	105.8
Dr. Michael Pickel	118.6	118.6
Silke Sehm since 6 March 2019	–	–
Total	**459.8**	**459.8**

Malus and clawback, risk adjustment

If a member of the Executive Board intentionally violates one of their fundamental due diligence obligations pursuant to § 93 Stock Corporation Act (AktG), a cardinal obligation under their service contract or other fundamental company principles governing conduct, e.g. from the Code of Conduct or the compliance guidelines, the Supervisory Board may, at its discretion, withhold in part or in full variable remuneration that has not yet been paid out ("malus") or reclaim in part or in full the gross amount of the variable remuneration already paid out ("clawback"). A clawback of remuneration is excluded if the significant breach occurred more than five years ago.

In making its discretionary decision, the Supervisory Board considers the severity of the violation, the degree of fault on the part of the member of the Executive Board as well as the material and immaterial damage incurred by the company.

Furthermore, a member of the Executive Board shall pay back variable remuneration already paid out to them in the event that, and insofar as, it emerges after payment has been made that the audited and adopted consolidated financial statement used as a basis for the calculation of the amount paid out was incorrect and must therefore be corrected according to pertinent financial reporting standards and a lower amount – or no amount at all – would have been owed from the variable remuneration on the basis of the corrected and audited consolidated financial statement and the relevant remuneration system.

In addition, a restriction or complete omission of payment of the variable remuneration components is permissible in the event of a final or immediately enforceable ruling of the Federal Financial Supervisory Authority (BaFin) in which the payment is prohibited or restricted (such as: if the equity capital is lower or at risk of becoming lower than the solvency capital requirement), and also if this is required in accordance with Art. 275 Para. 2 letter e of the Delegated Regulation (EU) 2015/35 of 10 October 2014.

No clawback or reduction occurred in the 2021 financial year, nor was there any restriction or omission of payment of variable remuneration components.

Benefits on leaving the company

Retirement provision

The members of the Executive Board, with the exception of Dr. Pickel, have been granted defined contribution pension commitments through retirement, surviving dependants' and disability benefits. At the request of the member of the Executive Board the retirement benefit is paid as a one-time lump sum. The pension benefits are provided through HDI Unterstützungskasse e.V. The latter takes out insurance covers with HDI Lebensversicherung AG to fund the benefits. The amount of the pension benefits corresponds to the payments under the insurance covers on the basis of the funding contributions rendered annually by the company in an amount of 25% of the pensionable income (annual fixed remuneration). Regular annuities are increased annually by at least 1% of their last (gross) amount.

Dr. Pickel was granted a pension commitment through a lifelong pension and a surviving dependants' benefit. The amount of the pension benefits is calculated according to a length-of-service-based percentage ranging from 25% to at most 50% of the pensionable income (last monthly salary received). In conjunction with the remuneration structure valid from 2011 onwards a non-pensionable fixed remuneration component was implemented. Of the fixed remuneration amounting to altogether EUR 520 thousand, EUR 320 thousand carries a pension entitlement. If the pension is drawn before reaching the age of 65 50% of other income received is counted towards the pension. Regular pensions are adjusted annually according to changes in the consumer price index for Germany.

The pension entitlements pursuant to IAS 19 for the active members of the Executive Board are set out in the following table.

Pension commitments M 89

			IAS 19			
	2021	2020	2021	2020	2021	2020
in EUR thousand	Attainable annual pension (age 65)		Personnel expense		DBO 31.12.	
Jean-Jacques Henchoz	58.2	52.8	215.0	127.9	509.3	370.7
Sven Althoff [1, 2]	118.2	108.5	288.7	151.8	2,290.0	2,265.9
Claude Chèvre	106.1	100.0	148.7	72.4	1,473.2	1,565.5
Clemens Jungsthöfel	46.1	26.2	103.2	33.6	256.0	166.0
Dr. Klaus Miller	61.5	58.1	136.1	76.5	1,150.2	1,118.3
Dr. Michael Pickel	160.0	160.0	203.9	180.5	4,087.7	4,235.9
Silke Sehm [1, 3]	65.8	58.6	188.7	326.2	1,257.6	1,194.5
Total	**615.9**	**564.2**	**1,284.3**	**968.9**	**11,024.0**	**10,916.8**

1 Mr. Althoff and Ms. Sehm were first granted a pension commitment prior to 2001 on the basis of their service to the company before 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.

2 The personnel expense includes a past service cost due to a premium increase of EUR 88.5 thousand (2020) and EUR 211.9 thousand (2021).

3 The personnel expense includes a past service cost due to a premium increase and change in measurement of EUR 259.5 thousand (2020) and EUR 144.9 thousand (2021).

Variable remuneration in case of early termination of the employment relationship

I. Short-Term Incentive (STI)

If the employment relationship of a member of the Executive Board ends during a financial year for a compelling reason that is not the responsibility of the member of the Executive Board in accordance with § 626 Para. 1 Civil Code (BGB), the participant in the plan has an entitlement to a pro rata temporis STI for this financial year. If the employment relationship is terminated by the company without notice prior to the end of the financial year for a compelling reason that is the responsibility of the member of the Executive Board in accordance with § 626 Para. 1 Civil Code (BGB), the entitlement to STI for this financial year shall be cancelled without replacement or compensation.

II. Long-Term Incentive (LTI)

If the employment relationship or the term of office on the Executive Board ends prior to the end of the performance period for a reason other than those specified below before the end of a financial year, the participant in the plan has an entitlement to a pro rata temporis LTI for this financial year. In this event, the determination and payment of the variable remuneration components is normally made in accordance with the provisions of the plan conditions for the LTI. Early payment prior to the end of the respective performance period of the LTI is not envisaged in such instances. If the employment relationship or the term of office on the Executive Board ends during the financial year due to resignation from office or notice given by the member of the Executive Board (exception: resignation from office or notice given by the member of the Executive Board for a compelling reason), the refusal by the member of the Executive Board to accept an offer of extension on at least equal contractual conditions (exception: the member of the Executive Board has reached the age of 60 and served as a member of the Executive Board for two terms of office), extraordinary termination without notice of the service contract of the member of the Executive Board by the company for a compelling reason or revocation of the appointment of the member of the Executive Board for a compelling reason as defined by § 84 Para. 3 Stock Corporation Act (AktG) (exception: vote of no confidence passed by the General Meeting), all conditionally allocated Hannover Re performance shares shall be cancelled without replacement or compensation.

Severance pay

The service contracts of the Executive Board make no provision for claims to severance pay. Commitments to benefits in connection with the early termination of employment on the Executive Board as a consequence of a change of control are similarly not envisaged in the service contracts of the members of the Executive Board.

Remuneration granted and owing in the 2021 financial year

Current members of the Executive Board

The following tables set out the remuneration granted and owing to the individual members of the Executive Board pursuant to § 162 Para. 1 Sentence 2 No. 1 Stock Corporation Act (AktG). Remuneration granted refers to remuneration for which the activity was performed in full in the year under review. Remuneration owing encompasses remuneration that is due but has not yet actually been received. In this context, the disclosure for the 2021 financial year covers:

- the fixed remuneration paid out in the 2021 financial year
- the fringe benefits accruing in the 2021 financial year
- the STI determined for the 2021 financial year with payment in 2022
- the amount contributed to the bonus bank for the 2017 financial year, which was paid out in the 2021 financial year
- the share awards allocated for the 2016 financial year, which were paid out in the 2021 financial year

In addition, the service cost for the pension commitments for the 2021 financial year is disclosed in the tables as part of the Executive Board remuneration.

The tables also show the relative shares of the individual remuneration components in the total remuneration granted and owing.

Remuneration granted and owing in the 2021 financial year M 90

	Jean-Jacques Henchoz (Chief Executive Officer)			Sven Althoff (Board member with divisional responsibility/ Coordinator of the Property & Casualty reinsurance business group)		
	2021		2020	2021		2020
	in EUR thousand	in %	in EUR thousand	in EUR thousand	in %	in EUR thousand
Basic remuneration	840.0		750.0	520.0		408.8
Fringe benefits [1]	14.1		30.9	16.1		16.5
Signing bonuses	130.0		130.0			–
Fixed remuneration components	**984.1**	**59**	**910.9**	**536.1**	**42**	**425.3**
One-year variable remuneration (STI) [2]	682.9		805.8	422.8		409.8
Multi-year variable remuneration	–		–	303.4		318.1
Bonus bank 2017/2016 (3 years)				109.6		121.2
Share Awards 2016/2015 (4 years)				193.8		196.9
Variable remuneration components	**682.9**	**41**	**805.8**	**726.2**	**58**	**727.9**
Total remuneration	1,667.0	100	1,716.7	1,262.3	100	1,153.2
Service cost [3]	215.0		127.9	288.7		151.8

1 Excluding insurance under group contracts
2 The disclosure in the 2020 financial year refers to amounts paid out from the one-year variable remuneration for 2020 that was received in 2021.
3 For details of the service cost see the table "Pension commitments"

	Claude Chèvre (Board member with divisional responsibility)			Clemens Jungsthöfel (Chief Financial Officer) since 1 September 2020		
	2021		2020	2021		2020
	in EUR thousand	in %	in EUR thousand	in EUR thousand	in %	in EUR thousand
Basic remuneration	520.0		440.0	400.0		106.7
Fringe benefits [1]	15.0		15.4	8.0		2.8
Fixed remuneration components	**535.0**	**41**	**455.4**	**408.0**	**56**	**109.5**
One-year variable remuneration (STI) [2]	391.6		487.8	325.2		118.2
Multi-year variable remuneration	378.3		409.9	–		–
Bonus bank 2017/2016 (3 years)	125.8		158.0			
Share Awards 2016/2015 (4 years)	252.5		251.9			
Variable remuneration components	**769.9**	**59**	**897.7**	**325.2**	**44**	**118.2**
Total remuneration	1,304.9	100	1,353.1	733.2	100	227.7
Service cost [3]	148.7		72.4	103.2		33.6

1 Excluding insurance under group contracts
2 The disclosure in the 2020 financial year refers to amounts paid out from the one-year variable remuneration for 2020 that was received in 2021.
3 For details of the service cost see the table "Pension commitments"

	Dr. Klaus Miller (Board member with divisional responsibility)			Dr. Michael Pickel (Board member with divisional responsibility)		
	2021		2020	2021		2020
	in EUR thousand	in %	in EUR thousand	in EUR thousand	in %	in EUR thousand
Basic remuneration	520.0		420.0	520.0		440.0
Fringe benefits [1]	0.7		0.9	7.0		5.6
Fixed remuneration components	**520.7**	**43**	**420.9**	**527.0**	**42**	**445.6**
One-year variable remuneration (STI) [2, 3]	376.0		469.2	391.6		434.4
Multi-year variable remuneration	314.5		342.4	336.0		360.6
Bonus bank 2017/2016 (3 years)	105.8		130.6	118.6		136.0
Share Awards 2016/2015 (4 years)	208.7		211.8	217.4		224.6
Variable remuneration components	**690.5**	**57**	**811.6**	**727.6**	**58**	**795.0**
Total remuneration	**1,211.2**	**100**	**1,232.5**	**1,254.6**	**100**	**1,240.6**
Service cost [4]	136.1		76.5	203.9		180.5

1 Excluding insurance under group contracts
2 The disclosure in the 2020 financial year refers to amounts paid out from the one-year variable remuneration for 2020 that was received in 2021, incl. seats held on Group bodies that were counted towards the amount paid out. Allowance for seats on Group bodies: Dr. Miller: EUR 75 thousand, Dr. Pickel EUR 4.4 thousand.
3 Payments for seats held on Group bodies received in 2021 are counted towards the one-year variable remuneration (STI 2021) to be paid out in April 2022. Allowance for seats on Group bodies: Dr. Miller EUR 75 thousand, Dr. Pickel EUR 5 thousand.
4 For details of the service cost see the table "Pension commitments"

	Silke Sehm (Board member with divisional responsibility)		
	2021		2020
	in EUR thousand	in %	in EUR thousand
Basic remuneration	400.0		320.0
Fringe benefits [1]	10.4		14.8
Fixed remuneration components	**410.4**	**47**	**334.8**
One-year variable remuneration (STI) [2]	325.2		323.4
Multi-year variable remuneration	141.6		135.3
Bonus bank 2017/2016 (3 years)	-		-
Share Awards 2016/2015 (4 years)	141.6		135.3
Variable remuneration components	**466.8**	**53**	**458.7**
Total remuneration	**877.2**	**100**	**793.5**
Service cost [3]	188.7		326.2

1 Excluding insurance under group contracts
2 The disclosure in the 2020 financial year refers to amounts paid out from the one-year variable remuneration for 2020 that was received in 2021.
3 For details of the service cost see the table "Pension commitments"

Former members of the Executive Board

The remuneration granted and owing to former members of the Executive Board of Hannover Re in the 2021 financial year pursuant to § 162 Stock Corporation Act (AktG) is shown below.

Former members of the Executive Board – remuneration granted and owing M 91

	Roland Vogel (until 30 September 2020)		Ulrich Wallin (until 5 May 2019)		André Arrago (until 31 August 2014)	
	2021		2021		2021	
	in EUR thousand	in %	in EUR thousand	in %	in EUR thousand	in %
Fixed remuneration components	**–**	**0**	**–**	**0**	**–**	
Multi-year variable remuneration [1]	386.0		608.8		–	
Bonus bank 2017 (3 years)	166.0		224.0		–	
Share Awards 2016 (4 years)	220.0		384.8		–	
Variable remuneration components	**386.0**	**29**	**608.8**	**70**	**–**	
Payment to compensate claims under the service contract	**954.6**	**71**	**–**		**–**	
Pension payments	**–**		**258.3**	**30**	**128.9**	**100**
Total target remuneration	**1,340.6**	**100**	**867.1**	**100**	**128.9**	**100**
Service cost	**66.9**		**–**		**–**	

[1] In the case of Mr. Vogel remuneration for seats held on Group bodies is counted in an amount of EUR 30 thousand.

Remuneration of the Supervisory Board

In view of amendments to the Stock Corporation Act, the Annual General Meeting in 2021 was also required to adopt a resolution on the remuneration system of the Supervisory Board. The existing remuneration system of the Supervisory Board dated back to a resolution of the General Meeting in 2011 and had since remained unchanged.

Against this backdrop, the remuneration system was refined and the variable remuneration of the Supervisory Board was eliminated. With a view to strengthening the independence of the Supervisory Board and ensuring the objective performance of its monitoring and advisory role, the members of the Supervisory Board are granted a customary fixed remuneration in the new remuneration system. In addition, the members of the Supervisory Board receive committee remuneration to recompense the increased time required for membership of committees as well as an attendance allowance for participation in meetings.

A new resolution was adopted on the Supervisory Board remuneration with effect from 1 January 2021; in accordance with the amended version of § 14 of the Articles of Association as amended on 5 May 2021, the members of the Supervisory Board receive fixed annual remuneration of EUR 75,000 (until 31 December 2020: EUR 30,000) in addition to reimbursement of their expenses. The Chairman of the Supervisory Board receives two-and-a-half times (until 31 January 2020: twice) the aforementioned remuneration amounts and the Deputy Chairman one-and-a-half times the amounts. Variable remuneration, formerly limited to at most EUR 30,000 annually, is no longer granted under the amendment of § 14 of the Articles of Association with effect from the 2021 financial year onwards.

The members of the Finance and Audit Committee formed by the Supervisory Board additionally receive remuneration of EUR 25,000 (until 31 December 2020: EUR 15,000) for their committee work and the members of the Standing Committee formed by the Supervisory Board receive remuneration of EUR 15,000 (until 31 December 2020: EUR 7,500). The Chair of each Committee receives twice 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 amounts pro rata temporis.

In addition to the specified remuneration for participation in the meetings of the Supervisory Board and the Committees, each member of the Supervisory Board receives an attendance allowance of EUR 1,000 per meeting. 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.

The individualised presentation of the remuneration shows the remuneration actually due in the respective year under review for the year under review as well as the attendance allowances granted in the year under review. Value-added tax payable on the remuneration, insofar as it accrues, is reimbursed by the company.

In the year under review no remuneration was paid to the members of the Supervisory Board for services provided individually outside the committee work described above, e.g. for consulting or mediation services, with the exception of the remuneration paid to employee representatives on the basis of their employment contract.

Individual remuneration of the members of the Supervisory Board M 92

		Remuneration for Supervisory Board work					
		Fixed remuneration			Variable remuneration		
		2021		2020	2021		2020
		in EUR thousand[1]	in %	in EUR thousand[1]	in EUR thousand[1]	in %	in EUR thousand[1]
Torsten Leue	Chairman of the – Supervisory Board – Standing Committee – Nomination Committee Member of the Finance and Audit Committee	187.5	55	60.0	–	0	58.7
Herbert K. Haas	Deputy Chairman of the Supervisory Board Chairman of the Finance and Audit Committee Member of the – Standing Committee – Nomination Committee	112.5	60	45.0	–	0	44.0
Natalie Bani Ardalan[2]	Member of the Supervisory Board	75.0	95	30.0	–	0	29.4
Frauke Heitmüller[2]	Member of the Supervisory Board	75.0	95	30.0	–	0	29.4
Ilka Hundeshagen[2]	Member of the Supervisory Board	75.0	95	30.0	–	0	29.4
Dr. Ursula Lipowsky	Member of the – Supervisory Board – Finance and Audit Committee	75.0	69	30.0	–	0	29.4
Dr. Michael Ollmann	Member of the Supervisory Board	75.0	95	30.0	–	0	29.4
Dr. Andrea Pollak	Member of the – Supervisory Board – Nomination Committee	75.0	95	30.0	–	0	29.4
Dr. Erhard Schipporeit	Member of the – Supervisory Board – Standing Committee	75.0	78	30.0	–	0	29.4
Total		**825.0**	**73**	**315.0**	**–**	**0**	**308.5**

1 Amounts excluding reimbursed VAT
2 Employee representative

Remuneration for committee work			Attendance allowances			Supervisory board remuneration from Group entities			Total remuneration	
2021		2020	2021		2020	2021		2020	2021	2020
in EUR thousand[1]	in %	in EUR thousand[1]	in EUR thousand[1]	in %	in EUR thousand[1]	in EUR thousand[1]	in %	in EUR thousand[1]	in EUR thousand[1]	in EUR thousand[1]
55.0	16	30.0	9.0	3	9.0	100.0	28	92.0	351.5	249.7
65.0	35	37.5	9.0	5	9.0	–	0	–	186.5	135.5
–	0	–	4.0	5	4.0	–	0	–		
–	0	–	4.0	5	4.0	–	0	–	79.0	63.4
–	0	–	4.0	5	4.0	–	0	–	79.0	63.4
25.0	23	15.0	8.0	7	7.0	–	0	–	108.0	81.4
–	0	–	4.0	5	4.0	–	0	–	79.0	63.4
–	0	–	4.0	5	4.0	–	0	–	79.0	63.4
15.0	16	7.5	6.0	6	5.0	–	0	–	96.0	71.9
160.0	**14**	**90.0**	**52.0**	**5**	**50.0**	**100.0**	**9**	**92.0**	**1,137.0**	**855.5**

Comparative presentation of the change in remuneration and earnings trend

In conformity with the requirements of § 162 Para. 1 Sentence 2 No. 2 Stock Corporation Act (AktG), the following table presents a comparison of the change in the remuneration of the members of the Executive Board, the members of the Supervisory Board as well as the employees and the earnings trend of the company.

The presentation of the remuneration of the Executive Board and the Supervisory Board is geared to the remuneration granted and owing pursuant to § 162 Stock Corporation Act (AktG).

The presentation of the average remuneration of the employees is geared to the workforce of Hannover Re in Germany. The employee remuneration shown encompasses the personnel expense (excluding the expense for Executive Board remuneration) for wages and salaries, employer contributions to social security, the variable remuneration components allocable to the financial year as well as – in the case of share-based payment – the amounts received in the financial year.

Comparative presentation M 93

	2021 in EUR thousand	2020 in EUR thousand	Change 2020/2021 in %
Active members of the Supervisory Board [1]			
Torsten Leue	351.5	249.7	40.8
Herbert K. Haas	186.5	135.5	37.6
Natalie Bani Ardalan [2]	79.0	63.4	24.6
Frauke Heitmüller [2]	79.0	63.4	24.6
Ilka Hundeshagen [2]	79.0	63.4	24.6
Dr. Ursula Lipowsky	108.0	81.4	32.7
Dr. Michael Ollmann	79.0	63.4	24.6
Dr. Andrea Pollak	79.0	63.4	24.6
Dr. Erhard Schipporeit	96.0	71.9	33.5
Active members of the Executive Board			
Jean-Jacques Henchoz	1,667.0	1,716.7	-2.9
Sven Althoff	1,262.3	1,153.2	9.5
Claude Chèvre	1,304.9	1,353.1	-3.6
Clemens Jungsthöfel (since 1 September 2020)	733.2	227.7	222.0
Dr. Klaus Miller	1,211.2	1,232.5	-1.7
Dr. Michael Pickel	1,254.6	1,240.6	1.1
Silke Sehm	877.2	793.5	10.5
Former members of the Executive Board			
André Arrago (until 31 August 2014)	128.9	130.4	-1.2
Roland Vogel (until 30 September 2020)	1,340.6	1,320.3	1.5
Ulrich Wallin (until 5. May 2019)	867.1	889.0	-2.5
Employees in Germany			
Average	108.5	107.7	0.8
Earnings trend			
Profit for the year of Hannover Rück SE according to HGB in EUR million	701.2	386.8	81.3
Group net income in EUR million	1,231.3	883.1	39.4

[1] Amounts excluding reimbursed VAT
[2] Employee representative

Remuneration of staff and senior executives

Structure and system

The remuneration system 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 variable remuneration. This is comprised of short-term variable remuneration, the annual cash bonus and long-term share-based remuneration, 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).

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 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 actually generated return on equity. 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 target attainment in the respective Property & Casualty or Life & Health business group and 40% for individual target attainment. In service departments the variable remuneration is based on Group net income and the individual targets with a corresponding weighting of 40% and 60%. The degree of target attainment is defined for both the Group net income and the business groups. Individual targets and the degree of target 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. Target 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, target attainment stands at 85%. Target attainment of 100% is recorded at 882 basis points. The maximum possible target attainment is 200%. A lower limit is placed on target attainment of -50% (malus) 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 2021 M 94

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 157 Group senior executives worldwide receive a cash bonus upon corresponding target attainment and participate in the Share Award Plan.
Director	Management level 3		
General Manager			
Chief Manager		Group Performance Bonus (GPB)	**Hannover Office** Of the altogether 1,477 employees at the Hannover Office (incl. 90 senior executives), 891 staff (excl. seconded employees) 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 target 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. Target 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 target attainment is 0%. The maximum possible target attainment is 150%.

Individual targets are agreed and measured for a period of one year. The degree of target attainment is between 0% and 100%.

Amount and payment of variable remuneration for senior executives

The degree of overall target 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 based on the premise that the degree of attainment for all targets 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 target attainment for Group net income is -50% while at the same time target 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 target attainment for Group net income is -50% and at the same time target 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 degree of overall target 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 for 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 ten trading days after the meeting of the Supervisory Board that approves the consolidated financial statement. 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 ten 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 ten 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 ten trading days after the Annual General Meeting that approves the dividend payment for the financial year just ended.

The cash bonus for the 2020 financial year was paid out in June 2021. The share awards for the 2020 financial year were also allocated in June 2021; they will be paid out in the spring of 2025 including dividends paid for the 2020, 2021, 2022 and 2023 financial years.

Refinement of the system of remuneration for senior executives effective 1 January 2022

In the 2021 financial year the modifications made to its system of remuneration prompted the Executive Board of Hannover Rück SE to review and overhaul the system of remuneration for senior executives (management levels 2 and 3). With effect from 1 January 2022 the Executive Board therefore approved refinements to the measurement bases and their weighting, while the amount of variable remuneration including share awards continues to be determined by the degree of overall target attainment. No change was made to the split of cash bonus/share awards.

Outlook

Forecast

- Group net income guidance: EUR 1.4 billion to EUR 1.5 billion
- Gross premium for the Group expected to grow by at least 5%
- Property and casualty reinsurance: target for combined ratio of no more than 96%
- Major loss budget for property and casualty reinsurance raised to EUR 1.4 billion
- Life and health reinsurance: sustained strong demand for financial solutions
- Return on investment target of at least 2.3% for assets under own management

Economic developments

Global economy

Faced with rising infections and supply chain bottlenecks in industry, the global economic rebound lost impetus in the second half of 2021. The Chinese economy is also currently growing only at a relatively modest pace. The upswing in the early months of 2022 will therefore likely remain muted until the economy rallies over the remainder of the year. The Kiel Institute for the World Economy (IfW) expects output for the full year to grow by 4.5% (previous year: 5.7%).

The economic impacts of the new waves of infections will probably be less marked than in the previous year. In some countries the vaccination rates are high and a large proportion of the population has already come into contact with the virus. Against this backdrop, sectors such as tourism, travel and entertainment will step up their activities back towards a normal level. Similarly, the supply shortages will ease gradually as production capacities are increasingly adjusted.

The Kiel-based experts expect the elevated level of inflation to retreat slightly on account of falling energy prices. It should still remain appreciably above the pre-crisis level. With a view to putting the brakes on soaring prices, central banks in the advanced economies – such as the United States, United Kingdom and also Central and Eastern European countries – are moving to tighten monetary policy. This will likely constrict the financial framework conditions in emerging economies. At the same time, high commodity prices serve as a stimulating factor for many emerging countries, with the result that further economic recovery in this group of countries should be sustained.

Growth in gross domestic product (GDP) **M 95**

in %	2021 (forecast from previous year)	2021 (provisional calculation)	2022 (forecast)
Economic areas			
World economy	6.1	5.7	4.5
Eurozone	4.9	5.0	3.5
Selected countries			
United States	3.7	5.6	4.4
China	9.2	7.8	4.1
India	11.6	7.6	11.7
Japan	3.7	1.5	2.8
Germany [1]	3.1	2.6	4.0

[1] adjusted for price, calendar and seasonal effects
Source: Kiel Institute for the World Economy

United States

Faced with an inflation rate most recently in excess of 6%, the US Federal Reserve plans to scale back its bond buying programme faster than anticipated and progressively raise its key interest rate. Parallel to this, the Biden administration is planning for approval of the Build Back Better Plan. Overall, the IfW expects economic output to grow by 4.4% (5.6%) in 2022. The propensity towards private consumption should remain intact, but the gain of 4.0% will be lower than in the previous year (8.0%). Capital investment will likely also fall short of the previous year at 3.0% (7.9%). In foreign trade the tendency is reversing: while exports should rise by 9.1% (4.0%), import growth is expected to soften to 5.4% (13.2%). The recovery on the labour market is set to continue, with the jobless rate expected to fall from 5.4% to 3.8% and hence return to virtually the pre-crisis level.

Europe

After a modest contraction during the six winter months, IfW estimates suggest that economic activity in the Eurozone will pick up again in the spring. The supply shortages will probably ease gradually and enable vigorous value-added growth in manufacturing industry. Growth of 3.5% (5.0%) is expected for the full year. Expenditures for consumption are forecast to rise by 4.5% (3.3%). While growth in exports and imports – at 4.3% and 4.2% respectively – will probably be softer than in the previous year (9.5% and 7.1%), it should remain robust. The pricing pressure on energy costs will likely fade. At the same time, the price buoyancy on industrial goods will probably intensify, with the result that inflation in 2022 – at 2.8% – will likely be significantly higher than the central bank's inflation target. Unemployment is forecast to fall to 6.9% and hence the lowest level since the existence of monetary union. With the Pandemic Emergency Purchase Programme for bonds set to expire in March, however, a reduction in the supply of liquidity is planned.

Despite the elimination of fiscal supports, GDP growth in the United Kingdom will likely show another robust increase of 4.5% in 2022 (6.9%). The economy will, however, have to find a fresh footing in international trade following the exit from the European Single Market. With inflation expected to come in at 4.1%, monetary policy will probably also be appreciably tightened.

Germany

As in the previous year, the German economy's recovery has been interrupted by a softer winter half-year. In addition to the pandemic, economic activity has initially been impacted by supply shortages. The moderating effect cannot, however, be compared to the previous year. For the year as a whole, the IfW anticipates growth of 4.0% (2.6%). Industry should move forward in its recovery process, and this is also likely to be reflected in more upbeat corporate investments. Activity in the building sector is favourably poised and expected to remain intact: construction investments should increase by 2.9% (1.6%).

The price buoyancy in international trade should continue to intensify. Exports will likely rise at a pace of 6.0% (7.5%) as bottlenecks constraining output ease and new business outside Germany grows. Imports are benefiting from, among other things, the resurgence in travel and will probably rise by 6.3% (7.8%).

The labour market will see only a short interruption in employment growth. The upturn from the spring onwards is expected to coincide with an increase in the minimum wage to EUR 12 effective 1 July 2022. This will to some extent put the brakes on employment growth. Looked at over the year as whole, the working population is expected to grow by 386,000. The jobless rate is forecast to fall from 5.7% to 5.2%. At 3.1%, inflation is expected to remain on the high level of the previous year and only come down going forward. Supply chain constraints are continuing to push up manufacturing costs and restrict the availability of consumer goods. At the same time, the purchasing power of EUR 200 billion that has built up among consumers since the start of the pandemic is running up against tight supply.

Asia

Output in Asia is estimated to grow by 6.3% in 2022 (6.9%). This will be driven in part by India (11.7%), although other Asian emerging economies such as Indonesia (6.4%), Thailand (5.7%) and the Philippines (7.6%) are also expecting clearly favourable growth numbers. In China, steps taken to contain the pandemic, an energy crisis and consolidation in the real estate sector will suppress total economic output and hence restrict the growth in gross domestic product to 4.1%. In December the central bank cut the reserve requirement ratio and eased economic conditions for small and mid-sized business in an effort to support the economy.

Japan's growth rate should reach 2.8% (1.5%) in the current year, thereby confirming the positive economic trend. Expansion will be helped by corporate investments with an expected gain of 5.0%, private consumption with growth of 2.9% and foreign trade, with exports and imports forecast to grow by 3.6% and 4.1% respectively. Inflation should remain low at 1.0%. For Japan, therefore, there is no end in sight to the extremely accommodative monetary policy.

Capital markets

The course of the pandemic and its scope and impacts on economies around the world will continue to affect 2022 – albeit on a significantly lesser scale than in the two previous years. Easing production bottlenecks and supply chain issues will still come up against robust demand for the time being, while the growth already observed in the year under review will soften but should nevertheless remain on an adequate level.

In this context, the support provided by central banks will remain a key pillar of stability for the moment. The US Federal Reserve has announced its intention to progressively taper its measures throughout the spring. It is our expectation that the ECB to follow suit in the course of the year. As far as government support programmes around the world are concerned, we expect stimulus to be substantially phased out. The extent to which the existing measures will be conducive on a lasting basis to inflationary tendencies, market overheating or even instances of countries becoming insolvent remains to be seen. The concerns of market players about systemic inflation currently still appear fragile in terms of their potential longevity. It is too soon to draw any definitive conclusions at the present time as to whether we will have to live with higher inflation as a structural and more protracted phenomenon. As the demand for goods normalises and the kinks in supply chains are ironed out again, we anticipate that inflation may fade and secondary effects such as wage pressures could be curbed. Furthermore, it should not be forgotten that even before the pandemic geopolitical and populist currents were fanning uncertainty on the markets. These will continue to be an influencing factor going forward.

We expect the advance of digitalisation to inject fresh, positive stimuli into the economy. As far as capital markets are concerned, we initially anticipate a higher level of interest rates and rising volatility on equity and credit markets. With regard to alternative and real asset classes, upward revaluations are likely to be significantly constrained. Should interest rates move lower again as the year progresses, however, appreciation pressure in these asset classes can be expected to intensify. It is our expectation that catch-up effects on the consumption side will fade. On the other hand, we expect to see a revival in investment demand from the corporate sector as well as positive developments in the service sector.

As a consequence of the unusual capital market constellations seen in recent years, the behaviour of capital market participants can no longer be consistently explained by market fundamentals. With this in mind, we shall continue to invest major parts of our asset portfolio conservatively. At the same time, due consideration will be paid to the economic prospects offered by certain markets and countries by entering into commensurate risks. However, we are not planning any significant changes in our asset allocation. We shall continue to attach great importance to broad diversification. The interest rate risk will be tightly managed through as neutral a modified duration as possible.

Insurance industry

In 2022 the global insurance industry will once again find itself faced with a myriad of already known as well as new challenges. The Covid-19 pandemic is ongoing and continues to affect the insurance sector, although the associated uncertainties appear more manageable and Covid-19 will become easier to deal with. This is made possible by the numerous vaccines and advances in the development of additional vaccines and medications. Higher inflation rates as well as ongoing climate change – together with the associated increase in extreme climate events – pose further challenges.

The digital transformation will continue to shape the insurance industry in 2022 and has gained added impetus from the pandemic. Working from home has become the norm and permanently changed the world of work. Covid-19 has led to greater agility, which will be manifested in the work environment on a lasting basis. In this context, the acceptance of online offerings and digital communication with customers have also continued to grow and will play an even more prominent role going forward.

Digitalisation and hence also the cyber risks segment are therefore creating a basis for new insurance products. The industry will increasingly partner with insurtechs. Not only that, global climate change is generating a greater need for insurance solutions across a wide range of lines and regions.

On the investment side, the insurance industry remains preoccupied with the continued low level of interest rates. In our main currency areas, however, sometimes appreciable increases in interest rates were recorded in the reporting period – a trend that could be sustained in 2022. It is our expectation, however, that this will go hand-in-hand with sharply higher volatility. We anticipate this development in the Eurozone, too, albeit with a time delay and on a lower level – meaning that the Eurozone will continue to see rates that are on the low side overall. Hardest hit here are life insurers: they find themselves challenged to adjust their business models and develop new products tailored to market circumstances.

Property & Casualty reinsurance

Overview

The treaty renewals in property and casualty reinsurance as at 1 January 2022 passed off satisfactorily. Hannover Re again wrote more business at sometimes substantially better prices and conditions. The inflation- and risk-adjusted price increase on the renewed business averaged 4.1%, with prices in non-proportional reinsurance rising by 6.1% and hence more strongly than in proportional reinsurance, where they improved by 3.4%.

Of the total premium volume booked in the previous year on an underwriting-year basis amounting to EUR 13,801 million in traditional property and casualty reinsurance (excluding facultative reinsurance, ILS business and structured reinsurance), treaties with a volume of altogether EUR 7,808 million – or 62% of the business – were up for renewal as at 1 January 2022. The premium volume due for renewal has been adjusted for a reinsurance cession of EUR 1,107 million received by Hannover Re from HDI Global Specialty. This was reduced to EUR 576 million in the 1 January 2022 renewals in connection with the sale of the participation.

Of the EUR 7,808 million up for renewal, a premium volume of EUR 7,284 million was renewed, while treaties worth EUR 524 million were either cancelled or renewed in modified form. Including increases of EUR 1,176 million from new treaties and from changes in prices and treaty shares, the total renewed premium volume came in at EUR 8,460 million and was thus 8.3% higher than the previous year's level.

In part because of the ongoing considerable losses from natural catastrophes, the renewal of our retrocession covers proved challenging. Based on our long-standing cooperation with our retrocessionaires, we were nevertheless again able to arrange a well-diversified retrocession programme. We thus covered our requirements according to our risk appetite, even though the capacity of the retrocession programme was smaller than in the previous year.

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 2022 M 96

	Volume[1]	Profitability[2]
Regional Markets		
Europe, Middle East and Africa (including CIS countries)[3, 4]	↘	+
Americas[3]	↗	+
Asia-Pacific[3]	→	+/–
Worldwide Markets		
Structured Reinsurance and Insurance-Linked Securities	↗	+
Facultative Reinsurance	↗	+
Credit, Surety and Political Risks	↗	+/–
Aviation and Marine[4]	↘	+
Agricultural Risks	↗	+/–

[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
[4] Decrease due to reduced obligatory cession from HDI Global Specialty

Regional Markets

Europe, Middle East and Africa

In the markets of **Continental Europe** we again achieved broadly higher prices in the 1 January treaty renewals. We are looking for a continued favourable development in the pricing momentum. Demand for superlative reinsurance protection also remains on a high level and is especially sought-after during the pandemic.

The generally favourable premium growth in the region is opposed by a reduced reinsurance cession from HDI Global Specialty, which was scaled back as planned in conjunction with the sale of the participating interest.

For 2022 Hannover Re expects a return to stronger growth on the primary market in **Germany** compared to the previous year. With an eye to the considerable expenditures in 2021 caused by fire losses in industrial insurance and the strain from natural catastrophe events, sizeable growth can be expected again in the property line – which will likely get a further boost from the increasing inclusion of natural perils covers in the private segment. In the motor line, on the other hand, growth will be on the moderate side in 2022 despite rising average claims owing to continuing restrictions on mobility put in place to fight the pandemic.

After the heavy losses due to natural perils events in 2021, we benefited from greater risk awareness and rising prices when reinsurance treaties were renewed as at 1 January 2022. In so doing, we maintained our leadership position and obtained improved prices and conditions in many instances.

Along with opportunities in emerging segments such as telematics or cyber, we see new developments first and foremost in the motor segment. Market players are increasingly responding actively to changes in their customers' mobility habits and developing new concepts. We bring our expertise to bear as we support our clients with these issues and with the development of modified or new coverage concepts.

In the **United Kingdom, Ireland and the London Market** we achieved price increases in all major reinsurance lines in the treaty renewals as at 1 January 2022. Continued hardening, albeit less marked, is expected on the original market in 2022. Our customer base has continued to grow through the formation of various Lloyd's syndicates, giving us additional opportunities to profitably expand our book of business. Especially where cyber covers are concerned, we shall discuss and implement capacity restrictions under proportional treaties in cooperation with our long-standing clients.

Our premium volume in the **Middle East** and in our retakaful business should remain stable. We nevertheless anticipate moderate growth in conjunction with the economic rebound after the pandemic as well as through new initiatives. For 2022 we are planning to further enlarge our product range in collaboration with our market experts. We shall also continue to stress the importance of selective underwriting in order to preserve the profitability of our portfolio.

In **South Africa** the 1 January 2022 treaty renewals brought further improvements in conditions. This enabled us to write a number of new shares in reinsurance programmes that we had declined in recent years owing to inadequate margins. The business generated through our managing general agents (MGAs) and Compass Insure nevertheless still makes up the bulk of our property and casualty reinsurance portfolio.

Americas

Building on the improvements in conditions achieved in previous years, the treaty renegotiations in **North America** for 1 January 2022 brought additional adjustments, thereby making it possible to further boost the profitability of the business. With the return to normalisation of raw materials availability and supply chains, together with the resulting economic upswing, Hannover Re expects to book solid growth from the written portfolio for 2022. We anticipate at least stable or slightly stronger earnings potential. Our broad and diversified positioning combined with close customer relationships will help us to continue to act on market opportunities as the reinsurance partner of choice for our customers and reinsurance brokers.

In **Latin America** we continue to see heightened awareness of the exposure to natural catastrophes. This is joined by new products aimed at end consumers as well as stronger interest in parametric covers. Large parts of the portfolio in Latin America are, however, only renewed by Hannover Re later in the year. All in all, we are looking to a further improvement in conditions on the reinsurance market.

Asia-Pacific

The **Asia-Pacific** region is developing into one of the largest insurance markets globally. This growth is opening up further significant business opportunities, not least because the insurance density is still lower than in more mature markets. We therefore anticipate substantial growth rates both in property and casualty reinsurance and in the area of health and provision in the APAC region over the medium and long term. Following the launch of our Asia-Pacific growth initiative, Hannover Re should be superbly placed to share in the further above-average growth of the APAC region.

For the renewals as at 1 April 2022 Hannover Re anticipates stable or improved reinsurance conditions and prices. Treaties affected by the pandemic or other losses should see clearly positive changes.

The hardening tendencies on other markets were evident to only a limited extent in Greater China. All in all, a stable to positive development can be observed. Over the year as a whole we intend to cement our position a reinsurer of choice in the region. This also includes expanding our book of business through initiatives and close cooperation with our customers.

The major reinsurers have recalibrated their risk models and hence their risk assessment and exposures for the coverage of typhoons in Japan. The increase in rates for industrial and fire business recorded on the primary insurance side establishes a favourable basis for Hannover Re to maintain its sustainable positioning in the market.

In Australia we anticipate further rate adjustments for 2022, above all in natural catastrophe business including corresponding frequency covers, in part as a reflection of the increased exposures. Additional rate increases are to be expected in the primary market, which should have positive implications for proportional reinsurance treaties.

Worldwide Markets

Structured Reinsurance and Insurance-Linked Securities

Given the improvements in market conditions benefiting reinsurers, we expect further growth in demand in **structured reinsurance**. The considerable expenditures incurred by insurers in North America and Europe from natural catastrophe losses are facilitating the shift towards a provider market. Based on new business written and the favourable development of the already existing portfolio, we are looking for significantly stronger growth than in traditional reinsurance for 2022.

In the area of **insurance-linked securities (ILS)** we anticipate rising demand over the long term. Investors are seeking a 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 for the transfer of property and life reinsurance risks to the capital market. Over the coming years we expect further growth in business volumes not only in collateralised reinsurance but also when it comes to supporting catastrophe bond issues and the transfer of life reinsurance risks. All in all, we are looking for our ILS activities to deliver a positive and consistently rising profit contribution. The capital market also remains an important element in our own retrocession protection.

Facultative Reinsurance

We expect to see a stable continuation of the current market development in **facultative reinsurance** over the coming 12 months. In the 2022 financial year we anticipate further strong demand for facultative reinsurance.

Considerable growth potential is identified in Asia. We intend here to step up our participation in the associated business opportunities and will expand our activities in the region accordingly. Yet in other regions, too, we shall press ahead on our growth track in facultative business.

Sustainability is an increasingly prominent issue that is very much in keeping with our corporate strategy and our corporate values. At the heart of our approach is our striving to avoid facilitating unsustainable practices in economic activity through our reinsurance support and to actively assist the transformation to a sustainable economy through facultative reinsurance coverage.

Credit, Surety and Political Risks

A gradual economic recovery is anticipated for 2022 and parallel to this a progressive elimination of government supports. Against this backdrop, loss ratios will likely rise moderately from a comparatively low level and prices on both the insurance and reinsurance side will remain broadly stable. A good result is expected for 2022.

Aviation and Marine

For 2022 we expect rates for **aviation** business to stabilise on the primary market for airline risks, insofar as the further course of the pandemic allows a return to the largely orderly transportation of passengers. As for the other segments (general aviation and product liability), we anticipate continued rate increases – albeit on a lower level than in the previous year. The positive pricing trend in the space market should be sustained, additionally influenced by a sharp rise in launch activity.

Based on the combination of these effects – and allowing for a reduced reinsurance cession from HDI Global Specialty –, we expect an increased premium volume in this segment. The reinsurance cession from HDI Global Specialty to Hannover Re was scaled back as planned in conjunction with the sale of the participating interest.

All in all, we are looking for another rise in the absolute market premium for aviation and space insurance. Hannover Re will participate directly in this development through its exposure in proportional reinsurance. As for non-proportional covers, the trend towards price increases will continue to level off. Given that losses from the previous years have not yet been fully compensated, we are still seeking to push through higher rates.

After promising improvements in the previous year, initial tendencies towards consolidation already emerged in **marine** business in 2021. Customers were prepared to carry more risk themselves and a surplus of reinsurance capacity was still available. This trend continued in the treaty renewals as at 1 January 2022. Based on our market position and long-standing customer relationships, we anticipate a stable portfolio with adequate prices in the marine and offshore reinsurance lines despite the competitive landscape.

Agricultural Risks

We anticipate further growth in our portfolio of **agricultural risks**. The increasing need for agricultural commodities and foodstuffs as well as the more widespread prevalence of extreme weather events, particularly in emerging and developing markets, are generating stronger demand for corresponding reinsurance covers. We engage both in traditional reinsurance and in intensified cooperation with our customers and partners on the development of innovative tools for primary insurance. Index-linked products and parametric covers, which can also be used to mitigate adverse impacts of climate change, offer growth potential. In addition, the more widespread implementation of public-private partnerships opens up new opportunities to write profitable business in markets that have still to establish themselves as well as to close protection gaps, especially in emerging and developing countries.

The cooperation entered into in 2019 with Global Parametrics, a provider of parametric covers, the Federal Ministry of Economic Cooperation and Development, Kreditanstalt für Wiederaufbau and the UK Department for International Development continues to represent a promising initiative for our company. Together, we have developed an innovative concept for the protection of climate risks in developing countries on the basis of parametric indices.

Life & Health reinsurance

For the 2022 financial year we anticipate additional pandemic-related strains in life and health reinsurance. We have placed an extreme mortality cover on the capital market as partial protection against extreme mortality. Aside from the challenges associated with the pandemic and the persistent intense competition, we nevertheless still see attractive opportunities for life and health reinsurance. The low interest rate environment continues to adversely impact the investment income generated by the insurance industry – a scenario that opens up additional opportunities for financially robust reinsurers such as Hannover Re, including for example in the financial solutions segment.

In **Financial Solutions** business it is our assumption that the favourable trend on markets such as Asia will continue. Special mention should be made here of China, where – as in the preceding years – we see considerable potential for 2022. We similarly take an optimistic view of the Latin American market and are looking forward to healthy demand and opportunities to write new business.

Turning to the **Longevity Solutions** reporting category, it is our expectation that coverage of longevity-related risks will remain a focus of attention and interest in corresponding solutions will continue to grow – not only in the leading UK market. Along with declining interest rates, a major driver here is the exacting capital requirements placed on primary insurers and pension funds in connection with such business.

In the area of **Mortality and Morbidity Solutions**, the pandemic will likely continue to negatively affect results – at least in the first half of 2022. Due to the elevated mortality we anticipate further loss expenditures. The strains from the pandemic may be opposed by the effect of an extreme mortality cover that we have placed on the capital market in regular tranches since 2013. It is not yet possible, however, to quantify the income that this will generate.

In the area of **Underwriting Services** it is our expectation that our automated underwriting systems “hr | ReFlex” and “hr | Quirc” will continue to stimulate considerable interest among our customers as part of the progressive march towards digitalisation.

Our customers increasingly see Hannover Re no longer as just a pure risk carrier, but rather as an expert and financially strong partner that stands ready to support them with its worldwide know-how as they face up to a diverse range of issues.

Life & Health reinsurance: Forecast development for 2022 **M 97**

	Volume[1]	Profitability[2]
Financial Solutions	↗[3]	++
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
[3] Including contracts for which no premium income is booked

Investments

Given the uncertainties associated with geopolitical developments and the pandemic, we shall continue to invest major parts of our asset portfolio conservatively. Nevertheless, we also envisage appropriate risk-taking in response to the recently increased – albeit still low overall – level of interest rates against the backdrop of a likely acceleration effect triggered by more extensive containment of the pandemic’s impacts. 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 further enlargement of the asset portfolio, supported by a good operating cash flow from the favourable development of business, is expected to have a positive effect on investment income. The interest rate increases observed during the reporting period in our main currency areas will prove beneficial in this respect. In view of the generally low returns on high-quality investments, we shall press ahead with our activities relating to products offering attractive credit spreads. With this in mind, we shall somewhat expand the portfolio of real assets or financing of such asset classes, although we shall maintain a particular focus on attractive risk-return profiles going forward. We also intend to selectively grow our exposure, as appropriate, to the areas of private equity and emerging markets.

If the valuation levels of listed equities experience significant corrections and stabilise, we are prepared to moderately increase the equity portfolio.

Given the persistent low level of interest rates, we anticipate an average return of at least 2.3% on our investments for 2022.

Outlook for the 2022 financial year

Based on the sustained improvement in prices and conditions in primary insurance and reinsurance, we are looking to book growth of at least 5% in Group gross premium for total business at constant exchange rates.

Based on the satisfactory treaty renewals as at 1 January 2022, we expect further growth in gross premium in **property and casualty reinsurance** in the current financial year adjusted for exchange rate effects. We shall retain unchanged our selective underwriting policy, under which in large part we write only business that satisfies our margin requirements.

Thanks to our good rating, our long-standing stable customer relationships and our low expense ratio, we should be able to generate another good result in property and casualty reinsurance, provided the burden of large losses remains within our expectations. We continue to aim for a combined ratio of no more than 96%.

In **life and health reinsurance** we expect to generate further growth in gross premium for the current financial year based on constant exchange rates. The value of new business should amount to at least EUR 250 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 portfolio of **investments** should continue to grow. We are looking to deliver a return on investment of at least 2.3% for 2022.

For the 2022 financial year we again expect to achieve a return on equity above our minimum target, which we define as an additional 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 range of EUR 1.4 billion to EUR 1.5 billion.

In view of the sharply higher business volume and marginally increased retention in property and casualty reinsurance, Hannover Re raised its net major loss budget for 2022 to EUR 1.4 billion (EUR 1.1 billion).

As usual, all forward-looking statements regarding future targets are based on the premise that there are no unforeseen distortions on capital markets, that major loss expenditure remains within the budgeted level and that the Covid-19 pandemic does not significantly affect the result in life and health reinsurance.

Hannover Re aims to pay an ordinary dividend that at least remains stable compared to the previous year. This will be supplemented by a special dividend provided the capitalisation exceeds the capital required for future growth and the earnings guidance is achieved.

Consolidated financial statements

Consolidated balance sheet as at 31 December 2021

Assets

in EUR thousand	Notes	31.12.2021	31.12.2020[1]
Fixed-income securities – held to maturity	6.1	48,632	185,577
Fixed-income securities – loans and receivables	6.1	2,443,629	2,312,840
Fixed-income securities – available for sale	6.1	45,473,677	38,851,723
Fixed-income securities – at fair value through profit or loss	6.1	81,308	105,711
Equity securities – available for sale	6.1	314,453	378,422
Other financial assets – at fair value through profit or loss	6.1	248,233	234,689
Investment property	6.1	1,818,754	1,589,238
Real estate funds	6.1	805,912	582,296
Investments in associated companies	6.1	238,110	361,617
Other invested assets	6.1	2,941,633	2,794,016
Short-term investments	6.1	443,793	327,426
Cash and cash equivalents	6.1	1,355,114	1,278,071
Total investments and cash under own management		**56,213,248**	**49,001,626**
Funds withheld	6.2	10,803,071	9,659,807
Contract deposits	6.3	503,412	298,344
Total investments		**67,519,731**	**58,959,777**
Reinsurance recoverables on unpaid claims	6.7	2,674,107	1,883,270
Reinsurance recoverables on benefit reserve	6.7	192,039	192,135
Prepaid reinsurance premium	6.7	204,597	165,916
Reinsurance recoverables on other technical reserves	6.7	2,703	1,106
Deferred acquisition costs	6.4	3,350,633	3,073,117
Accounts receivable	6.4	7,207,750	5,605,803
Goodwill	6.5	83,933	80,965
Deferred tax assets	7.5	676,344	597,986
Other assets	6.6	972,167	859,136
Accrued interest and rent		18,248	18,264
Total assets		**82,902,252**	**71,437,475**

[1] Restated pursuant to IAS 8

Liabilities

in EUR thousand	Notes	31.12.2021	31.12.2020[1]
Loss and loss adjustment expense reserve	6.7	40,777,703	33,929,230
Benefit reserve	6.7	7,541,881	7,217,988
Unearned premium reserve	6.7	6,195,961	5,070,009
Other technical provisions	6.7	841,591	701,577
Funds withheld	6.8	632,195	582,316
Contract deposits	6.9	3,586,740	3,255,453
Reinsurance payable		2,380,681	1,777,761
Provisions for pensions	6.10	208,750	229,252
Taxes	7.5	92,023	132,736
Deferred tax liabilities	7.5	2,836,374	2,731,648
Other liabilities	6.11	681,867	538,813
Financing liabilities	6.12	4,370,255	3,431,276
Total liabilities		**70,146,021**	**59,598,059**
Shareholders' equity			
Common shares	6.13	120,597	120,597
Nominal value: 120,597 Conditional capital: 24,119	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		1,768,312	2,275,936
Cumulative foreign currency translation adjustment		366,231	(330,693)
Changes from hedging instruments		(8,618)	(8,678)
Other changes in cumulative other comprehensive income		(71,851)	(83,792)
Total other comprehensive income		**2,054,074**	**1,852,773**
Retained earnings		8,985,770	8,297,114
Equity attributable to shareholders of Hannover Rück SE		**11,885,003**	**10,995,046**
Non-controlling interests	6.14	871,228	844,370
Total shareholders' equity		**12,756,231**	**11,839,416**
Total liabilities		**82,902,252**	**71,437,475**

[1] Restated pursuant to IAS 8

Consolidated statement of income 2021

in EUR thousand	Notes	1.1.–31.12.2021	1.1.–31.12.2020[1]
Gross written premium	7.1	27,762,314	24,770,342
Ceded written premium		2,905,054	2,442,720
Change in gross unearned premium		(737,631)	(1,028,172)
Change in ceded unearned premium		24,023	61,345
Net premium earned		**24,143,652**	**21,360,795**
Ordinary investment income	7.2	1,555,591	1,240,420
Profit/loss from investments in associated companies	7.2	35,743	88,129
Realised gains and losses on investments	7.2	281,026	329,610
Change in fair value of financial instruments	7.2	36,114	63,971
Total depreciation, impairments and appreciation of investments	7.2	87,665	129,393
Other investment expenses	7.2	146,047	129,034
Net income from investments under own management		**1,674,762**	**1,463,703**
Income/expense on funds withheld and contract deposits	7.2	268,250	221,765
Net investment income		**1,943,012**	**1,685,468**
Other technical income	7.3	114	15
Total revenues		**26,086,778**	**23,046,278**
Claims and claims expenses	7.3	18,617,725	16,782,658
Change in benefit reserves	7.3	(298,645)	(103,487)
Commission and brokerage, change in deferred acquisition costs	7.3	5,788,582	5,111,753
Other acquisition costs		4,767	4,466
Administrative expenses	7.3	510,707	478,182
Total technical expenses		**24,623,136**	**22,273,572**
Other income	7.4	774,816	823,391
Other expenses	7.4	503,631	382,022
Other income and expenses	7.4	271,185	441,369
Operating profit/loss (EBIT)		**1,734,827**	**1,214,075**
Financing costs	6.12	83,037	90,204
Net income before taxes		**1,651,790**	**1,123,871**
Taxes	7.5	351,569	205,086
Net income		**1,300,221**	**918,785**
thereof			
Non-controlling interest in profit and loss	6.14	68,887	35,712
Group net income		**1,231,334**	**883,073**
Earnings per share (in EUR)	**8.5**		
Basic earnings per share		10.21	7.32
Diluted earnings per share		10.21	7.32

[1] Restated pursuant to IAS 8

Consolidated statement of comprehensive income 2021

in EUR thousand	1.1.–31.12.2021	1.1.–31.12.2020
Net income	**1,300,221**	**918,785**
Not reclassifiable to the consolidated statement of income		
Actuarial gains and losses		
Gains (losses) recognised directly in equity	19,291	(28,342)
Tax income (expense)	(6,094)	9,020
	13,197	**(19,322)**
Changes from the measurement of associated companies		
Gains (losses) recognised directly in equity	96	(272)
	96	**(272)**
Income and expense recognised directly in equity that cannot be reclassified		
Gains (losses) recognised directly in equity	19,387	(28,614)
Tax income (expense)	(6,094)	9,020
	13,293	**(19,594)**
Reclassifiable to the consolidated statement of income		
Unrealised gains and losses on investments		
Gains (losses) recognised directly in equity	(537,235)	1,547,846
Transferred to the consolidated statement of income	(254,497)	(235,899)
Tax income (expense)	277,353	(282,509)
	(514,379)	**1,029,438**
Currency translation		
Gains (losses) recognised directly in equity	798,672	(804,401)
Tax income (expense)	(92,474)	78,208
	706,198	**(726,193)**
Changes from the measurement of associated companies		
Gains (losses) recognised directly in equity	(1,493)	(1,670)
Transferred to the consolidated statement of income	915	–
	(578)	**(1,670)**
Changes from hedging instruments		
Gains (losses) recognised directly in equity	299	(10,742)
Tax income (expense)	(238)	3,247
	61	**(7,495)**
Reclassifiable income and expense recognised directly in equity		
Gains (losses) recognised directly in equity	260,243	731,033
Transferred to the consolidated statement of income	(253,582)	(235,899)
Tax income (expense)	184,641	(201,054)
	191,302	**294,080**
Total income and expense recognised directly in equity		
Gains (losses) recognised directly in equity	279,630	702,419
Transferred to the consolidated statement of income	(253,582)	(235,899)
Tax income (expense)	178,547	(192,034)
	204,595	**274,486**
Total recognised income and expense	**1,504,816**	**1,193,271**
thereof		
Attributable to non-controlling interests	72,507	63,132
Attributable to shareholders of Hannover Rück SE	1,432,309	1,130,139

Consolidated statement of changes in shareholders' equity 2021

in EUR thousand	Common shares	Additional paid-in capital	Other reserves (cumulative other comprehensive income)	
			Unrealised gains/losses	Currency translation
Balance as at 1.1.2020	**120,597**	**724,562**	**1,287,907**	**385,153**
Net income	–	–	–	–
Total income and expense recognised directly in equity	–	–	988,029	(715,846)
Total recognised income and expense	**–**	**–**	**988,029**	**(715,846)**
Dividends paid	–	–	–	–
Changes in ownership interest with no change of control status	–	–	–	–
Capital increases/additions	–	–	–	–
Capital repayments	–	–	–	–
Acquisition/disposal of treasury shares	–	–	–	–
Balance as at 31.12.2020	**120,597**	**724,562**	**2,275,936**	**(330,693)**
Balance as at 1.1.2021	**120,597**	**724,562**	**2,275,936**	**(330,693)**
Net income	–	–	–	–
Total income and expense recognised in equity	–	–	(507,624)	696,924
Total recognised income and expense	**–**	**–**	**(507,624)**	**696,924**
Dividends paid	–	–	–	–
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	–	–	–	–
Balance as at 31.12.2021	**120,597**	**724,562**	**1,768,312**	**366,231**

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				
(1,276)	**(66,077)**	**8,077,123**	**10,527,989**	**826,490**	**11,354,479**
–	–	883,073	883,073	35,712	918,785
(7,402)	(17,715)	–	247,066	27,420	274,486
(7,402)	**(17,715)**	**883,073**	**1,130,139**	**63,132**	**1,193,271**
–	–	(663,284)	(663,284)	(45,553)	(708,837)
–	–	235	235	385	620
–	–	–	–	31	31
–	–	–	–	(115)	(115)
–	–	(33)	(33)	–	(33)
(8,678)	(83,792)	8,297,114	10,995,046	844,370	11,839,416
(8,678)	**(83,792)**	**8,297,114**	**10,995,046**	**844,370**	**11,839,416**
–	–	1,231,334	1,231,334	68,887	1,300,221
60	11,615	–	200,975	3,620	204,595
60	**11,615**	**1,231,334**	**1,432,309**	**72,507**	**1,504,816**
–	–	(542,687)	(542,687)	(45,793)	(588,480)
–	–	384	384	172	556
–	326	(326)	–	–	–
–	–	–	–	313	313
–	–	–	–	(341)	(341)
–	–	(49)	(49)	–	(49)
(8,618)	(71,851)	8,985,770	11,885,003	871,228	12,756,231

Consolidated cash flow statement 2021

in EUR thousand	1.1.–31.12.2021	1.1.–31.12.2020[1]
I. Cash flow from operating activities		
Net income	1,300,221	918,785
Appreciation/depreciation	150,664	165,100
Realised gains and losses on investments	(281,026)	(329,610)
Change in fair value of financial instruments (through profit or loss)	(36,114)	(63,971)
Realised gains and losses on deconsolidation	(9,906)	–
Amortisation	(45,907)	106,644
Changes in funds withheld	(514,338)	111,208
Net changes in contract deposits	(41,422)	(108,890)
Changes in prepaid reinsurance premium	713,607	966,827
Change in tax assets/provisions for taxes	241,332	(65,753)
Change in benefit reserve	(136,539)	(691,060)
Change in claims reserves	4,312,687	2,867,687
Change in deferred acquisition costs	(106,018)	(295,722)
Change in other technical provisions	104,705	75,532
Change in accounts receivable/payable	(844,022)	(407,067)
Change in other assets and liabilities	132,538	(231,439)
Cash flow from operating activities	**4,940,462**	**3,018,271**

in EUR thousand	1.1.–31.12.2021	1.1.–31.12.2020[1]
II. Cash flow from investing activities		
Fixed-income securities – held to maturity		
Maturities	135,125	34,895
Fixed-income securities – loans and receivables		
Maturities, sales	310,648	367,534
Purchases	(345,506)	(527,266)
Fixed-income securities – available for sale		
Maturities, sales	18,401,741	14,227,952
Purchases	(23,910,783)	(15,774,256)
Fixed-income securities – at fair value through profit or loss		
Maturities, sales	39,192	1,131,435
Purchases	(6,970)	(673,087)
Equity securities – available for sale		
Sales	154,476	25,719
Purchases	(25,144)	(269,983)
Other financial assets – at fair value through profit or loss		
Sales	58,999	148,255
Purchases	(25,815)	(127,143)
Other invested assets		
Sales	1,551,915	1,456,900
Purchases	(1,356,674)	(2,011,242)
Affiliated companies and participating interests		
Sales	224,603	279
Purchases	(87,164)	(73,958)
Real estate and real estate funds		
Sales	249,030	199,743
Purchases	(558,290)	(196,588)
Short-term investments		
Changes	(100,508)	106,915
Other changes	30,063	(77,924)
Cash flow from investing activities	**(5,261,062)**	**(2,031,820)**

in EUR thousand	1.1.–31.12.2021	1.1.–31.12.2020[1]
III. Cash flow from financing activities		
Contribution from capital measures	313	31
Payment on capital measures	(341)	(112)
Structural change without loss of control	556	620
Dividends paid	(588,480)	(708,837)
Proceeds from long-term debts	881,102	509,001
Repayment of long-term debts	(15,592)	(526,712)
Other changes (net)	(49)	(33)
Cash flow from financing activities	**277,509**	**(726,042)**
IV. Exchange rate differences on cash	**120,134**	**(73,190)**
Cash and cash equivalents at the beginning of the period	**1,278,071**	**1,090,852**
Change in cash and cash equivalents (I.+II.+III.+IV.)	**77,043**	**187,219**
Cash and cash equivalents at the end of the period	1,355,114	1,278,071
Supplementary information on the cash flow statement[2]		
Income taxes paid (on balance)	(137,064)	(268,859)
Dividend receipts[3]	326,072	176,068
Interest received	1,538,887	1,595,027
Interest paid	(418,895)	(439,884)

1 Restated pursuant to IAS 8
2 The income taxes paid, dividend receipts as well as interest received and paid are included entirely in the cash flow from operating activities.
3 Including dividend-like profit participations from investment funds

Notes to the consolidated financial statements 2021

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 27.8 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 3,300. The Group's German business is conducted by the subsidiary E+S Rückversicherung 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 Re.

The consolidated financial statement reflects all IFRS in force as at 31 December 2021 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 98 to 103 "Underwriting risks in property and casualty reinsurance/Underwriting risks in life and health reinsurance" and to pages 104 to 108 "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.

Hannover Re is publishing its consolidated financial statement as at 31 December 2021 in accordance with the provisions of the German ESEF Implementation Act (European Single Electronic Format).

The present consolidated financial statement was released for publication by a resolution of the Executive Board on 4 March 2022.

New accounting standards or accounting standards applied for the first time

In the context of Phase 2 of the Interest Rate Benchmark Reform project the IASB published "Amendments to IFRS 9, IAS 39, IFRS 7, IFRS 4 and IFRS 16 Interest Rate Benchmark Reform" in August 2020. The amendments to these standards were adopted by the EU in January 2021 and are effective for financial years beginning on or after 1 January 2021. The changes address specific issues that may arise in connection with replacement of an existing interest rate benchmark with an alternative reference interest rate.

A separate implementation project was initiated to explore the implications of the IBOR reform for Hannover Re and ensure a smooth transition to alternative interest rate benchmarks. The investigation was conducted at the level of individual contracts. The implications for the measurement of financial assets and the corresponding adjustments that need to be made in the IT systems were also considered. In addition to a status assessment, the effects on the accounting and financial reporting were analysed as at 31 December 2021 and our investment strategy was modified accordingly. Furthermore, Group-wide communication took place and we also communicated with counterparties and issuers.

The transition to the new interest rate benchmarks has been implemented progressively since 2021. Measurement effects above a previously defined de minimis/materiality limit are offset through the exchange of compensatory payments with the respective counterparties.

It should be pointed out that measurement effects may also arise with respect to certain assets in our portfolio whose contractual terms do not make explicit reference to the reformed interest rate benchmarks – if the determination of their fair value draws on such reference interest rates.

At the reporting date Hannover Re's portfolio contained 337 contracts with a fair value of altogether EUR 709.2 million that make reference in their contractual terms to the interest rate benchmarks that are to be transitioned and will be affected by the interest rate benchmark transition. It is our assumption that the transition will not have any appreciable effects on net income.

In March 2021 the IASB issued "Amendment to IFRS 16 'Leases': Covid-19-Related Rent Concessions beyond 30 June 2021" in order to facilitate for lessees the accounting of concessions, e.g. deferral of rent payments and rent reductions, granted in connection with the outbreak of the coronavirus pandemic. The amendment is applicable to financial years beginning on or after 1 April 2021 and was adopted by the EU in August 2021. Earlier application is permitted. Hannover Re did not apply the amendment in the financial year.

Apart from the above, there were no other amendments to existing standards that would have had to have been applied in the 2021 financial year.

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. 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. Based on this draft and having regard to additional content-related changes, the IASB issued "Amendments to IFRS 17" in June 2020, thereby deferring the date of initial application of the standard including the changes for another year, i.e. to financial years beginning on or after 1 January 2023. The standard was endorsed by the EU in November 2021.

The exemption from initial application of IFRS 9 "Financial Instruments" granted to insurance and reinsurance entities has similarly been extended until 1 January 2023, thereby continuing to facilitate first-time application of both standards at the same time. In this connection we would also refer to our remarks on IFRS 9 in this section.

In December 2021 the IASB issued "Amendment to IFRS 17 Insurance Contracts; Initial Application of IFRS 17 and IFRS 9 – Comparative Information". The amendment is a transition option relating to comparative information about financial assets presented on initial application of IFRS 17. The amendment is aimed at helping entities to avoid temporary accounting mismatches between financial assets and insurance contract liabilities, and therefore improve the usefulness of comparative information for users of financial statements. The amendment is similarly effective for annual reporting periods beginning on or after 1 January 2023.

Given that the standard affects Hannover Re's core business activity, major 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. Analyses of the implications of the standard for Group financials were carried out in the year under review. The implementation of the financial reporting standard is expected to have effects that reduce total shareholders' equity, especially in life and health reinsurance, and more than offset the positive effect in property and casualty reinsurance, above all from the discounting of loss reserves. At this point in time, however, it is not yet possible to determine in detail the specific quantitative effects on the consolidated financial statement.

In July 2014 the IASB published the first version of IFRS 9 "Financial Instruments" (last amended in October 2017), 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)" and in June 2020 "Amendments to IFRS 4: Extension of the Temporary Exemption from Applying IFRS 9". 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 2023. 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. Based on initial test calculations, the risk provision as at 31 December 2021 is expected to be in the mid-double-digit millions. What is more, the final implications of IFRS 9 can only be fully determined by taking into consideration the interaction with the financial reporting standard IFRS 17. Consequently, it was not yet possible to reliably establish the effects on the net assets, financial position and results of operations at the time when this consolidated financial statement was published.

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 results of operations:

Further IFRS Amendments and Interpretations **N 06**

Published	Title	Initial application to annual periods beginning on or after the followjng date:
January/July 2020	Amendments to IAS 1 Presentation of Financial Statements: Classification of Liabilities as Current or Non-current and Classification of Liabilities as Current or Non-current – Deferral of Effective Date	1 January 2023 (still to be endorsed by the EU)
February 2021	Amendments to IAS 1 Presentation of Financial Statements and IFRS Practice Statement 2: Disclosure of Accounting Policies	1 January 2023 (still to be endorsed by the EU)
February 2021	Amendments to IAS 8 Accounting Policies, Changes in Accounting Estimates and Errors: Definition of Accounting Estimates	1 January 2023 (still to be endorsed by the EU)
May 2021	Amendments to IAS 12 Income Taxes: Deferred Tax related to Assets and Liabilities arising from a Single Transaction	1 January 2023 (still to be endorsed by the EU)

3. Accounting policies

Change in accounting policies

In the fourth quarter of 2020 Hannover Re wrote a portfolio of life insurance policies through its Australian subsidiary. The mediation and administration of the policies as well as sales and marketing of new business in this connection are handled by a specialised company. Payment of a commission for the mediation of existing and future policies was agreed based on the projected experience of this portfolio. With a view to enabling other interested investors – along with Hannover Re – to participate in the opportunities and risks associated with the future development of the portfolio, the commission payment was financed through the involvement of a cell of a segregated accounts company, which issued suitably structured securities. Some of these securities were taken up by Hannover Rück SE.

In the 2020 consolidated financial statement the portfolio of life insurance portfolios, on the one hand, and the securities taken up, on the other, were presented separately in accordance with the provisions of IFRS 4 and IAS 39.

After fresh, in-depth analysis of the contractual details of the transaction, however, we consider a combined view of the components of the transaction from the perspective of the Hannover Re Group as unified reporting subject matter to be a more appropriate presentation for providing reliable and relevant information with respect to the financial implications of the transaction.

In accordance with this perspective, the transaction is equivalent overall to an insurance contract in its economic effect and with its payment flows. The commission payment is therefore capitalised under the balance sheet item "Deferred acquisition costs" and amortised in line with the business experience.

In view of this change in the presentation of the transaction, the comparative figures for previous periods were restated. The effects of this change on the individual items of the consolidated balance sheet and the consolidated statement of income are shown in the following table. There were no implications for Group net income.

Restatements pursuant to IAS 8 N 07

in EUR thousand	31.12.2020
Consolidated balance sheet	
Fixed-income securities – loans and receivables	(219.306)
Deferred acquisition costs	216.046
Other assets	966
Other liabilities	(2.294)

in EUR thousand	1.1.2020 – 31.12.2020
Consolidated statement of income	
Gross written premium	4.880
Ordinary investment income	(2.655)
Commission and brokerage, change in deferred acquisition costs	(2.225)
Group net income	–

3.1 Summary of major accounting policies

Reinsurance contracts: 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.

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 amendments to IFRS 17 published in June 2019 and June 2020, the IASB ultimately proposed a deferral of the date of initial application to 1 January 2023 as well as further content-related amendments to the standard.

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 N 08

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		
Forward exchange transactions, foreign exchange swaps, non-deliverable 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
Cross-currency swaps	Yield curve, currency spot rates	Present value method
Total return swaps	Listing of underlying, 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 in the case of 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 approximation 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 allocated 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 3.2 "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 (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 09

	31.12.2021	31.12.2020	2021	2020
1 EUR corresponds to:	Mean rate of exchange on the balance sheet date		Average rate of exchange	
AUD	1.5596	1.6030	1.5800	1.6533
BHD	0.4277	0.4634	0.4469	0.4320
CAD	1.4491	1.5704	1.4882	1.5326
CNY	7.2297	8.0199	7.6408	7.8887
GBP	0.8393	0.9041	0.8617	0.8869
HKD	8.8474	9.5286	9.2128	8.8827
INR	84.3918	90.1030	87.5195	84.5591
KRW	1,348.4900	1,335.8500	1,352.9939	1,346.0585
MYR	4.7381	4.9613	4.8966	4.7958
SEK	10.2351	10.0560	10.1461	10.4782
USD	1.1344	1.2291	1.1853	1.1449
ZAR	18.0275	18.0114	17.6160	18.6678

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 applicable 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.

3.2 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.

Risks connected with the impacts of climate change are of great significance to a reinsurance company's business model. The estimation of occurrence probabilities and loss amounts for climate-related storms, floods or droughts is a major integral component of our risk management system. It exerts a considerable influence on our underwriting policy for catastrophe-exposed risks and requires appropriate risk capital to be kept available. Physical risks such as extreme weather events and their consequences as well as long-term changes in climatic and environmental conditions, such as precipitation amounts, the rise in sea levels or the increase in average temperatures, can also affect the value of our real estate holdings or the measurement of securities in our investment portfolio.

Along with the influence of these physical risks, the measurement of our investment portfolio is also subject to transition risks as a consequence of climate change. Transition risks refer to those risks connected with the effects of climate change that result from the shift towards a low-carbon economy. This transition is initiated and supported by political regulatory policies. Insofar as such regulatory measures negatively affect, for example, issuers of shares or corporate bonds in our asset portfolio, there are corresponding implications for the measurement of these instruments.

All in all, the evaluation of climate risks is considered inter alia in the context of the impairment test for non-financial assets, including goodwill pursuant to IAS 36, in the determination of the useful life and residual value of assets pursuant to IAS 16 or IAS 38 as well as in the establishment of provisions and the disclosure of contingent liabilities pursuant to IAS 37 and IFRS 4.

Estimates and assumptions are also significant in connection with the ongoing Covid-19 pandemic. 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.

The Covid-19 pandemic heavily influenced the entire global economy in the year under review and hence also had implications for Hannover Re's consolidated financial statement. Against the backdrop of the pandemic, the critical issues in the areas of investments, goodwill impairment and reinsurance obligations, in particular, were subjected to closer analysis. For further information we would refer to our explanatory remarks in section 6.5 "Goodwill", 7.2 "Investment income" and 7.3 "Reinsurance result".

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 98 et seq. of the management report – 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 3.1 "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 3.1 "Summary of major accounting policies" and on the liability adequacy test 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 3.1 "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 3.1 "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 and Joint Ventures”, 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 the subsection “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 3 (2) individual companies were not included at equity in the consolidated financial statement for the same reason. The business object of these altogether 15 (14) 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 10**

Number of companies	2021	2020
Consolidated companies (Group companies)		
Germany	11	11
Abroad	104	102
Total	**115**	**113**
Companies included at equity		
Germany	2	3
Abroad	4	6
Total	**6**	**9**

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 information is the list of shareholdings in accordance with § 313 Para. 2 German Commercial Code (HGB). We make use of the exemptions pursuant to § 313 Para. 3 German Commercial Code (HGB). The stipulations of IFRS 12.10 and IFRS 12.21 have also been observed. With regard to the major acquisitions and disposals in the year under review, please see our remarks in the following subsections of this section.

List of shareholdings **N 11**

Name and registered office of the company	Proportionally calculated participation in %
Domestic companies	
Affiliated consolidated companies	
Hannover Rück Beteiligung Verwaltungs-GmbH, Hannover/Germany	100.00
FUNIS GmbH & Co. KG, Hannover/Germany	100.00
Hannover America Private Equity Partners II GmbH & Co. KG, Hannover/Germany	95.42
HAPEP II Holding GmbH, Hannover/Germany	95.42
Hannover Re Global Alternatives GmbH & Co. KG, Hannover/Germany	94.72
Hannover Re Euro PE Holdings GmbH & Co. KG, Hannover/Germany	91.20
Hannover Re Euro RE Holdings GmbH, Hannover/Germany	87.68
HR GLL Central Europe GmbH & Co. KG, Munich/Germany	87.67
HR GLL Central Europe Holding GmbH, Munich/Germany	87.67
HAPEP II Komplementär GmbH, Hannover/Germany	82.40
E+S Rückversicherung AG, Hannover/Germany	64.79
Affiliated non-consolidated companies	
HILSP Komplementär GmbH, Hannover/Germany	100.00
Associated companies	
WeHaCo Unternehmensbeteiligungs-GmbH, Hannover/Germany	32.96
HANNOVER Finanz GmbH, Hannover/Germany	27.78
Other participations	
myKonzept Holding Deutschland GmbH & Co. KG AG, Göttingen/Germany	15.00
Neue SEBA Beteiligungsgesellschaft mbH, Nürnberg/Germany	12.07
Internationale Schule Hannover Region GmbH, Hannover/Germany	9.17
FinLeap GmbH, Berlin/Germany	8.41
ELEMENT Insurance AG, Berlin/Germany	6.08

Name and registered office of the company	Proportionally calculated participation in %
Foreign companies	
Affiliated consolidated companies	
Hannover Finance (Luxembourg) S.A., Leudelange/Luxembourg	100.00
Hannover Finance (UK) Limited, London/United Kingdom	100.00
Hannover Re Holdings (UK) Ltd., London/United Kingdom	100.00
Hannover Life Reassurance Company of America, Orlando/USA	100.00
Hannover Life Reassurance Company of America (Bermuda) Ltd., Hamilton/Bermuda	100.00
Hannover Re (Ireland) Designated Activity Company, Dublin/Ireland	100.00
Hannover Life Re of Australasia Ltd, Sydney/Australia	100.00
Hannover Re (Bermuda) Ltd., Hamilton/Bermuda	100.00
Hannover ReTakaful B.S.C. (c), Manama/Bahrain	100.00
Hannover Services (UK) Limited, London/United Kingdom	100.00
Inter Hannover (No. 1) Limited, London/United Kingdom	100.00
Integra Insurance Solutions Limited, Bradford/United Kingdom	100.00
Argenta Holdings Limited, London/United Kingdom	100.00
Argenta Private Capital Limited, London/United Kingdom	100.00
APCL Corporate Director No.1 Limited, London/United Kingdom	100.00
APCL Corporate Director No.2 Limited, London/United Kingdom	100.00
Fountain Continuity Limited, Edinburgh/United Kingdom	100.00
Names Taxation Service Limited, London/United Kingdom	100.00
Argenta Secretariat Limited, London/United Kingdom	100.00
Argenta Continuity Limited, London/United Kingdom	100.00
Argenta General Partner Limited, Edinburgh/United Kingdom	100.00

Name and registered office of the company	Proportionally calculated participation in %
Argenta General Partner II Limited, Edinburgh/United Kingdom	100.00
Argenta LLP Services Limited, London/United Kingdom	100.00
Argenta SLP Continuity Limited, Edinburgh/United Kingdom	100.00
Argenta Syndicate Management Limited, London/United Kingdom	100.00
Argenta Tax & Corporate Services Limited, London/United Kingdom	100.00
Argenta Underwriting No.1 Limited, London/United Kingdom	100.00
Argenta Underwriting No.2 Limited, London/United Kingdom	100.00
Argenta Underwriting No.3 Limited, London/United Kingdom	100.00
Argenta Underwriting No.4 Limited, London/United Kingdom	100.00
Argenta Underwriting No.7 Limited, London/United Kingdom	100.00
Argenta Underwriting No.9 Limited, London/United Kingdom	100.00
Argenta Underwriting No.10 Limited, London/United Kingdom	100.00
Argenta Underwriting No.11 Limited, London/United Kingdom	100.00
Residual Services Limited[1], London/United Kingdom	100.00
Residual Services Corporate Director Limited, London/United Kingdom	100.00
Argenta Underwriting Asia Pte. Ltd., Singapore/Singapore	100.00
Argenta Underwriting Labuan Ltd[2], Labuan/Malaysia	100.00
Glencar Underwriting Managers, Inc., Chicago/USA	100.00
Glencar Insurance Company, Orlando/USA	100.00
Kubera Insurance (SAC) Ltd, Hamilton/Bermuda	100.00
Leine Investment General Partner S.à r.l., Luxembourg/Luxembourg	100.00
Leine Investment SICAV-SIF, Luxembourg/Luxembourg	100.00
LI RE, Hamilton/Bermuda	100.00
Fracom FCP[3], Paris/Frannce	100.00
Hannover Finance, Inc., Wilmington/USA	100.00
Sand Lake Re, Inc., Burlington/USA	100.00
Hannover Reinsurance Group Africa (Pty) Ltd., Johannesburg/South Africa	100.00
Hannover Re South Africa Limited, Johannesburg/South Africa	100.00

Name and registered office of the company	Proportionally calculated participation in %
Hannover Africa Limited, Johannesburg/South Africa	100.00
Compass Insurance Company Limited, Johannesburg/South Africa	100.00
Annuity Reinsurance Cell A1, Hamilton/Bermuda	100.00
Hannover Re Real Estate Holdings, Inc., Orlando/USA	95.25
HR US Infra Equity LP, Wilmington/USA	95.24
320AUS LLC, Wilmington/USA	95.15
GLL HRE CORE Properties, L.P., Wilmington/USA	95.15
101BOS LLC, Wilmington/USA	95.15
402 Santa Monica Blvd, LLC, Wilmington/USA	95.15
111ORD LLC, Wilmington/USA	95.15
140EWR LLC, Wilmington/USA	95.15
7550IAD LLC, Wilmington/USA	95.15
Nashville West, LLC, Wilmington/USA	95.15
590ATL LLC, Wilmington/USA	95.15
975 Carroll Square, LLC, Wilmington/USA	95.15
Broadway 101, LLC, Wilmington/USA	95.15
River Terrace Parking, LLC, Wilmington/USA	95.15
3290ATL LLC, Wilmington/USA	95.15
1600FLL LLC, Wilmington/USA	95.15
2530AUS LLC, Wilmington/USA	95.15
7550BWI LLC, Wilmington/USA	95.15
7659BWI LLC, Wilmington/USA	95.15
7653BWI LLC, Wilmington/USA	95.15
M8 Property Trust, Sydney/Australia	94.72
Markham Real Estate Partners (KSW) Pty Limited, Sydney/Australia	94.72
PAG Real Estate Asia Select Fund Limited, George Town/Cayman Islands	94.72
Ubitech Hub Pte. Ltd., Singapore/Singapore	94.72
ASF Spectrum Limited, George Town/Cayman Islands	94.72

Name and registered office of the company	Proportionally calculated participation in %
HR US Infra Debt LP, George Town/Cayman Islands	94.71
Orion No.1 Professional Investors Private Real Estate Investment LLC, Seoul/South Korea	94.39
Peace G.K., Tokyo/Japan	93.77
Morea Limited Liability Company, Tokyo/Japan	93.77
Rocky G.K., Tokyo/Japan	93.77
Kaith Re Ltd., Hamilton/Bermuda	90.40
Highgate sp. z o.o., Warsaw/Poland	87.67
3541 PRG s.r.o., Prague/Czech Republic	87.67
HR GLL Roosevelt Kft, Budapest/Hungary	87.67
HR GLL Liberty Corner SPÓŁKA Z OGRANICZONĄ ODPOWIEDZIALNOŚCIĄ, Warsaw/Poland	87.67
HR GLL Griffin House SPÓŁKA Z OGRANICZONĄ ODPOWIEDZIALNOŚCIĄ, Warsaw/Poland	87.67
92601 BTS s.r.o., Bratislava/Slovakia	87.67
Akvamarín Beta s.r.o., Prague/Czech Republic	87.67
HR GLL Europe Holding S.à r.l., Luxembourg/Luxembourg	87.67
HR GLL CDG Plaza S.r.l., Bucharest/Romania	87.67
Commercial & Industrial Acceptances (Pty) Ltd., Johannesburg/South Africa	74.80
Lireas Holdings (Pty) Ltd., Johannesburg/South Africa	70.00
SUM Holdings (Pty) Ltd., Johannesburg/South Africa	70.00
Firedart Engineering Underwriting Managers (Pty) Ltd., Johannesburg/South Africa	70.00
Film & Entertainment Underwriters SA (Pty) Ltd., Johannesburg/South Africa	68.18
Transit Underwriting Managers (Pty) Ltd., Durban/South Africa	63.00
Garagesure Consultants and Acceptances (Pty) Ltd., Johannesburg/South Africa	63.00
MUA Insurance Acceptances (Pty) Ltd., Cape Town/South Africa	59.50
Hospitality Industrial and Commercial Underwriting Managers (Pty) Ltd., Johannesburg/South Africa	59.50
Thatch Risk Acceptances (Pty) Ltd., Johannesburg/South Africa	49.00
Landmark Underwriting Agency (Pty) Ltd., Bloemfontein/South Africa	45.85
Real Assist (Pty) Ltd., Pretoria/South Africa	38.15
Affiliated non-consolidated companies	
HR Hannover Re, Correduría de Reaseguros, S.A., Madrid/Spain	100.00
Hannover Re Services Japan, Tokyo/Japan	100.00
Hannover Re Consulting Services India Private Limited, Mumbai/India	100.00
Hannover Services (México) S.A. de C.V., Mexico City/Mexico	100.00
Hannover Re Services USA, Inc., Itasca/USA	100.00
Hannover Mining Engineering Services LLC, Itasca/USA	100.00
Hannover Rück SE Escritório de Representação no Brasil Ltda., Rio de Janeiro/Brasil	100.00
Hannover Re Risk Management Services India Private Limited, New Delhi/India	100.00
Dynastic Underwriting Limited, London/United Kingdom	100.00
Bristol Re Ltd., Hamilton/Bermuda	100.00
Hannover Re Services Italy S.r.l., Milan/Italia	99.65
Associated companies	
Monument Insurance Group Limited[4], Hamilton/Bermuda	20.00
Monument Midco Limited[4], Hamilton/Bermuda	24.35
Investsure Technologies Proprietary Limited, Johannesburg/South Africa	26.35
Clarendon Transport Underwriting Managers (Pty) Ltd., Johannesburg/South Africa	22.87
Inqaku FC (Pty) Ltd, Port Elizabeth/South Africa	14.72
Other participations	
Reaseguradora del Ecuador S.A., Guayaquil/Equador	30.00
Trinity Underwriting Managers Ltd., Toronto/Canada	20.37
Kopano Ventures (Pty) Ltd[2, 5], Johannesburg/South Africa	20.34
Meribel Mottaret Limited, St. Helier/Jersey	18.96
SWISS INSUREVOLUTION PARTNERS Holding (FL) AG, Triesen/Liechtenstein	15.00
SWISS INSUREVOLUTION PARTNERS Holding (CH) AG, Freienbach/Switzerland	15.00

Name and registered office of the company	Proportionally calculated participation in %
Mosaic Insurance Holdings Limited, Hamilton/Bermuda	15.00
Somerset Reinsurance Ltd., Hamilton/Bermuda	11.70
Pineapple Tech (Pty) Ltd, Johannesburg/South Africa	10.28
Sureify Labs, Inc., Wilmington/USA	10.03
Acte Vie S.A., Schiltigheim/France	9.38
Different Technology (Pty) Ltd, Johannesburg/South Africa	8.61
Centaur Animal Health, Inc., Olathe/USA	6.90
The Sociotech Institute Proprietary Limited, Cape Town/South Africa	6.56
Liberty Life Insurance Public Company Ltd, Nicosia/Cyprus	3.30
LifeQ Global Limited, Dublin/Ireland	1.71
B3i Services AG, Zurich/Switzerland	1.46

[1] The company holds 45 subsidiaries with capital and reserves of altogether EUR 0.7 million.
[2] The company is inactive.
[3] Investment fund
[4] The company is included in measurement at equity through a consolidated financial statement.
[5] The company is in liquidation.

Material branches within the Group

Hannover Rück SE maintains branches that are listed below according to the amount of gross written premium in the current financial year.

Material branches within the Group **N 12**

Group Company/Branch	Gross written premium[1]		Net income[1]	
Figures in EUR thousand	2021	2020	2021	2020
Hannover Rück SE				
Hannover Rück SE Shanghai Branch, Shanghai/China	2,024,182	2,186,683	22,122	(13,535)
Hannover Rueck SE Malaysian Branch, Kuala Lumpur/Malaysia	941,784	606,071	(38,410)	38,612
Hannover Rück SE Succursale Francaise, Paris/France	874,728	934,771	32,658	(6,621)
Hannover Rueck SE Australian Branch, Sydney/Australia	649,229	540,523	5,563	9,886
Hannover Rück SE Canadian Branch, Toronto/Canada	551,028	433,932	65,541	(1,194)
Hannover Rück SE, Tyskland Filial, Stockholm/Sweden	430,680	400,662	36,072	7,604
Hannover Re UK Life Branch, London/United Kingdom	353,285	288,609	(35,657)	15,568
Hannover Rück SE, Hong Kong Branch, Wanchai/Hongkong	265,118	292,796	(24,918)	862
Hannover Rück SE – India Branch, Mumbai/India	199,076	125,322	13,398	5,669
Hannover Rueck SE Bahrain Branch, Manama/Bahrain	124,701	137,951	15,651	(29,911)
Hannover Rück SE Korea Branch, Seoul/South Korea	46,936	47,634	1,368	2,586

[1] IFRS figures before consolidation.

In addition, other companies belonging to the Hannover Re Group maintain further branches that both individually and collectively are to be classified as immaterial to the Group.

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;
- 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.

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.

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 4,587.4 million (EUR 3,799.9 million) as at the balance sheet date. The maximum risk of loss corresponds to the book values.

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 77.5 million (EUR 100.5 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 398.5 million (EUR 432.3 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 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 4,730.9 million (EUR 4,063.4 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 4,550.0 million (EUR 3,919.9 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 the uncollateralised exposure limit amounted to EUR 1,174.1 million (EUR 1,365.6 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 38.4 million (EUR 35.9 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 13**

	31.12.2021		
in EUR thousand	General investing activities	Investment in catastrophe bonds (ILS)	Retrocession incl. securitisations and ILS transactions
Assets			
Fixed-income securities – held to maturity	346	–	–
Fixed-income securities – loans and receivables	438	–	–
Fixed-income securities – available for sale	2,020,491	–	–
Fixed-income securities – at fair value through profit or loss	–	77,518	–
Equity securities – available for sale	314,453	–	–
Real estate and real estate funds	525,148	–	–
Other invested assets	1,726,487	–	–
Contract deposits	–	–	212
Reinsurance recoverables on unpaid claims	–	–	1,230,181
Prepaid reinsurance premium	–	–	76,735
Deferred acquisition costs	–	–	209,570
Accounts receivable	–	–	285,581
Total assets	**4,587,363**	**77,518**	**1,802,279**
Liabilities			
Reinsurance payable	–	–	782,835
Total liabilities	**–**	**–**	**782,835**

Book values from business relations with unconsolidated structured entities N 14

in EUR thousand	31.12.2020 General investing activities	Investment in catastrophe bonds (ILS)	Retrocession incl. securitisations and ILS transactions[1]
Assets			
Fixed-income securities – held to maturity	600	–	–
Fixed-income securities – loans and receivables	1,060	–	–
Fixed-income securities – available for sale	1,784,580	–	–
Fixed-income securities – at fair value through profit or loss	–	100,488	–
Equity securities – available for sale	377,799	–	–
Real estate and real estate funds	403,740	–	–
Other invested assets	1,232,162	–	–
Contract deposits	–	–	5,545
Reinsurance recoverables on unpaid claims	–	–	842,277
Prepaid reinsurance premium	–	–	74,090
Deferred acquisition costs	–	–	217,012
Accounts receivable	–	–	126,630
Total assets	**3,799,941**	**100,488**	**1,265,554**
Liabilities			
Reinsurance payable	–	–	552,360
Total liabilities	**–**	**–**	**552,360**

[1] Restated pursuant to IAS 8

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 September 2020 Kubera Insurance (SAC) Ltd established a segregated account that gathered investor capital by means of issued bonds which was made available to an Australian intermediary of insurance business under a swap agreement for the financing of the latter's business. Repayment of the bonds is contingent on the development of the intermediary's business. Hannover Rück SE is an investor in the bond along with other external parties. The segregated account can be used flexibly for additional rounds of financing. Hannover Re is not the owner of the segregated account.

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., Orlando/USA, the special purpose property company 7653BWI LLC established in the third quarter of 2021 for the purpose of real estate acquisition by the subsidiary GLL HRE Core Properties, LP, both Wilmington/USA, was consolidated for the first time. A property was placed with the new company.

In the third quarter of 2021 Hannover Re participated in the newly established special purpose property company Rocky G.K., Tokyo/Japan, with a share of 99% through its 94.7%-owned subsidiary PAG Real Estate Asia Select Fund Limited, George Town/Cayman Islands. The company acquired a logistics property. In the third quarter PAG also established the holding company ASF Spectrum Limited, George Town/Cayman Islands, which acquired all shares in the special purpose property company Ubitech Hub Pte. Ltd., Singapore/Singapore. The acquired company holds an office building. A total amount of roughly EUR 245.3 million was invested.

In the fourth quarter Hannover Re gained control over Annuity Reinsurance Cell A1 through its wholly owned subsidiary Hannover Life Reassurance Company of America (Bermuda) Ltd., both Hamilton/Bermuda (ARCA1), because 100% of the voting shares were acquired. ARCA1 is a segregated account of Kubera Insurance (SAC) Ltd, Hamilton/Bermuda. The purpose of the cell is to assume reinsurance portfolios and perform transformation services for the capital market.

4.4 Major disposals and retirements

With economic effect from 31 December 2021 Hannover Re sold the entire 49.8% interest that it held in HDI Global Specialty SE, Hannover, for a price of EUR 159 million to HDI Global Specialty Holding GmbH, Hannover. The purchase price was paid in January 2022. Deconsolidation of the company previously recognised at equity gave rise to income of EUR 9.9 million, which was recognised under profit or loss from investments in associated companies. This includes cumulative other comprehensive income of EUR -0.9 million, which was realised. In addition, actuarial gains and losses of EUR -0.3 million were recognised directly in equity.

5. Segment reporting

Based on the "management approach" of IFRS 8, which requires segment information to be presented as it is re ported 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 26 of the management report. The report on economic position on page 31 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.

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.

The acquisitions of real estate companies referred to in the subsection on major acquisitions and new formations are allocated to the property and casualty reinsurance segment. The same is true of the shares in HDI Global Specialty Holding GmbH, Hannover, which have now been sold.

The business activity of Annuity Reinsurance Cell A1, Hamilton / Bermuda, which was consolidated for the first time in the reporting period, is allocable to the life and health reinsurance segment.

Consolidated segment report

Segmentation of assets

in EUR thousand	Property and casualty reinsurance 31.12.2021	31.12.2020[1]
Assets		
Fixed-income securities – held to maturity	48,286	139,867
Fixed-income securities – loans and receivables	1,954,457	1,998,611
Fixed-income securities – available for sale	34,837,639	29,422,685
Equity securities – available for sale	314,453	378,422
Financial assets at fair value through profit or loss	87,403	110,304
Other invested assets	5,050,754	4,384,139
Short-term investments	379,437	244,474
Cash	907,873	901,989
Total investments and cash under own management	**43,580,302**	**37,580,491**
Funds withheld	3,247,068	2,569,420
Contract deposits	3,290	5,404
Total investments	**46,830,660**	**40,155,315**
Reinsurance recoverables on unpaid claims	2,527,916	1,730,507
Reinsurance recoverables on benefit reserve	–	–
Prepaid reinsurance premium	204,456	165,834
Reinsurance recoverables on other reserves	1,446	562
Deferred acquisition costs	1,474,442	1,169,521
Accounts receivable	5,637,585	4,155,372
Other assets in the segment	3,157,485	2,788,243
Total assets	**59,833,990**	**50,165,354**

Segmentation of liabilities

in EUR thousand		
Liabilities		
Loss and loss adjustment expense reserve	35,089,423	29,194,354
Benefit reserve	–	–
Unearned premium reserve	5,795,849	4,709,229
Provisions for contingent commissions	513,280	395,296
Funds withheld	383,106	342,420
Contract deposits	28,221	80,369
Reinsurance payable	1,630,320	1,157,650
Financing liabilities	590,751	420,348
Other liabilities in the segment	2,587,905	2,478,161
Total liabilities	**46,618,855**	**38,777,827**

[1] Restated pursuant to IAS 8

N 15

Life and health reinsurance		Consolidation		Total	
31.12.2021	31.12.2020[1]	31.12.2021	31.12.2020[1]	31.12.2021	31.12.2020[1]
346	45,710	–	–	48,632	185,577
474,123	299,180	15,049	15,049	2,443,629	2,312,840
10,620,228	9,429,038	15,810	–	45,473,677	38,851,723
–	–	–	–	314,453	378,422
242,138	230,096	–	–	329,541	340,400
753,655	920,960	–	22,068	5,804,409	5,327,167
62,923	82,221	1,433	731	443,793	327,426
434,657	371,972	12,584	4,110	1,355,114	1,278,071
12,588,070	**11,379,177**	**44,876**	**41,958**	**56,213,248**	**49,001,626**
7,556,003	7,090,387	–	–	10,803,071	9,659,807
500,122	292,940	–	–	503,412	298,344
20,644,195	**18,762,504**	**44,876**	**41,958**	**67,519,731**	**58,959,777**
146,191	152,763	–	–	2,674,107	1,883,270
192,039	192,135	–	–	192,039	192,135
141	82	–	–	204,597	165,916
1,257	544	–	–	2,703	1,106
1,876,191	1,903,596	–	–	3,350,633	3,073,117
1,570,165	1,450,628	–	(197)	7,207,750	5,605,803
526,930	470,282	(1,933,723)	(1,702,174)	1,750,692	1,556,351
24,957,109	**22,932,534**	**(1,888,847)**	**(1,660,413)**	**82,902,252**	**71,437,475**

5,688,280	4,734,876	–	–	40,777,703	33,929,230
7,541,881	7,217,988	–	–	7,541,881	7,217,988
400,112	360,780	–	–	6,195,961	5,070,009
328,311	306,281	–	–	841,591	701,577
249,089	239,896	–	–	632,195	582,316
3,558,519	3,175,084	–	–	3,586,740	3,255,453
750,361	620,111	–	–	2,380,681	1,777,761
37,787	35,010	3,741,717	2,975,918	4,370,255	3,431,276
3,188,682	2,863,934	(1,957,573)	(1,709,646)	3,819,014	3,632,449
21,743,022	**19,553,960**	**1,784,144**	**1,266,272**	**70,146,021**	**59,598,059**

Consolidated segment report

Segment statement of income	**Property and casualty reinsurance**	
in EUR thousand	**1.1.–31.12.2021**	1.1.–31.12.2020[1]
Gross written premium	19,224,174	16,744,058
Net premium earned	16,623,863	14,205,380
Net investment income	1,343,056	987,489
thereof		
Change in fair value of financial instruments	2,279	964
Total depreciation, impairments and appreciation of investments	87,634	127,600
Income/expense on funds withheld and contract deposits	48,527	50,452
Claims and claims expenses	11,514,353	10,344,343
Change in benefit reserve	–	–
Commission and brokerage, change in deferred acquisition costs and other technical income/expenses	4,529,517	3,911,440
Administrative expenses	245,050	223,557
Other income and expenses	(165,713)	109,495
Operating profit/loss (EBIT)	**1,512,286**	**823,024**
Financing costs	2,082	2,096
Net income before taxes	**1,510,204**	**820,928**
Taxes	359,911	172,223
Net income	**1,150,293**	**648,705**
thereof		
Non-controlling interest in profit or loss	67,848	33,927
Group net income	**1,082,445**	**614,778**

[1] Restated pursuant to IAS 8

N 15

Life and health reinsurance		Consolidation		Total	
1.1.–31.12.2021	1.1.–31.12.2020 [1]	1.1.–31.12.2021	1.1.–31.12.2020	1.1.–31.12.2021	1.1.–31.12.2020 [1]
8,538,140	8,026,284	–	–	27,762,314	24,770,342
7,519,457	7,155,189	332	226	24,143,652	21,360,795
598,759	695,260	1,197	2,719	1,943,012	1,685,468
33,835	63,007	–	–	36,114	63,971
31	1,793	–	–	87,665	129,393
219,723	171,313	–	–	268,250	221,765
7,103,372	6,438,315	–	–	18,617,725	16,782,658
(298,645)	(103,487)	–	–	(298,645)	(103,487)
1,263,718	1,204,764	–	–	5,793,235	5,116,204
265,243	254,107	414	518	510,707	478,182
438,729	336,267	(1,831)	(4,393)	271,185	441,369
223,257	**393,017**	**(716)**	**(1,966)**	**1,734,827**	**1,214,075**
1,501	1,512	79,454	86,596	83,037	90,204
221,756	**391,505**	**(80,170)**	**(88,562)**	**1,651,790**	**1,123,871**
24,107	60,842	(32,449)	(27,979)	351,569	205,086
197,649	**330,663**	**(47,721)**	**(60,583)**	**1,300,221**	**918,785**
1,039	1,785	–	–	68,887	35,712
196,610	**328,878**	**(47,721)**	**(60,583)**	**1,231,334**	**883,073**

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 are determined by the investment intent and comply 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 16

in EUR thousand	2021	2020[1]
Regional origin		
Germany	7,520,389	8,206,449
United Kingdom	3,525,675	3,673,652
France	2,113,298	1,439,647
Other	7,888,908	6,814,913
Europe	**21,048,270**	**20,134,661**
USA	19,839,869	15,621,305
Other	2,891,774	2,364,724
North America	**22,731,643**	**17,986,029**
Asia	6,301,135	5,044,810
Australia	3,156,317	2,982,749
Australasia	**9,457,452**	**8,027,559**
Africa	359,741	335,887
Other	2,616,142	2,517,490
Total	**56,213,248**	**49,001,626**

[1] Restated pursuant to IAS 8

Maturities of the fixed-income and variable-yield securities N 17

in EUR thousand	2021 Amortised cost[1]	2021 Fair value	2020 Amortised cost[1, 3]	2020 Fair value[3]
Held to maturity				
due in one year	–	–	136,693	139,574
due after one through two years	48,287	50,020	–	–
due after two through three years	–	–	48,284	51,684
due after three through four years	–	–	–	–
due after four through five years	–	–	–	–
due after five through ten years	–	–	–	–
due after more than ten years	345	128	600	217
Total	**48,632**	**50,148**	**185,577**	**191,475**
Loans and receivables				
due in one year	195,267	198,864	273,701	277,587
due after one through two years	654,345	668,913	191,024	200,587
due after two through three years	348,624	355,108	597,031	613,668
due after three through four years	136,589	147,510	92,742	99,564
due after four through five years	404,066	453,370	136,620	152,813
due after five through ten years	286,294	315,823	674,921	778,086
due after more than ten years	418,444	450,179	346,801	395,661
Total	**2,443,629**	**2,589,767**	**2,312,840**	**2,517,966**
Available for sale				
due in one year[2]	5,364,684	5,385,051	4,304,412	4,318,468
due after one through two years	3,561,972	3,597,590	3,278,457	3,359,359
due after two through three years	3,545,176	3,604,426	3,294,465	3,413,253
due after three through four years	3,318,090	3,368,832	2,919,887	3,077,189
due after four through five years	5,197,728	5,393,570	3,347,071	3,485,182
due after five through ten years	15,819,565	16,239,970	14,567,732	15,567,648
due after more than ten years	9,166,253	9,683,145	6,397,959	7,236,121
Total	**45,973,468**	**47,272,584**	**38,109,983**	**40,457,220**
Financial assets at fair value through profit or loss				
due in one year	8,882	8,882	29,009	29,009
due after one through two years	25,999	25,999	28,145	28,145
due after two through three years	37,144	37,144	31,446	31,446
due after three through four years	3,505	3,505	9,122	9,122
due after four through five years	–	–	3,757	3,757
due after five through ten years	4,606	4,606	4,232	4,232
due after more than ten years	1,172	1,172	–	–
Total	**81,308**	**81,308**	**105,711**	**105,711**

[1] Including accrued interest
[2] Including short-term investments, cash and cash equivalents
[3] Restated pursuant to IAS 8

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 18**

in EUR thousand	2021				
	Amortised cost including accrued interest	thereof accrued interest	Unrealised gains	Unrealised losses	Fair value
Investments held to maturity					
Fixed-income securities					
Corporate securities	48,287	1,292	1,733	–	50,020
Covered bonds/asset-backed securities	345	1	–	217	128
Total	**48,632**	**1,293**	**1,733**	**217**	**50,148**

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 19**

in EUR thousand	2020				
	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	23,260	130	554	–	23,814
Corporate securities	48,285	1,292	3,400	–	51,685
Covered bonds/asset-backed securities	114,032	2,627	2,327	383	115,976
Total	**185,577**	**4,049**	**6,281**	**383**	**191,475**

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 20**

in EUR thousand	2021				
	Amortised cost including accrued interest	thereof accrued interest	Unrealised gains	Unrealised losses	Fair value
Loans and receivables					
Debt securities issued by semi-governmental entities	846,636	12,514	80,541	–	927,177
Corporate securities	1,219,874	35,135	26,286	1,325	1,244,835
Covered bonds/asset-backed securities	370,427	6,337	41,646	1,010	411,063
Other	6,692	78	–	–	6,692
Total	**2,443,629**	**54,064**	**148,473**	**2,335**	**2,589,767**

Amortised cost, unrealised gains and losses and accrued interest on loans and receivables as well as their fair value **N 21**

in EUR thousand	2020				
	Amortised cost including accrued interest	thereof accrued interest	Unrealised gains	Unrealised losses	Fair value
Loans and receivables					
Debt securities issued by semi-governmental entities	1,117,235	17,285	124,022	–	1,241,257
Corporate securities [1]	817,108	11,836	24,756	2,312	839,552
Covered bonds/asset-backed securities	378,497	6,399	58,660	–	437,157
Total	**2,312,840**	**35,520**	**207,438**	**2,312**	**2,517,966**

1 Restated pursuant to IAS 8

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 22**

in EUR thousand	2021				
	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	5,221,089	19,591	341,147	23,036	5,539,200
US Treasury notes	9,198,765	29,293	380,096	11,937	9,566,924
Other foreign government debt securities	4,063,095	29,735	109,036	28,855	4,143,276
Debt securities issued by semi-governmental entities	6,707,198	56,544	238,642	43,138	6,902,702
Corporate securities	15,822,175	140,205	436,579	145,887	16,112,867
Covered bonds/asset-backed securities	3,011,312	20,188	56,351	17,154	3,050,509
Investment funds	150,968	–	9,107	1,876	158,199
	44,174,602	**295,556**	**1,570,958**	**271,883**	**45,473,677**
Equity securities					
Investment funds	183,529	–	130,924	–	314,453
	183,529	**–**	**130,924**	**–**	**314,453**
Short-term investments	443,752	1,375	138	97	443,793
Total	**44,801,883**	**296,931**	**1,702,020**	**271,980**	**46,231,923**

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 23

in EUR thousand	2020				
	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	5,012,966	20,970	380,394	1,540	5,391,820
US Treasury notes	7,260,239	24,856	505,067	11,222	7,754,084
Other foreign government debt securities	3,700,451	31,029	165,774	6,671	3,859,554
Debt securities issued by semi-governmental entities	5,870,954	46,222	400,193	3,523	6,267,624
Corporate securities	12,140,504	116,310	818,711	8,595	12,950,620
Covered bonds / asset-backed securities	2,390,407	18,538	102,621	8,271	2,484,757
Investment funds	128,820	–	14,726	282	143,264
	36,504,341	**257,925**	**2,387,486**	**40,104**	**38,851,723**
Equity securities					
Shares	587	–	36	–	623
Investment funds	267,442	–	110,357	–	377,799
	268,029	**–**	**110,393**	**–**	**378,422**
Short-term investments	327,571	1,655	54	199	327,426
Total	**37,099,941**	**259,580**	**2,497,933**	**40,303**	**39,557,571**

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 24

in EUR thousand	Fair value before accrued interest		Accrued interest		Fair value	
	2021	2020	2021	2020	2021	2020
Financial assets at fair value through profit or loss						
Fixed-income securities						
Corporate securities	80,696	105,007	612	704	81,308	105,711
	80,696	**105,007**	**612**	**704**	**81,308**	**105,711**
Other financial assets						
Derivatives	248,248	234,728	(15)	(39)	248,233	234,689
	248,248	**234,728**	**(15)**	**(39)**	**248,233**	**234,689**
Total	**328,944**	**339,735**	**597**	**665**	**329,541**	**340,400**

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 81.3 million (EUR 105.7 million) as well as derivative financial instruments in an amount of EUR 248.2 million (EUR 234.7 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 25**

	2021		2020	
in EUR thousand	Carrying amount before impairment	Impairment	Carrying amount before impairment	Impairment
Fixed-income securities – held to maturity	48,632	–	185,577	–
Fixed-income securities – loans and receivables[1]	2,443,629	–	2,312,840	–
Fixed-income securities – available for sale	45,473,910	233	38,863,495	11,772
Short-term investments	443,916	123	327,554	128
Equity securities – available for sale	314,453	–	378,422	–
Participating interests and other invested assets, real estate funds	3,780,794	33,249	3,451,555	75,243
Total	**52,505,334**	**33,605**	**45,519,443**	**87,143**

[1] Restated pursuant to IAS 8

For further explanatory remarks on the impairment criteria please see section 3.1 "Summary of major accounting policies".

Rating structure of fixed-income securities **N 26**

	2021								
in EUR thousand	AAA	AA	A	BBB	BB	B	C	Other	Total
Fixed-income securities – held-to-maturity	–	346	48,286	–	–	–	–	–	48,632
Fixed-income securities – loans and receivables	1,175,987	40,638	759,735	244,565	43,430	–	–	179,274	2,443,629
Fixed-income securities – available-for-sale	19,660,717	6,044,440	8,093,145	8,700,797	1,389,160	354,901	23,027	1,207,490	45,473,677
Fixed-income securities – at fair value through profit or loss	–	–	–	–	–	–	–	81,308	81,308
Total fixed-income securities	**20,836,704**	**6,085,424**	**8,901,166**	**8,945,362**	**1,432,590**	**354,901**	**23,027**	**1,468,072**	**48,047,246**

Rating structure of fixed-income securities N 27

in EUR thousand	2020								
	AAA	AA	A	BBB	BB	B	C	Other	Total
Fixed-income securities – held-to-maturity	100,863	36,430	48,284	–	–	–	–	–	185,577
Fixed-income securities – loans and receivables [1]	1,453,828	40,844	432,361	259,619	30,114	–	–	96,074	2,312,840
Fixed-income securities – available-for-sale	17,200,308	5,677,906	6,787,056	7,020,943	1,077,843	297,430	15,340	774,897	38,851,723
Fixed-income securities – at fair value through profit or loss	–	–	–	–	–	–	–	105,711	105,711
Total fixed-income securities	**18,754,999**	**5,755,180**	**7,267,701**	**7,280,562**	**1,107,957**	**297,430**	**15,340**	**976,682**	**41,455,851**

[1] Restated pursuant to IAS 8

The maximum credit risk of the items shown here corresponds to their carrying amounts.

Breakdown of investments by currencies N 28

in EUR thousand	2021								
	AUD	CAD	CNY	EUR	GBP	USD	ZAR	Other	Total
Fixed-income securities – held to maturity	–	–	–	48,286	–	346	–	–	48,632
Fixed-income securities – loans and receivables	29,771	–	753,113	1,417,682	–	243,063	–	–	2,443,629
Fixed-income securities – available-for-sale	3,416,331	1,688,265	1,663,735	12,157,995	3,324,741	20,555,887	334,442	2,332,281	45,473,677
Fixed-income securities – at fair value through profit or loss	–	–	–	–	–	81,308	–	–	81,308
Equity securities – available-for-sale	–	–	–	97,594	7,880	208,979	–	–	314,453
Other financial assets – at fair value through profit or loss	(57,705)	–	–	45,800	161,715	96,990	–	1,433	248,233
Other invested assets	84,894	–	–	2,372,401	1,879	2,909,642	6,548	429,045	5,804,409
Short-term investments, cash	180,001	50,479	139,572	226,890	142,309	761,654	76,483	221,519	1,798,907
Total	**3,653,292**	**1,738,744**	**2,556,420**	**16,366,648**	**3,638,524**	**24,857,869**	**417,473**	**2,984,278**	**56,213,248**

Breakdown of investments by currencies N 29

in EUR thousand	2020								
	AUD	CAD	CNY	EUR	GBP	USD	ZAR	Other	Total
Fixed-income securities – held to maturity	–	–	–	163,071	13,783	8,723	–	–	185,577
Fixed-income securities – loans and receivables[1]	–	–	421,977	1,519,178	5,591	366,094	–	–	2,312,840
Fixed-income securities – available-for-sale	3,176,026	1,374,374	1,374,186	11,054,552	3,141,105	16,273,618	306,424	2,151,438	38,851,723
Fixed-income securities – at fair value through profit or loss	–	–	–	–	–	105,711	–	–	105,711
Equity securities – available-for-sale	–	–	–	120,102	9,697	248,623	–	–	378,422
Other financial assets – at fair value through profit or loss	–	(9,766)	–	10,750	182,598	50,873	–	234	234,689
Other invested assets	81,203	–	–	2,336,290	80,489	2,611,385	6,539	211,261	5,327,167
Short-term investments, cash	138,705	47,047	77,627	104,174	314,490	539,512	98,413	285,529	1,605,497
Total	**3,395,934**	**1,411,655**	**1,873,790**	**15,308,117**	**3,747,753**	**20,204,539**	**411,376**	**2,648,462**	**49,001,626**

[1] Restated pursuant to IAS 8

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,
- 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,
- Inqaku FC (Pty) Ltd, Port Elizabeth, South Africa,
- Investsure Technologies Proprietary Limited, Johannesburg, South Africa,

Information on the percentage share held by the Hannover Re Group in the capital of the associated 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 30

in EUR thousand	2021	2020
Group share of net income from continuing operations	35,743	88,129
Group share of income and expense recognised directly in equity	(482)	(1,942)
Group share of total recognised income and expense	**35,261**	**86,187**

The carrying amount of the investments in associated companies changed as follows in the year under review:

Investments in associated companies N 31

in EUR thousand	2021	2020
Net book value at 31 December of the previous year	**361,617**	**245,478**
Currency translation at 1 January	(2)	(182)
Net book value after currency translation	**361,615**	**245,296**
Additions	75,048	31,334
Disposals	214,154	–
Profit or loss on investments in associated companies	35,743	88,129
Dividend payments	19,682	1,236
Change recognised outside income	(482)	(1,942)
Currency translation at 31 December	22	36
Net book value at 31 December of the year under review	**238,110**	**361,617**

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.

Additions of EUR 73.1 million and disposals of EUR 54.2 million result from a conversion of preference shares in connection with a restructuring measure at Monument Insurance Group Limited, Hamilton, Bermuda. Further disposals are attributable in an amount of EUR 159.0 million to HDI Global Specialty SE, Hannover, Germany (HGS).

The profit or loss on investments in associated companies includes income from deconsolidation of HGS amounting to EUR 9.9 million.

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 11.7 million (EUR 17.7 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 32

in EUR thousand	2021	2020
Gross book value at 31 December of the previous year	1,797,761	1,935,208
Currency translation at 1 January	69,816	(87,574)
Gross book value after currency translation	**1,867,577**	**1,847,634**
Additions	334,889	61,528
Disposals	123,413	107,641
Currency translation at 31 December	3,958	(3,760)
Gross book value at 31 December of the year under review	**2,083,011**	**1,797,761**
Cumulative depreciation at 31 December of the previous year	208,523	185,691
Currency translation at 1 January	10,452	(10,002)
Cumulative depreciation after currency translation	**218,975**	**175,689**
Disposals	10,029	8,099
Depreciation	38,402	36,609
Impairments	16,873	6,069
Appreciation	1,145	–
Currency translation at 31 December	1,181	(1,745)
Cumulative depreciation at 31 December of the year under review	**264,257**	**208,523**
Net book value at 31 December of the previous year	**1,589,238**	**1,749,517**
Net book value at 1 January of the year under review	**1,648,602**	**1,671,945**
Net book value at 31 December of the year under review	**1,818,754**	**1,589,238**

With regard to the right-of-use assets included as part of the accounting of leases, please see section 8.8 “Leases”.

The fair value of investment property excluding capitalised right-of-use assets amounted to EUR 2,266.6 million (EUR 1,897.4 million) as at the balance sheet date.

In terms of diversification across various real estate sectors, the focus is on office buildings (58%), complemented by logistics properties (23%) and retail (17%). In geographical terms, exposures are spread across the United States (38%), Europe (excluding Germany; 18%) as well as Germany (21%) and Asia (23%).

Changes in this item are attributable to investment activities at the relevant real estate companies belonging to the Hannover Re Group.

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 no properties were reclassified to assets held for sale.

In addition, we held indirect real estate investments measured at fair values in an amount of EUR 805.9 million (EUR 582.3 million) in the year under review, the amortised costs of which amounted to EUR 691.6 million (EUR 527.9 million). The differences between the carrying amounts and amortised costs were recognised as unrealised gains of EUR 118.7 million (EUR 58.6 million) and unrealised losses of EUR 4.4 million (EUR 4.2 million) under cumulative other comprehensive income.

Other invested assets

The other invested assets consisted largely of participating interests in partnerships measured at fair value in an amount of EUR 2,228.9 million (EUR 1,867.7 million), the amortised cost of which amounted to EUR 1,605.8 million (EUR 1,493.1 million). The differences between the carrying amounts and the amortised costs were recognised as unrealised gains of EUR 638.8 million (EUR 415.8 million) and unrealised losses of EUR 15.7 million (EUR 41.1 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 14.2 million (EUR 16.6 million). Loans granted in an amount of EUR 362.1 million (EUR 183.5 million) were similarly recognised under other invested assets.

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.

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 33

	2021			
in EUR thousand	Level 1	Level 2	Level 3	Total
Fixed-income securities	30,051	45,524,934	–	45,554,985
Equity securities	314,453	–	–	314,453
Other financial assets	–	87,209	161,024	248,233
Real estate funds	–	–	805,912	805,912
Other invested assets	–	–	2,297,588	2,297,588
Short-term investments	443,793	–	–	443,793
Other assets	–	2,012	–	2,012
Total financial assets	**788,297**	**45,614,155**	**3,264,524**	**49,666,976**
Other liabilities	–	52,844	22,240	75,084
Total financial liabilities	**–**	**52,844**	**22,240**	**75,084**

Fair value hierarchy of financial assets and liabilities recognised at fair value N 34

	2020			
in EUR thousand	Level 1	Level 2	Level 3	Total
Fixed-income securities	22,301	38,935,133	–	38,957,434
Equity securities	378,422	–	–	378,422
Other financial assets	–	80,000	154,689	234,689
Real estate funds	–	–	582,296	582,296
Other invested assets	–	–	1,982,592	1,982,592
Short-term investments	327,426	–	–	327,426
Total financial assets	**728,149**	**39,015,133**	**2,719,577**	**42,462,859**
Other liabilities	–	58,798	26,488	85,286
Total financial liabilities	**–**	**58,798**	**26,488**	**85,286**

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 35

	2021				
in EUR thousand	Equity securities	Other financial assets	Real estate funds	Other invested assets	Other liabilities
Net book value at 31 December of the previous year	**–**	**154,689**	**582,296**	**1,982,592**	**26,488**
Currency translation at 1 January	–	12,921	23,279	105,313	2,212
Net book value after currency translation	**–**	**167,610**	**605,575**	**2,087,905**	**28,700**
Income and expenses					
recognised in the statement of income	–	29,857	(7,905)	83,778	(7,246)
recognised directly in shareholders' equity	–	–	56,221	218,386	–
Purchases	–	–	223,401	465,770	1,124
Sales	–	35,836	77,362	562,687	–
Transfers to level 3	–	–	–	–	–
Transfers from level 3	–	–	–	–	–
Currency translation at 31 December	–	(607)	5,981	4,437	(338)
Net book value at 31 December of the year under review	**–**	**161,024**	**805,911**	**2,297,589**	**22,240**

Movements in level 3 financial assets and liabilities N 36

in EUR thousand	2020 Equity securities	Other financial assets	Real estate funds	Other invested assets	Other liabilities
Net book value at 31 December of the previous year	**–**	**160,418**	**534,739**	**1,841,392**	**30,042**
Currency translation at 1 January	–	(14,376)	(23,583)	(109,090)	(2,693)
Net book value after currency translation	**–**	**146,042**	**511,156**	**1,732,302**	**27,349**
Income and expenses					
recognised in the statement of income	147	37,895	(12,936)	(53,155)	(6,563)
recognised directly in shareholders' equity	(147)	–	(2,934)	65,668	–
Purchases	–	56,397	135,059	416,927	5,154
Sales	–	90,714	45,170	165,302	425
Transfers to level 3	–	–	–	–	–
Transfers from level 3	–	–	–	–	–
Currency translation at 31 December of the year under review	–	5,069	(2,879)	(13,848)	973
Net book value at 31 December for the year under review	**–**	**154,689**	**582,296**	**1,982,592**	**26,488**

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 37

in EUR thousand	2021 Equity securities	Other financial assets	Real estate funds	Other invested assets	Other liabilities
Total in the financial year					
Ordinary investment income	–	–	–	(23)	–
Realised gains and losses on investments	–	–	–	109,610	–
Change in fair value of financial instruments	–	29,857	–	(878)	7,246
Total depreciation, impairments and appreciation of investments	–	–	(7,905)	(24,931)	–
Thereof attributable to financial instruments included in the portfolio at 31 December the year under review					
Ordinary investment income	–	–	–	(23)	–
Change in fair value of financial instruments	–	29,857	–	(266)	7,246
Total depreciation, impairments and appreciation of investments	–	–	(7,905)	(24,931)	–

Income and expenses from level 3 financial assets and liabilities N 38

in EUR thousand	2020 Equity securities	Other financial assets	Real estate funds	Other invested assets	Other liabilities
Total in the financial year					
Ordinary investment income	–	–	–	9	–
Realised gains and losses on investments	147	–	–	(151)	(426)
Change in fair value of financial instruments	–	37,895	–	(289)	6,989
Total depreciation, impairments and appreciation of investments	–	–	(12,936)	(52,724)	–
Thereof attributable to financial instruments included in the portfolio at 31 December the year under review					
Ordinary investment income	–	–	–	9	–
Change in fair value of financial instruments	–	37,895	–	(289)	6,989
Total depreciation, impairments and appreciation of investments	–	–	(12,936)	(52,724)	–

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 3,264.5 million (EUR 2,719.6 million) as at the balance sheet date, Hannover Re measures financial assets with a volume of EUR 3,034.9 million (EUR 2,450.0 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 2,731.4 million. The remaining financial assets included in level 3 with a volume of EUR 229.7 million (EUR 269.6 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 39

in EUR thousand	2021 Level 1	Level 2	Level 3	Total
Fixed-income securities	–	2,309,373	330,542	2,639,915
Investment property	–	–	2,266,593	2,266,593
Other invested assets	4,016	6,467	633,520	644,003
Total financial assets	**4,016**	**2,315,840**	**3,230,655**	**5,550,511**
Financing liabilities	–	4,160,613	238,127	4,398,740
Total financial liabilities	**–**	**4,160,613**	**238,127**	**4,398,740**

Fair value hierarchy of financial assets and liabilities measured at amortised cost N 40

	2020			
in EUR thousand	Level 1	Level 2	Level 3	Total
Fixed-income securities[1]	–	2,460,747	248,694	2,709,441
Investment property	–	–	1,897,351	1,897,351
Other invested assets	–	87,260	725,062	812,322
Total financial assets	**–**	**2,548,007**	**2,871,107**	**5,419,114**
Financing liabilites	–	3,518,114	110,444	3,628,558
Total financial liabilities	**–**	**3,518,114**	**110,444**	**3,628,558**

[1] Restated pursuant to IAS 8

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 41

	2021			
	Financial assets that give rise to solely payments of principal and interest (SPPI criterion)		All other financial assets	
in EUR thousand	Fair value at 31.12.	Fair value change in the financial year	Fair value at 31.12.	Fair value change in the financial year
Fixed-income securities – held to maturity	50,148	(4,552)	–	–
Fixed-income securities – loans and receivables	2,582,638	(46,109)	7,129	(247)
Fixed-income securities – available for sale	44,924,458	(17,277)	549,219	(8,213)
Fixed-income securities – at fair value through profit or loss	–	–	81,308	85
Equity securities – available for sale	–	–	314,453	56,757
Other financial assets – at fair value through profit or loss	–	–	231,707	(32,891)
Real estate funds	–	–	805,912	101,348
Other invested assets	356,184	2,448	2,249,029	295,855
Short-term investments	–	–	443,793	(440)
Other assets	290,131	–	34,426	2,071
Total	**48,203,559**	**(65,490)**	**4,716,976**	**414,325**

Fair value disclosures for financial assets N 42

	2020			
	Financial assets that give rise to solely payments of principal and interest (SPPI criterion)		All other financial assets	
in EUR thousand	Fair value at 31.12.	Fair value change in the financial year	Fair value at 31.12.	Fair value change in the financial year
Fixed-income securities – held to maturity	191,475	(2,657)	–	–
Fixed-income securities – loans and receivable [1]	2,516,906	(26,081)	1,061	(205)
Fixed-income securities – available for sale	38,300,963	281,845	550,760	(5,316)
Fixed-income securities – at fair value through profit or loss	–	–	105,711	22,782
Equity securities – available for sale	–	–	378,422	104,396
Other financial assets – at fair value through profit or loss	–	–	227,530	41,329
Real estate funds	–	–	582,296	16,107
Other invested assets	389,585	4,961	1,970,964	(14,830)
Short-term investments	–	–	327,426	(3,069)
Other assets	93,721	–	21,791	–
Total	**41,492,650**	**258,068**	**4,165,961**	**161,194**

[1] Restated pursuant to IAS 8

Rating structure of financial assets that give rise to solely payments of principal and interest N 43

in EUR thousand	2021	2020
AAA	20,805,954	18,731,863
AA	6,385,404	6,045,082
A	8,861,601	7,136,068
BBB	8,721,294	7,081,788
BB or lower	1,695,478	1,320,595
No rating		
low credit risk	1,120,019	727,536
more than a low credit risk [1]	183,731	128,690
Total	**47,773,481**	**41,171,622**

[1] Restated pursuant to IAS 8

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 10,803.1 million (EUR 9,659.8 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 205.1 million in the year under review from EUR 298.3 million to EUR 503.4 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 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 94 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 44

in EUR thousand	2021	2020[1]
Net book value at 31 December of the previous year	3,073,117	2,931,722
Currency translation at 1 January	148,321	(140,130)
Net book value after currency translation	**3,221,438**	**2,791,592**
Additions	1,617,119	1,494,109
Amortisations	1,511,101	1,198,387
Currency translation at 31 December	23,177	(14,197)
Net book value at 31 December of the year under review	**3,350,633**	**3,073,117**

[1] Restated pursuant to IAS 8

For further explanatory remarks please see section 3.1 "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 45

	2021		2020	
in EUR thousand	Three months to one year	More than one year	Three months to one year	More than one year
Accounts receivable	479,549	271,037	339,613	174,921

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 108 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 46

in EUR thousand	2021	2020
Cumulative value adjustments at 31 December of the previous year	24,943	33,840
Currency translation at 1 January	1,008	(1,516)
Cumulative value adjustments after currency translation	**25,951**	**32,324**
Value adjustments	15,139	7,580
Reversal	3,655	7,058
Utilisation	886	7,903
Cumulative value adjustments at 31 December of the year under review	**36,549**	**24,943**
Gross book value of accounts receivable at 31 December of the year under review	7,244,299	5,630,746
Cumulative value adjustments at 31 December of the year under review	36,549	24,943
Net book value of accounts receivable at 31 December of the year under review	**7,207,750**	**5,605,803**

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 3.1 "Summary of major accounting policies". With regard to the credit risks resulting from technical assets we would also refer the reader to our comments on page 108 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 47

in EUR thousand	2021	2020
Net book value at 31 December of the previous year	80,965	88,303
Currency translation at 1 January	2,968	(3,645)
Net book value after currency translation	**83,933**	**84,658**
Value adjustments	–	3,935
Currency translation at 31 December	–	242
Net book value at 31 December of the year under review	**83,933**	**80,965**

This item principally includes the goodwill from the acquisitions of E+S Rückversicherung AG (EUR 36.1 million, previous year: EUR 36.1 million)), Integra Insurance Solutions Limited (EUR 11.4 million, previous year: EUR 10.6 million) and Argenta Holdings Limited (EUR 30.1 million, previous year: 28.0 million).

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 ranges currently recommended by 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 48**

	2021	2020	2021	2020
in EUR thousand	Capitalisation rate		Growth rate	
Argenta Holdings Limited	6.93%	6.66%	1.00%	1.00%
E+S Rückversicherung AG	5.65%	5.38%	0.00%	0.00%
Integra Insurance Solutions Limited	6.64%	6.36%	1.00%	1.00%

The capitalisation rates as well as material/value-influencing items of the respective planning calculations (inter alia premium volumes, investment income or loss ratios) were varied as part of sensitivity analyses. In this context, individual parameters were changed within appropriate bands that can be expected in light of the current market situations and developments. It was established that where changes were made to parameters in areas that could reasonably occur, the values in use were above the corresponding book values. We would also refer to our basic remarks in section 3.1 "Summary of major accounting policies".

6.6 Other assets

Other assets **N 49**

in EUR thousand	2021	2020
Present value of future profits on acquired life reinsurance portfolios	25,700	25,807
Other intangible assets	138,487	131,695
Insurance for pension commitments	102,530	99,994
Own-use real estate	129,806	105,168
Tax refund claims	196,826	304,288
Fixtures, fittings and equipment	35,529	31,318
Receivables from advance payments and services	87,997	69,282
Sundry [1]	255,292	91,584
Total	**972,167**	**859,136**

[1] Restated pursuant to IAS 8

With regard to the right-of-use assets from lease contracts included in the items "Own-use real estate", "Fixtures, fittings and equipment" and "Sundry", please see section 8.8 "Leases".

The purchase price receivable from the sale of HDI Global Specialty SE in an amount of EUR 159.0 million is included in the sundry assets. For details we would refer to section 4.4 "Major disposals and retirements". The sundry assets contain unadjusted other receivables of EUR 0.4 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 50

in EUR thousand	2021	2020
Gross book value at 31 December of the previous year	119,850	129,150
Currency translation at 1 January	7,741	(9,300)
Gross book value at 31 December of the year under review	**127,591**	**119,850**
Cumulative depreciation at 31 December of the previous year	94,043	95,335
Currency translation at 1 January	5,585	(6,270)
Cumulative depreciation after currency translation	**99,628**	**89,065**
Amortisation	2,166	5,344
Currency translation at 31 December	97	(366)
Cumulative depreciation at 31 December of the year under review	**101,891**	**94,043**
Net book value at 31 December of the previous year	**25,807**	**33,815**
Net book value at 31 December of the year under review	**25,700**	**25,807**

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. For further information please refer to our explanatory notes on intangible assets in section 3.1 "Summary of major accounting policies".

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 Benefits" they were carried as a separate asset at fair value as at the balance sheet date in an amount of EUR 102.5 million (EUR 100.0 million).

Fixtures, fittings and equipment

Fixtures, fittings and equipment **N 51**

in EUR thousand	2021	2020
Gross book value at 31 December of the previous year	153,816	164,170
Currency translation at 1 January	3,797	(4,494)
Gross book value after currency translation	**157,613**	**159,676**
Additions	15,694	15,483
Disposals	16,053	21,583
Changes in the consolidated group	–	2
Currency translation at 31 December	93	238
Gross book value at 31 December of the year under review	**157,347**	**153,816**
Cumulative depreciation at 31 December of the previous year	122,498	137,167
Currency translation at 1 January	3,052	(3,867)
Cumulative depreciation after currency translation	**125,550**	**133,300**
Disposals	15,729	21,259
Depreciation	12,105	10,311
Changes in the consolidated group	–	1
Currency translation at 31 December	(108)	145
Cumulative depreciation at 31 December of the year under review	**121,818**	**122,498**
Net book value at 31 December of the previous year	**31,318**	**27,003**
Net book value at 31 December of the year under review	**35,529**	**31,318**

With regard to the measurement of fixtures, fittings and equipment, the reader is referred to our explanatory notes on the other assets in section 3.1 “Summary of major accounting policies”.

With regard to the leased assets contained in this table we would refer to section 8.8 “Leases”.

Other intangible assets

Development of other intangible assets N 52

in EUR thousand	2021	2020
Gross book value at 31 December of the previous year	394,002	394,088
Currency translation at 1 January	7,586	(6,897)
Gross book value after currency translation	**401,588**	**387,191**
Additions	23,104	23,819
Disposals	2,483	17,008
Currency translation at 31 December	12	–
Gross book value at 31 December of the year under review	**422,221**	**394,002**
Cumulative depreciation at 31 December of the previous year	262,307	259,996
Currency translation at 1 January	1,194	(1,733)
Cumulative depreciation after currency translation	**263,501**	**258,263**
Disposals	1,332	16,094
Depreciation	21,406	20,198
Currency translation at 31 December	159	(60)
Cumulative depreciation at 31 December of the year under review	**283,734**	**262,307**
Net book value at 31 December of the previous year	**131,695**	**134,092**
Net book value at 31 December of the year under review	**138,487**	**131,695**

The item includes EUR 30.4 million (EUR 32.5 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 6.8 million (EUR 7.0 million) is attributable to purchased software. Among other things, the amortised cost of the intangible assets identified in connection with the acquisition of Argenta Holdings Limited in an amount of EUR 81.2 million (EUR 76.8 million) is also recognised under other intangible assets.

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 98 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 53

	2021			2020		
in EUR thousand	gross	retro	net	gross	retro	net
Loss and loss adjustment expense reserve	40,777,703	2,674,107	38,103,596	33,929,230	1,883,270	32,045,960
Benefit reserve	7,541,881	192,039	7,349,842	7,217,988	192,135	7,025,853
Unearned premium reserve	6,195,961	204,597	5,991,364	5,070,009	165,916	4,904,093
Other technical provisions	841,591	2,703	838,888	701,577	1,106	700,471
Total	**55,357,136**	**3,073,446**	**52,283,690**	**46,918,804**	**2,242,427**	**44,676,377**

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 54

	2021			2020		
in EUR thousand	gross	retro	net	gross	retro	net
Net book value at 31 December of the previous year	33,929,230	1,883,270	32,045,960	32,996,231	2,050,114	30,946,117
Currency translation at 1 January	1,760,419	110,411	1,650,008	(1,883,704)	(139,593)	(1,744,111)
Net book value after currency translation	**35,689,649**	**1,993,681**	**33,695,968**	**31,112,527**	**1,910,521**	**29,202,006**
Incurred claims and claims expenses (net)[1]						
Year under review	16,751,508	2,002,255	14,749,253	14,175,062	834,097	13,340,965
Previous years	4,479,726	611,254	3,868,472	4,620,133	1,178,440	3,441,693
	21,231,234	**2,613,509**	**18,617,725**	**18,795,195**	**2,012,537**	**16,782,658**
Less:						
Claims and claims expenses paid (net)[1]						
Year under review	(4,809,075)	(910,023)	(3,899,052)	(4,189,271)	(216,675)	(3,972,596)
Previous years	(11,445,287)	(1,039,301)	(10,405,986)	(11,759,665)	(1,829,034)	(9,930,631)
	(16,254,362)	**(1,949,324)**	**(14,305,038)**	**(15,948,936)**	**(2,045,709)**	**(13,903,227)**
Specific value adjustment for retrocessions	–	40	(40)	–	637	(637)
Reversal of impairments	–	315	(315)	–	4,392	(4,392)
Portfolio entries/exits	–	–	–	(20,746)	(9,002)	(11,744)
Currency translation at 31 December	111,182	15,966	95,216	(8,810)	11,168	(19,978)
Net book value at 31 December of the year under review	**40,777,703**	**2,674,107**	**38,103,596**	**33,929,230**	**1,883,270**	**32,045,960**

[1] excluding effects from portfolio entries/exits recognised in income

On balance, cumulative specific value adjustments of EUR 55.8 million (EUR 52.0 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 38,047.8 million (EUR 31,994.0 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 2011 to 2021 as well as the run-off of the reserve (so-called run-off triangle). The figures reported for the 2011 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 2021 financial year for the individual run-off years.

Net loss reserve and its run-off in the property and casualty reinsurance segment N 55

in EUR million	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	31.12. 2020	**31.12. 2021**
Loss and loss adjustment expense reserve (from balance sheet)											
	16,597.7	17,221.6	17,788.1	19,697.5	21,709.2	22,663.5	22,814.8	24,252.7	26,489.9	27,902.3	**32,561.5**
Cumulative payments for the year in question and previous years											
One year later	3,139.4	2,913.3	3,197.1	3,515.1	3,275.4	3,754.3	4,795.1	4,874.7	5,599.1	5,466.0	
Two years later	4,878.1	4,539.5	5,002.5	5,262.9	5,192.0	6,010.7	6,855.9	7,573.2	7,900.5		
Three years later	5,814.9	5,738.7	6,122.9	6,533.8	6,663.3	7,262.0	8,519.0	8,999.5			
Four years later	6,753.8	6,590.9	7,119.9	7,614.2	7,650.5	8,366.1	9,436.1				
Five years later	7,474.6	7,384.6	8,026.5	8,452.8	8,555.2	8,977.0					
Six years later	8,070.6	8,075.0	8,609.2	9,201.8	8,997.3						
Seven years later	8,581.9	8,547.2	9,193.2	9,532.7							
Eight years later	8,882.8	9,057.8	9,448.0								
Nine years later	9,313.1	9,260.5									
Ten years later	9,472.2										
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	**16,597.7**	**17,221.6**	**17,788.1**	**19,697.5**	**21,709.2**	**22,663.5**	**22,814.8**	**24,252.7**	**26,489.9**	**27,902.3**	**32,561.5**
One year later	16,308.8	16,739.3	17,602.5	19,191.3	20,837.5	21,496.6	22,070.1	23,411.9	25,878.8	27,054.4	
Two years later	15,914.6	16,385.8	16,962.0	18,061.1	19,403.3	20,511.9	20,768.9	22,503.9	24,749.2		
Three years later	15,468.0	15,867.7	15,912.5	17,109.4	18,408.0	19,437.5	20,008.7	21,657.2			
Four years later	14,846.1	15,156.2	15,057.4	16,225.0	17,431.7	18,683.2	19,347.8				
Five years later	14,172.2	14,456.2	14,294.7	15,390.5	16,760.0	18,073.0					
Six years later	13,534.3	13,769.0	13,491.1	14,746.0	16,219.4						
Seven years later	12,849.0	13,164.3	12,959.5	14,302.7							
Eight years later	12,315.3	12,749.5	12,590.0								
Nine years later	12,028.9	12,391.0									
Ten years later	11,715.3										
Change relative to previous year											
Net run-off result	313.7	44.8	11.0	73.9	97.2	69.6	50.7	185.8	282.9	(281.6)	
As percentage of original loss reserve	1.9	0.3	0.1	0.4	0.4	0.3	0.2	0.8	1.1	(1.0)	

The run-off profit of altogether EUR 848.0 million (EUR 590.5 million) in the 2021 financial year derives above all from positive run-offs of reserves in the areas of property business as well as marine and aviation.

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 deposits 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 3.1 "Summary of major accounting policies".

Maturities of the technical reserves **N 56**

	2021					
	Loss and loss adjustment expense reserves			Benefit reserve		
in EUR thousand	gross	retro	net	gross	retro	net
Due in one year	11,505,643	604,687	10,900,956	1,035,542	1,460	1,034,082
Due after one through five years	15,685,611	1,327,189	14,358,422	564,159	6,049	558,110
Due after five through ten years	6,099,433	466,290	5,633,143	487,131	23,507	463,624
Due after ten through twenty years	3,596,204	203,007	3,393,197	489,823	1,611	488,212
Due after twenty years	1,532,264	74,750	1,457,514	1,598,438	3,115	1,595,323
	38,419,155	**2,675,923**	**35,743,232**	**4,175,093**	**35,742**	**4,139,351**
Deposits	2,358,548	54,016	2,304,532	3,366,788	156,297	3,210,491
Total	**40,777,703**	**2,729,939**	**38,047,764**	**7,541,881**	**192,039**	**7,349,842**

Maturities of the technical reserves **N 57**

	2020					
	Loss and loss adjustment expense reserves			Benefit reserve		
in EUR thousand	gross	retro	net	gross	retro	net
Due in one year	9,630,992	403,350	9,227,642	916,023	1,126	914,897
Due after one through five years	13,080,012	973,471	12,106,541	668,698	5,832	662,866
Due after five through ten years	5,027,070	318,810	4,708,260	489,109	33,802	455,307
Due after ten through twenty years	2,887,331	144,737	2,742,594	326,997	1,993	325,004
Due after twenty years	1,090,257	48,143	1,042,114	1,240,193	2,665	1,237,528
	31,715,662	**1,888,511**	**29,827,151**	**3,641,020**	**45,418**	**3,595,602**
Deposits	2,213,568	46,719	2,166,849	3,576,968	146,717	3,430,251
Total	**33,929,230**	**1,935,230**	**31,994,000**	**7,217,988**	**192,135**	**7,025,853**

The average maturity of the loss and loss adjustment expense reserves was 4.8 years (4.6 years), or 4.8 years (4.6 years) after allowance for the corresponding retrocession shares. The benefit reserve had an average maturity of 14.5 years (13.1 years) – or 14.5 years (13.2 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 are made about the aforementioned three parameters 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 58

	2021			2020		
in EUR thousand	gross	retro	net	gross	retro	net
Net book value at 31 December of the previous year	7,217,988	192,135	7,025,853	9,028,000	852,598	8,175,402
Currency translation at 1 January	482,845	15,380	467,465	(547,480)	(72,106)	(475,374)
Net book value after currency translation	**7,700,833**	**207,515**	**7,493,318**	**8,480,520**	**780,492**	**7,700,028**
Changes	(313,885)	(15,240)	(298,645)	(494,914)	(391,427)	(103,487)
Portfolio entries/exits	162,110	4	162,106	(826,518)	(238,945)	(587,573)
Currency translation at 31 December	(7,177)	(240)	(6,937)	58,900	42,015	16,885
Net book value at 31 December of the year under review	**7,541,881**	**192,039**	**7,349,842**	**7,217,988**	**192,135**	**7,025,853**

The unearned premium reserve derives from the deferral of 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.

Development of the unearned premium reserve N 59

	2021			2020		
in EUR thousand	gross	retro	net	gross	retro	net
Net book value at 31 December of the previous year	5,070,009	165,916	4,904,093	4,391,848	116,176	4,275,672
Currency translation at 1 January	320,011	12,116	307,895	(276,799)	(9,212)	(267,587)
Net book value after currency translation	**5,390,020**	**178,032**	**5,211,988**	**4,115,049**	**106,964**	**4,008,085**
Changes	737,631	24,023	713,608	1,028,172	61,345	966,827
Currency translation at 31 December	68,310	2,542	65,768	(73,212)	(2,393)	(70,819)
Net book value at 31 December of the year under review	**6,195,961**	**204,597**	**5,991,364**	**5,070,009**	**165,916**	**4,904,093**

The adequacy of the technical liabilities arising out of our reinsurance 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 632.2 million (EUR 582.3 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 increased by EUR 331.2 million in the year under review from EUR 3,255.5 million to EUR 3,586.7 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.

Insurance coverage has been taken out for both the aforementioned pension plans.

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 Heubeck "2018 G standard tables" were used as the biometric actuarial basis for pension commitments in Germany. 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 **A 60**

in %	2021	2020
Discount rate for defined benefit obligation	1.20	0.56
Discount rate for net interest component	0.68	0.86
Discount rate for current service costs	0.56	1.12
Rate of compensation increase	2.85	2.49
Pension indexation	1.96	1.69

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 61

in EUR thousand	2021	2020	2021	2020	2021	2020
	Defined benefit obligation		Fair value of plan assets		Impact of minimum funding requirement/asset ceiling	
Position at 1 January of the financial year	286,162	249,636	56,910	47,759	–	–
Recognised in profit or loss						
Current service costs	8,172	5,502	–	–	–	–
Past service cost and plan curtailments	357	2,761	–	–	–	–
Net interest component	1,151	2,163	440	641	–	–
	9,680	**10,426**	**440**	**641**	**–**	**–**
Recognised in cumulative other comprehensive income						
Actuarial gain (–)/loss (+) from change in biometric assumptions	838	–	–	–	–	–
Actuarial gain (–)/loss (+) from change in financial assumptions	(23,389)	29,205	–	–	–	–
Experience gains (–)/losses (+)	663	3,117	–	–	–	–
Return on plan assets, excluding amounts included in interest income	–	–	(2,320)	3,931	–	–
Change in asset ceiling	–	–	–	–	7	–
Exchange differences	1,333	(872)	1,263	(832)	–	–
	(20,555)	**31,450**	**(1,057)**	**3,099**	**7**	**–**
Other changes						
Employer contributions	–	–	5,834	5,745	–	–
Employer contributions and deferred compensation	–	–	–	–	–	–
Benefit payments	(5,148)	(5,233)	(347)	(352)	–	–
Additions and disposals	(88)	(61)	(81)	(8)	–	–
Changes in the consolidated group	–	–	–	–	–	–
Effects of plan settlements	(90)	(56)	–	26	–	–
	(5,326)	**(5,350)**	**5,406**	**5,411**	**–**	**–**
Position at 31 December of the financial year	**269,961**	**286,162**	**61,699**	**56,910**	**7**	**–**

The actuarial gain from change in financial assumptions results primarily from an increase in the discount rate, which to some extent is offset by the increase in the rate of compensation and the pension progression.

The plan assets contain assets held by a long-term employee benefit fund and qualifying insurance policies as defined by IAS 19. The plan assets are attributable in an amount of EUR 21.4 million (EUR 18.3 million) to assets with quoted market prices.

The reconciliation of the projected benefit obligations with the recognised provisions for pensions is as follows:

Provisions for pensions **N 62**

in EUR thousand	2021	2020
Projected benefit obligations at 31 December of the financial year	269,961	286,162
Fair value of plan assets at 31 December of the financial year	61,699	56,910
Effect of minimum funding requirement on asset ceiling	7	–
Recognised pension obligations at 31 December of the financial year	**208,269**	**229,252**
thereof: Capitalised assets	481	–
Provisions for pensions	208,750	229,252

Of the total provisions for pensions, an amount of EUR 205.8 million (EUR 226.0 million) is attributable to employer-funded obligations and EUR 3.0 million (EUR 3.3 million) to employee-funded obligations.

In the current financial year Hannover Re anticipates contribution payments of EUR 5.9 million under the plans set out above. The weighted average duration of the defined benefit obligation is 17.8 (18.7) 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 63**

in EUR thousand		Parameter increase	Parameter decrease
Discount rate	(+/– 0.5%)	(22,548)	25,486
Rate of compensation increase	(+/– 0.25%)	1,410	(1,406)
Pension indexation	(+/– 0.25%)	8,088	(7,745)

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 10.1 million (EUR 10.1 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 23.5 million (EUR 22.2 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 10.2 million (EUR 10.3 million) relates to state pension schemes, thereof EUR 7.7 million (EUR 8.0 million) to contributions to the statutory pension insurance scheme in Germany.

6.11 Other liabilities

Other liabilites N 64

in EUR thousand	2021	2020
Liabilities from derivatives	75,084	85,286
Interest	40,601	34,958
Deferred income and prepayments received	144,329	96,919
Sundry non-technical provisions	182,623	175,892
Sundry liabilities [1]	239,230	145,758
Total	**681,867**	**538,813**

[1] Restated pursuant to IAS 8

With regard to the liabilities from derivatives in an amount of EUR 75.1 million (EUR 85.3 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 11.0 million (EUR 2.3 million) from interests in private equity funds that had still to be recognised in income as at the balance sheet date.

We enter 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 89.8 million (EUR 24.1 million).

Development of sundry non-technical provisions

in EUR thousand	Balance at 31 December 2020	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	6,775	164	6,939
Consultancy fees	3,038	226	3,264
Suppliers' invoices	4,538	161	4,699
Partial retirement arrangements and early retirement obligations	1,900	4	1,904
Holiday entitlements and overtime	13,197	183	13,380
Anniversary bonuses	5,575	92	5,667
Management and staff bonuses	67,003	2,754	69,757
Other	73,866	722	74,588
Total	**175,892**	**4,306**	**180,198**

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 66

in EUR thousand	2021	2020
Due in one year	135,874	99,441
Due after one through five years	39,714	70,198
Due after five years	7,035	6,253
Total	**182,623**	**175,892**

N 65

Additions	Utilisation	Release	Currency translation at 31 December	Balance at 31 December 2021
6,162	5,743	312	(2)	7,044
2,747	2,635	509	(69)	2,798
16,175	3,009	608	448	17,705
379	(186)	129	4	2,344
8,194	7,514	–	8	14,068
687	11	137	4	6,210
42,417	33,605	507	(446)	77,616
26,159	9,601	36,472	164	54,838
102,920	**61,932**	**38,674**	**111**	**182,623**

6.12 Financing liabilities

On 22 March 2021 Hannover Rück SE placed subordinated debt in the amount of EUR 750.0 million on the European capital market. The bond has a total maturity of around 21 years and a first scheduled call option on 30 December 2031. It carries a fixed coupon of 1.375% p.a. in the first roughly eleven years, after which the interest rate basis changes to a floating rate of 3-month EURIBOR +233 basis points.

On 8 July 2020 Hannover Rück SE placed subordinated debt in the amount of EUR 500.0 million on the European capital market. The bond has a total maturity of around 20 years with a first scheduled call option on 8 July 2030. It carries a fixed coupon of 1.75% p.a. in the first roughly ten years, after which the interest rate basis changes to a floating rate of 3-month EURIBOR +300 basis points.

On 9 October 2019 Hannover Rück SE placed subordinated debt in the 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.

Altogether six (five) bonds were recognised as at the balance sheet date with an amortised cost of EUR 3,722.3 million (EUR 2,975.7 million).

Long-term debt and notes payable N 67

				2021			
in EUR thousand	Coupon	Maturity	Currency	Amortised cost	Fair value measurement	Accrued interest	Fair value
Notes payable							
Hannover Rück SE, 2021	1.375	2042	EUR	743,257	(7,237)	5,227	741,247
Hannover Rück SE, 2020	1.75	2040	EUR	495,433	15,112	2,038	512,583
Hannover Rück SE, 2019	1.125	2039	EUR	741,983	(6,406)	1,919	737,496
Hannover Rück SE, 2018	1.125	2028	EUR	744,914	46,291	5,941	797,146
Hannover Rück SE, 2014	3.375	n/a	EUR	497,490	50,420	8,692	556,602
Hannover Finance (Luxembourg) S.A., 2012	5.00	2043	EUR	499,239	36,151	12,603	547,993
				3,722,316	**134,331**	**36,420**	**3,893,067**
Long-term debt				535,386	6,707	1,008	543,101
Total				**4,257,702**	**141,038**	**37,428**	**4,436,168**

Long-term debt and notes payable N 68

in EUR thousand	Coupon	Maturity	Currency	2020 Amortised cost	Fair value measure-ment	Accrued interest	Fair value
Notes payable							
Hannover Rück SE, 2020	1.75	2040	EUR	494,942	40,513	2,038	537,493
Hannover Rück SE, 2019	1.125	2039	EUR	740,973	26,427	1,919	769,319
Hannover Rück SE, 2018	1.125	2028	EUR	744,112	78,848	5,941	828,901
Hannover Rück SE, 2014	3.375	n/a	EUR	496,844	66,761	8,692	572,297
Hannover Finance (Luxembourg) S.A., 2012	5.00	2043	EUR	498,859	59,636	12,603	571,098
				2,975,730	272,185	31,193	3,279,108
Long-term debt				372,705	7,938	943	381,586
Total				**3,348,435**	**280,123**	**32,136**	**3,660,694**

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 estimated 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 periods are always taken as a basis.

Net gains and losses from long-term debt and notes payable N 69

in EUR thousand	2021 Ordinary income/expenses	2020	2021 Amortisation	2020	2021 Net result	2020
Long-term debt	(9,704)	(8,568)	(358)	(313)	(10,062)	(8,881)
Notes payable	(75,552)	(83,333)	(3,779)	(3,262)	(79,331)	(86,595)
Total	**(85,256)**	**(91,901)**	**(4,137)**	**(3,575)**	**(89,393)**	**(95,476)**

The ordinary expenses principally include interest expenses of nominally EUR 75.6 million (EUR 83.3 million) resulting from the issued subordinated and senior bonds.

Maturities of financial liabilities N 70

in EUR thousand	2021 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]	115,421	304,618	3,410	711	–	–	–
Long-term debt	–	23,315	329,484	153,642	28,945	–	–
Notes payable	–	–	–	744,914	1,237,416	1,242,496	497,490
Lease liabilities	3,961	4,525	31,277	33,733	3,489	35,568	–
Total	**119,382**	**332,458**	**364,171**	**933,000**	**1,269,850**	**1,278,064**	**497,490**

[1] Excluding sundry non-technical provisions and derivative financial instruments; the maturities of these items are broken down separately

Maturities of financial liabilities N 71

in EUR thousand	2020						
	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]	101,438	172,851	3,346	–	2,294	–	–
Long-term debt	–	–	273,039	99,666	–	–	–
Notes payable	–	–	–	744,112	1,235,915	498,859	496,844
Lease liabilities	2,690	4,250	29,757	13,578	–	32,566	–
Total	**104,128**	**177,101**	**306,142**	**857,356**	**1,238,209**	**531,425**	**496,844**

[1] Excluding sundry non-technical provisions and derivative financial instruments; the maturities of the 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 72

in EUR thousand	Balance at 31 December 2020	Cash Flow	Non-cash items		Balance at 31 December 2021
			Exchange Rate Difference	Other Changes	
Long-term Debt	372,705	137,169	25,154	358	535,386
Notes payable	2,975,730	742,807	–	3,779	3,722,316
Lease liabilities	82,841	(14,466)	5,803	38,375	112,553
Total	**3,431,276**	**865,510**	**30,957**	**42,512**	**4,370,255**

Reconciliation of financing liabilities N 73

in EUR thousand	Balance at 31 December 2019	Cash Flow	Non-cash items		Balance at 31 December 2020
			Exchange Rate Difference	Other Changes	
Long-term Debt	395,043	(278)	(22,373)	313	372,705
Notes payable	2,977,724	(5,256)	–	3,262	2,975,730
Lease liabilities	89,201	(12,177)	(5,091)	10,908	82,841
Total	**3,461,968**	**(17,711)**	**(27,464)**	**14,483**	**3,431,276**

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 24,119 thousand is available. It can be used to grant shares to holders of bonds and/or profit-sharing rights with conversion rights and warrants and has a time limit of 4 May 2026. In addition, authorised capital is available in an amount of up to EUR 24,119 thousand, which similarly has a time limit of 4 May 2026. 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 2025.

The Annual General Meeting of Hannover Rück SE resolved on 5 May 2021 that a gross dividend of EUR 4.50 per share should be paid for the 2020 financial year, corresponding to a total distribution of EUR 542.7 million (EUR 633.3 million).

The increase in the other reserves arising out of currency translation, which is recognised in equity, was attributable in a net amount of EUR 97.1 million (decrease of EUR 61.2 million in the previous year) to the translation of long-term debt or 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 and net assets" subsection 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., subsection entitled "Investment policy") and a description of our policyholders' surplus (page 59 et seq., subsection 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 87 et seq. of the risk report.

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 15,766 (16,511) treasury shares during the second quarter of 2021 on the legal basis of § 71 Para. 1 No. 2 Stock Corporation Act (AktG) and delivered them to eligible employees at preferential conditions. These shares are blocked until 31 May 2025. This transaction resulted in an expense of EUR 0.5 million (EUR 0.5 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 871.2 million (EUR 844.4 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 68.9 million (EUR 35.7 million) in the year under review.

Subsidiaries with material non-controlling interests N 74

in EUR thousand	2021	2020
	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	146,624	71,603
thereof attributable to non-controlling interests	51,624	25,210
Income/expense recognised directly in equity	(73,518)	93,955
Total recognised income and expense	73,106	165,558
Shareholder's equity	2,105,823	2,157,717
thereof attributable to non-controlling interests	741,427	759,698
Dividends paid	125,000	125,000
thereof attributable to non-controlling interests	44,011	44,011
Assets	11,819,576	10,644,455
Liabilities	9,713,753	8,486,738
Cash flow from operating activities	563,547	275,181
Cash flow from investing activities	(455,683)	(152,497)
Cash flow from financing activities	(125,000)	(125,000)

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 75**

in EUR thousand	2021	2020
Regional origin		
Germany	1,998,499	1,753,635
United Kingdom	3,722,549	3,406,117
France	1,034,597	1,099,165
Other	3,253,195	2,751,329
Europe	**10,008,840**	**9,010,246**
USA	8,194,528	7,059,536
Other [1]	1,494,412	1,126,354
North America	**9,688,940**	**8,185,890**
Asia	4,463,120	4,340,543
Australia	1,848,562	1,653,305
Australasia	**6,311,682**	**5,993,848**
Africa	622,441	518,085
Other	1,130,411	1,062,273
Total	**27,762,314**	**24,770,342**

[1] Restated pursuant to IAS 8

7.2 Investment income

Investment income N 76

in EUR thousand	2021	2020
Income from real estate	177,109	164,428
Dividends	6,363	4,532
Interest income[1]	1,006,895	990,246
Other investment income	365,224	81,214
Ordinary investment income	**1,555,591**	**1,240,420**
Profit or loss on investments in associated companies	35,743	88,129
Appreciation	1,145	–
Realised gains on investments	506,893	399,832
Realised losses on investments	225,867	70,222
Change in fair value of financial instruments	36,114	63,971
Impairments on real estate	63,180	55,615
Impairments on fixed-income securities	233	11,772
Impairments on participating interests and other financial assets	25,397	62,006
Other investment expenses	146,047	129,034
Net income from assets under own management	**1,674,762**	**1,463,703**
Interest income on funds withheld and contract deposits	462,812	347,788
Interest expense on funds withheld and contract deposits	194,562	126,023
Total investment income	**1,943,012**	**1,685,468**

1 Restated pursuant to IAS 8

Of the impairments totalling EUR 50.4 million (EUR 92.8 million), an amount of EUR 24.9 million (EUR 32.3 million) was attributable to private equity. An impairment loss of EUR 24.8 million (EUR 19.0 million) was recognised on real estate and real estate funds.

The impairments taken on fixed-income securities amounted to just EUR 0.2 million (EUR 11.8 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 77

in EUR thousand	2021	2020
Fixed-income securities – held to maturity	4,207	8,211
Fixed-income securities – loans and receivables[1]	81,041	82,175
Fixed-income securities – available for sale	897,154	862,853
Financial assets – at fair value through profit or loss	4,198	13,275
Other	20,295	23,732
Total	**1,006,895**	**990,246**

1 Restated pursuant to IAS 8

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 146.0 million (EUR 129.0 million), net income from assets under own management of altogether EUR 1,674.8 million (EUR 1,463.7 million) was recognised in the year under review.

Net gains and losses on investments

N 78

in EUR thousand	2021				
	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	4,169	(183)	–	–	3,986
Loans and receivables					
Fixed-income securities	76,558	153	–	–	76,711
Available for sale					
Fixed-income securities	966,293	22,967	233	–	989,027
Equity securities	562	49,296	–	–	49,858
Other invested assets	353,903	149,528	33,250	–	470,181
Short-term investments	11,017	127	123	–	11,021
At fair value through profit or loss					
Fixed-income securities	4,198	–	–	384	4,582
Other financial assets	–	2,278	–	31,193	33,471
Other invested assets	–	20	–	4,897	4,917
Other	174,634	56,840	54,059	(360)	177,055
Total	**1,591,334**	**281,026**	**87,665**	**36,114**	**1,820,809**

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 79

in EUR thousand	2020				
	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	7,863	(61)	–	–	7,802
Loans and receivables					
Fixed-income securities[3]	77,778	4,003	–	–	81,781
Available for sale					
Fixed-income securities	789,598	293,281	11,772	–	1,071,107
Equity securities	1,393	6,736	–	–	8,129
Other invested assets	190,852	(65)	75,243	–	115,544
Short-term investments	19,321	105	129	–	19,297
At fair value through profit or loss					
Fixed-income securities	13,275	3,541	–	1,752	18,568
Other financial assets	–	–	–	65,461	65,461
Other invested assets	–	4,787	–	746	5,533
Other	228,469	17,283	42,249	(3,988)	199,515
Total	**1,328,549**	**329,610**	**129,393**	**63,971**	**1,592,737**

1 Including income from associated companies, for reconciliation with the consolidated statement of income
2 Excluding other investment expenses
3 Restated pursuant to IAS 8

7.3 Reinsurance result

Reinsurance result **N 80**

in EUR thousand	2021	2020[1]
Gross written premium	27,762,314	24,770,342
Ceded written premium	2,905,054	2,442,720
Change in unearned premium	(737,631)	(1,028,172)
Change in ceded unearned premium	24,023	61,345
Net premium earned	**24,143,652**	**21,360,795**
Other technical income	114	15
Total net technical income	**24,143,766**	**21,360,810**
Claims and claims expenses paid	14,305,038	13,903,227
Change in loss and loss adjustment expense reserve	4,312,687	2,879,431
Claims and claims expenses	**18,617,725**	**16,782,658**
Change in benefit reserve	(298,645)	(103,487)
Net change in benefit reserve	**(298,645)**	**(103,487)**
Commissions	5,789,895	5,331,943
Change in deferred acquisition costs	106,018	295,722
Change in provision for contingent commissions	104,705	75,532
Other acquisition costs	4,767	4,466
Administrative expenses	510,707	478,182
Net technical result	**(479,370)**	**(912,762)**

[1] Restated pursuant to IAS 8

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 exclusively to the life and health reinsurance segment. The administrative expenses amounted to altogether 2.1% (2.2%) of net premium earned.

The effects of the Covid-19 pandemic increased the losses in the year under review by altogether EUR 582.0 million. They are entirely allocable to the life and health reinsurance segment.

Other technical income **N 81**

in EUR thousand	2021	2020
Other technical income (gross)	114	15
Reinsurance recoverables	–	–
Other technical income (net)	**114**	**15**

Commission and brokerage, change in deferred acquisition costs N 82

in EUR thousand	2021	2020[1]
Commissions paid (gross)	6,073,534	5,567,985
Reinsurance recoverables	283,639	236,042
Change in deferred acquisition costs (gross)	102,826	259,996
Reinsurance recoverables	(3,192)	(35,726)
Change in provision for contingent commissions (gross)	106,273	67,373
Reinsurance recoverables	1,568	(8,159)
Commissions and brokerage, change in deferred acquisition costs (net)	**5,788,582**	**5,111,753**

[1] Restated pursuant to IAS 8

7.4 Other income/expenses

Other income/expenses N 83

in EUR thousand	2021	2020
Other income		
Exchange gains	140,205	280,300
Reversals of impairments on receivables	3,970	11,465
Income from contracts recognised in accordance with the deposit accounting method	387,663	344,592
Income from services	112,326	115,281
Other interest income	50,036	54,562
Sundry income	80,616	17,191
	774,816	**823,391**
Other expenses		
Other interest expenses	15,283	12,443
Exchange losses	217,739	131,165
Expenses from contracts recognised in accordance with the deposit accounting method	985	2,181
Separate value adjustments on receivables	31,859	18,952
Expenses for the company as a whole	99,842	89,666
Expenses for services	68,786	73,855
Sundry expenses	69,137	53,760
	503,631	**382,022**
Total	**271,185**	**441,369**

The sharp decline in exchange gains and the increase in exchange losses are essentially the result of the US dollar's upward revaluation against the euro. The sundry income includes a fee for early contract termination in our US mortality portfolio amounting to EUR 59.1 million. The sundry expenses include the amortisation of the PVFP in an amount of EUR 2.2 million (EUR 5.3 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.

With regard to the fundamental approach adopted for application of IFRS 15 we would refer to the remarks in section 3.1 "Summary of major accounting policies".

Revenue categories N 84

in EUR thousand	2021	2020
Revenue realised at a point in time		
Brokerage commissions, performance fees and similar forms of remuneration	38,521	47,717
Other insurance-related services	6,913	6,934
Revenue realised over time		
Other insurance-related services	66,429	59,330
Total	**111,863**	**113,981**

The brokerage commissions, performance fees and similar forms of remuneration in an amount of EUR 38.5 million (EUR 47.7 million) were realised at a point in time. Of this amount, EUR 37.7 million (46.9 million) is attributable to brokerage commissions earned by Group-internal insurance intermediaries.

Further revenues of EUR 0.8 million (EUR 0.8 million) were generated in this revenue category.

An amount of EUR 66.4 million (EUR 59.3 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 28.0 million (EUR 25.4 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 underlying 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 realised pro rata temporis in accordance with the contractual term.

In addition, other revenues known as "binder fees" were earned from administrative activities on the South African market in an amount of EUR 16.1 million (EUR 14.1 million). The transaction price is calculated from a percentage rate in relation to the gross premium of the underlying insurance contracts. Binding fees are earned over a period of time.

On the German market revenues of EUR 8.6 million (EUR 7.9 million) were generated. These relate in large part to transfers of use for IT. The underlying transaction prices are derived from the contractually agreed contract prices and are realised pro rata temporis as the customer makes use of the IT.

On the North American market revenues of EUR 3.6 million (EUR 3.8 million) were earned from the assumption of administrative tasks. The performance obligation is considered to have been fulfilled when the company has rendered the contractually 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 4.1 million (EUR 3.5 million) in the year under review 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.

An amount of EUR 5.2 million (EUR 3.5 million) was earned on the UK and Swedish markets 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. The transaction prices in this regard are measured essentially by the underlying general fee scales.

Further revenues of EUR 0.8 million (EUR 1.1 million) were generated in this revenue category.

In addition, revenues of EUR 6.9 million (EUR 6.9 million) were realised at a point in time in the year under review from other insurance-related services.

In this context revenues of EUR 6.4 million (EUR 5.7 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 0.5 million (EUR 1.1 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.

Further revenues of EUR 0.0 million (EUR 0.1 million) were generated in this revenue category.

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 3.1 "Summary of major accounting policies" regarding the basic approach to the recognition and measurement of deferred taxes.

An unchanged tax rate of 32.63% 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%. This therefore gives rise to a Group tax rate (rounded) of 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 85

in EUR thousand	2021	2020
Actual tax for the year under review	250,029	57,567
Actual tax for other periods	(59,664)	(72,172)
Deferred taxes due to temporary differences	133,476	218,875
Deferred taxes from loss carry-forwards	28,313	(27,436)
Change in deferred taxes due to changes in tax rates	22,134	8,601
Value adjustments on deferred taxes	(22,719)	19,651
Total	**351,569**	**205,086**

Domestic/foreign breakdown of recognised tax expenditure/income N 86

in EUR thousand	2021	2020
Current taxes		
Germany	77,601	4,335
Abroad	112,764	(18,940)
Deferred taxes		
Germany	200,429	122,873
Abroad	(39,225)	96,818
Total	**351,569**	**205,086**

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 87

in EUR thousand	2021	2020
Deferred tax assets		
Tax loss carry-forwards	422,689	409,274
Loss and loss adjustment expense reserves	653,572	504,809
Benefit reserve	65,986	187,742
Other technical/non-technical provisions	71,671	70,567
Funds withheld	96,924	90,229
Deferred acquisition costs	1,820	11,462
Accounts receivable/reinsurance payable	712,092	505,768
Valuation differences relating to investments	87,990	57,395
Other valuation differences	62,886	50,843
Value adjustments[1]	(75,962)	(87,571)
Total	**2,099,668**	**1,800,518**
Deferred tax liabilities		
Loss and loss adjustment expense reserves	39,957	42,668
Benefit reserve	1,577,804	1,213,550
Other technical/non-technical provisions	29,222	27,958
Equalisation reserve	1,502,324	1,349,086
Funds withheld	1,263	983
Deferred acquisition costs	235,015	199,370
Accounts receivable/reinsurance payable	169,698	303,788
Valuation differences relating to investments	556,658	679,461
Other valuation differences	147,757	117,316
Total	**4,259,698**	**3,934,180**
Deferred tax liabilities	2,160,030	2,133,662

[1] Thereof on tax loss carry-forwards: EUR -72.871 thousand (EUR -79.543 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. Further 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 assests and deferred tax liabilities N 88

in EUR thousand	2021	2020
Deferred tax assets	676,344	597,986
Deferred tax liabilities	2,836,374	2,731,648
Net deferred tax liabilities	**2,160,030**	**2,133,662**

In view of the unrealised components of profit and loss recognised directly in equity in the financial year, actual and deferred tax income – including amounts attributable to non-controlling interests – of EUR 178.5 million (tax expense of EUR (192.0) 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 89**

in EUR thousand	2021	2020
Profit before taxes on income	1,651,790	1,123,871
Group tax rate	32.7%	32.7%
Expected expense for income taxes	540,135	367.506
Change in tax rates	22,134	8.601
Differences in tax rates affecting subsidiaries	(157,250)	(145.007)
Non-deductible expenses	126,484	74.471
Tax-exempt income	(82,582)	(61.789)
Tax expense/income not attributable to the reporting period	(14,706)	(41.633)
Value adjustments on deferred taxes/loss carry-forwards	(22,719)	19.651
Trade tax modifications	(68,131)	(17.713)
Other	8,204	999
Actual expense for income taxes	**351,569**	**205.086**

The expense for income taxes in the financial year was EUR 146.5 million higher than in the previous year at EUR 351.6 million (EUR 205.1 million). This development was driven largely by a significantly increased pre-tax profit and a slightly higher effective tax rate than in the previous year of 21.3% (18.2%).

Availability of non-capitalised loss carry-forwards

Unused tax loss carry-forwards of EUR 1,875.6 million (EUR 1,828.2 million) existed as at the balance sheet date. Of existing tax loss carry-forwards, EUR 302.9 million (EUR 385.6 million) was not capitalised in consideration of local tax rates because their realisation is not sufficiently certain.

The assets-side unadjusted deferred taxes on loss carry-forwards amounting to EUR 349.8 million (EUR 329.7 million) will probably be realised in an amount of EUR 34.1 million (EUR 67.7 million) within one year and in an amount of EUR 315.7 million (EUR 262.0 million) in the subsequent years.

In the year under review the actual taxes on income were reduced by EUR 0.8 million (EUR 2.3 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 did not result in a deferred tax expense in the year under review (previous year: EUR 16.2 million). This is opposed by deferred tax income of EUR 25.5 million (previous year: none) from the reassessment 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 30.9 million (EUR 1.1 million).

No deferred taxes were established on liabilities-side taxable temporary differences amounting to EUR 24.3 million (EUR 50.4 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 90**

in EUR thousand	One to five years	Six to ten years	More than ten years	Unlimited	Total
Temporary differences	–	–	–	14,719	14,719
Loss carry-forwards	88,542	–	14,257	185,412	288,211
Total	**88,542**	**–**	**14,257**	**200,131**	**302,930**

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 3.1 "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 1.8 million (EUR 4.2 million) and other financial assets at fair value through profit or loss in an amount of EUR 0.1 million (EUR 0.0 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 50.3 million (EUR 46.5 million) and other financial assets at fair value through profit or loss in an amount of EUR 16.4 million (EUR 7.2 million).

The decrease in equity from hedging instruments recognised directly in equity pursuant to IAS 39 in an amount of EUR 0.4 million (EUR 0.8 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 liabilities of EUR 0.3 million (EUR 1.0 million).

In order to hedge the risk of share price changes in connection with the stock appreciation rights granted under the share award plan, Hannover Re has taken out hedges since 2014 in the form of so-called equity swaps. The fair value of these instruments was recognised in an amount of EUR 2.0 million under other receivables (EUR 0.0 million recognised under other liabilities) as at the balance sheet date. The hedge gave rise to an increase in equity from hedging instruments recognised directly in equity in an amount of EUR 0.7 million (decrease of EUR 10.0 million recognised directly in equity).

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 91

in EUR thousand	2021 Less than one year	One to five years	Five to ten years	More than ten years	31.12.2021
Interest rate hedges					
Fair values	(704)	(909)	–	–	(1,613)
Notional values	5,946	100,164	–	–	106,110
Currency hedges					
Fair values	(8,703)	(8,966)	(11,517)	(5,105)	(34,291)
Notional values	2,961,844	311,335	401,221	46,141	3,720,541
Inflation hedges					
Fair values	–	(9)	–	–	(9)
Notional values	–	641	–	–	641
Share price hedges					
Fair values	2,012	–	–	–	2,012
Notional values	27,064	–	–	–	27,064
Total hedging instruments					
Fair values	(7,395)	(9,884)	(11,517)	(5,105)	(33,901)
Notional values	2,994,854	412,140	401,221	46,141	3,854,356

Maturity structure of derivative financial instruments N 92

in EUR thousand	2020 Less than one year	One to five years	Five to ten years	More than ten years	31.12.2020
Interest rate hedges					
Fair values	(841)	(3,359)	–	–	(4,200)
Notional values	3,183	95,880	–	–	99,063
Currency hedges					
Fair values	(9,724)	(20,492)	(10,033)	–	(40,249)
Notional values	1,141,322	598,729	173,105	–	1,913,156
Inflation hedges					
Fair values	–	–	–	–	–
Notional values	–	–	–	–	–
Share price hedges					
Fair values	(11)	–	–	–	(11)
Notional values	22,943	–	–	–	22,943
Total hedging instruments					
Fair values	(10,576)	(23,851)	(10,033)	–	(44,460)
Notional values	1,167,448	694,609	173,105	–	2,035,162

The net changes in the fair value of these instruments reduced the result of the financial year by EUR 3.8 million (EUR 12.3 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 normally 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 93**

in EUR thousand	2021				
	Fair value	Netting agreement	Cash collateral received/ furnished	Other collateral received/ furnished	Net amount
Derivative receivables	18,122	5,585	6,640	–	5,897
Derivative liabilities	49,253	5,585	5,788	34,416	3,464

Netting agreements **N 94**

in EUR thousand	2020				
	Fair value	Netting agreement	Cash collateral received/ furnished	Other collateral received/ furnished	Net amount
Derivative receivables	7,159	5,975	–	–	1,184
Derivative liabilities	46,468	5,975	18,625	17,620	4,248

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 1.0 million (EUR 15.2 million) as at the balance sheet date and was recognised under other financial assets at fair value through profit or loss together with an amount of EUR 0.4 million (EUR 0.3 million) recognised under other liabilities. In total, the change in the fair value of the derivative over the course of the year gave rise to an expense of EUR 15.0 million before tax (EUR 6.0 million).

A derivative financial instrument was also unbundled from another similarly structured transaction in previous years. This gave rise to recognition of other financial assets at fair value through profit or loss in an amount of EUR 26.0 million (EUR 57.6 million). The performance of this derivative reduced the result by EUR 35.2 million (improvement of EUR 33.9 million) in the financial year.

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 25.3 million (EUR 31.6 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 in investment income of EUR 34.8 million (EUR 38.6 million) in the financial year.

The portfolio contains a hedge against an extreme increase in mortality that protects the Hannover Re Group against a rise in mortality rates, for example due to pandemics, natural catastrophes or terrorist attacks. The risk swap is indexed against a weighted combination of US, UK and Australian population mortality. Payment under the cover is triggered proportionately between 110% and 120% of the mortality index. The derivative was recognised with a positive fair value of EUR 39.2 million (EUR 4.7 million under other liabilities) under other financial assets at fair value through profit or loss. The change in the fair value of the derivative gave rise to income of EUR 43.9 million (EUR 3.7 million) in the course of the year.

In the area of life and health reinsurance a reinsurance treaty with a financing component was also written in the past 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 22.2 million (EUR 26.5 million) and other financial assets at fair value through profit or loss in an amount of EUR 135.8 million (EUR 123.1 million). Altogether, these arrangements gave rise to an improvement in income of EUR 2.3 million (EUR 6.3 million) in the year under review.

At the end of the 2017 financial year 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 4.6 million under other financial assets at fair value through profit or loss (EUR 2.2 million under other liabilities). The change in the fair value of the derivative gave rise to income of EUR 9.6 million (expense of EUR 1.6 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 231.9 million (EUR 227.5 million) as well as recognition of liabilities in an amount of EUR 22.6 million (EUR 33.7 million) from the derivatives resulting from technical items as at the balance sheet date. Improvements in investment income amounting to EUR 90.6 million (EUR 82.5 million) as well as charges to income of EUR 50.2 million (EUR 7.6 million) were recognised in the year under review from all separately measured derivatives in connection with the technical account.

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 2,651.7 million (EUR 2,447.3 million); an amount equivalent to EUR 1,988.1 million (EUR 1,901.8 million) had been taken up as at the balance sheet date. The variable payments to the special purpose entities that are guaranteed by the Hannover Re Group cover their payment obligations. Under some of the transactions the payments resulting from the swaps in the event of a claim are reimbursed by the parent companies of the cedants by way of compensation agreements. In this case the reimbursement claims from the compensation agreements are to be capitalised separately from and up to the amount of the provision.

Under IAS 39 these transactions are to be recognised at fair value as financial guarantees. To this end Hannover Re uses the net method, according to which the present value of the agreed fixed swap premiums is netted with the present value of the guarantee commitment. The fair value on initial recognition therefore amounted to zero. The higher of the fair value and the amount carried as a provision on the liabilities side pursuant to IAS 37 is recognised at the point in time when utilisation is considered probable. This was not the case as at the balance sheet date.

8.2 Related party disclosures

IAS 24 “Related Party Disclosures” defines related parties as group entities of a common parent, associated entities, legal entities under the influence of key management personnel and the key management personnel of the entity itself. Transactions between Hannover Rück SE and its subsidiaries, which are to be regarded as related parties, were eliminated through consolidation and are therefore not discussed in the notes to the consolidated financial statement. In the 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, 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. E+S Rückversicherung AG and Hannover Rück SE bear exclusive responsibility for German business and for international markets respectively.

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 and Talanx AG grant 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 or Talanx AG.

The Hannover Re Group provides reinsurance protection for the HDI Group. To this extent, numerous underwriting business relations exist with related parties in Germany and abroad that are not included in the Hannover Re Group's consolidation. This includes business both assumed and ceded at usual market conditions. By far the bulk of the premium from business assumed – in an amount of EUR 1.4 billion (EUR 1.3 billion) – is attributable to Hannover Rück SE and its subsidiaries.

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 95**

	2021			2020[1]		
in EUR thousand	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	1,804,465	142,586	1,947,051	1,673,324	134,007	1,807,331
Underwriting result	(38,018)	19,099	(18,919)	(105,557)	19,853	(85,704)
Business ceded						
Premium	13,299	(71,924)	(58,625)	15,720	(62,496)	(46,776)
Underwriting result	24,392	(11,160)	13,232	29,844	(9,417)	20,427
Total						
Premium	1,817,764	70,662	1,888,426	1,689,044	71,511	1,760,555
Underwriting result	(13,626)	7,939	(5,687)	(75,713)	10,436	(65,277)
Material items in the balance sheet						
Assets						
Funds withheld	85,289	933,151	1,018,440	51,966	784,123	836,089
Deferred acquisition costs	280,676	17,668	298,344	245,179	21,942	267,121
Accounts receivable	688,885	11,564	700,449	521,810	14,566	536,376
Liabilities						
Loss and loss adjustment expense reserve	3,371,974	50,233	3,422,207	2,884,228	46,269	2,930,497
Benefit reserve	–	91,708	91,708	–	95,746	95,746
Unearned premium reserve	972,009	143	972,152	828,114	98	828,212
Contract deposits	–	810,913	810,913	–	663,479	663,479
Reinsurance payable	68,401	22,352	90,753	24,367	18,676	43,043

[1] Restated pursuant to IAS 8 for own additional reserves not recognised in the prior year that were established in previous years supplementary to the actual figures provided by cedants.

In addition, other assets of EUR 162.0 million (EUR 3.0 million) as well as other liabilities of EUR 33.8 million (EUR 36.3 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 performs investment and asset management services for Hannover Rück SE and the vast majority of its subsidiaries. A total amount of EUR 52.6 million (EUR 48.7 million) was expensed for the rendering of these services in the financial year just ended. Ampega Real Estate GmbH also performed services for Hannover Re until June 2021 under a number of management contracts, although in the course of the year it was merged into Ampega Asset Management GmbH. These contracts have been continued by Ampega Asset Management GmbH.

Hannover Rück SE has concluded agreements with Ampega Asset Management GmbH, HDI Global Specialty SE, Talanx Reinsurance Broker GmbH and Svedea AB that enable these companies to use software for screening 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.

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 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 use of data acquisition software for Group accounting purposes.

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

A provision of altogether EUR 9.4 million (EUR 8.6 million) was established for the remuneration of the active members of the Executive Board of Hannover Re. Of this, EUR 3.8 million (EUR 3.5 million) is fixed remuneration and an anticipated EUR 5.6 million (EUR 5.1 million) variable remuneration. In the event of 100% target attainment the remuneration of the Executive Board consists of a 40% short-term fixed component and a 60% variable component. Each member of the Executive Board receives a contractual commitment to customary target remuneration which is aligned with their scope of responsibility and their expertise and experience of relevance to the position. The long-term incentive is paid out at the end of the four-year performance period in the 2026 financial year.

With effect from 1 January 2021 the variable component of the Executive Board remuneration is split into a short-term incentive (40%) and a long-term incentive (60%) (HR performance share awards). For a detailed explanation of the long-term incentive (LTI) we would refer to section 8.3 “Share-based payment”. The short-term incentive (STI) is geared to Hannover Re’s commercial success in the respective financial year. The basis for payment under the STI is the contractually defined STI target amount, which is based on overall target attainment of 100%. The overall target attainment (including the individual premium or deduction) can range from 0% to 200%. The amount paid out under the STI is thus limited to 200% of the target amount. In addition to the return on equity as a financial performance criterion, an individual premium or deduction is also determinative for the STI. The latter encompasses both financial and non-financial performance criteria, particularly including sustainability targets. The amount of the premium or deduction, which can range from -25 percentage points to +25 percentage points, is determined by the Supervisory Board at its reasonable discretion. The criteria and key performance indicators used to establish the individual premium or deduction are defined by the Supervisory Board in advance for the coming financial year and communicated to the members of the Executive Board. The STI for the 2021 financial year amounts to EUR 2.2 million. In the previous year the total amount was split into EUR 3.1 million short-term, EUR 1.0 million medium-term and EUR 1.0 million long-term variable remuneration.

The fixed remuneration is granted in three components, namely fixed remuneration, fringe benefits and retirement provision. The fixed remuneration is aligned with the scope of duties and the professional experience of the individual member of the Executive Board. In addition, each member of the Executive Board receives certain, non-performance-based fringe benefits in the customary scope, for example a company car and insurance coverage. These amounted to EUR 0.1 million (EUR 0.1 million). The benefits after termination of the employment relationship for the most part consist of a defined contribution retirement plan, which only takes the form of a final salary pension commitment for one member of the Executive Board. Altogether, a pension expense for the active members of the Executive Board amounting to EUR 1.3 million (EUR 1.0 million) was recognised for 2021.

The total remuneration of former members of the Executive Board and their surviving dependants, for whom 16 (17) pension commitments existed, amounted to EUR 1.8 million (EUR 3.7 million) in the year under review. Of this, EUR 1.9 million was attributable in the previous year to payments due to the termination of an employment relationship. Altogether, a provision of EUR 31.2 million (EUR 34.5 million) has been set aside for pension commitments.

The exclusively short-term total remuneration of the Supervisory Board of Hannover Re amounted to EUR 1.1 million (EUR 0.9 million). Of this, EUR 0.8 million (EUR 0.3 million) was fixed remuneration; a variable component no longer existed in 2021 (in 2020: EUR 0.3 million). In addition, remuneration of EUR 0.2 million (EUR 0.1 million) was paid for committee work together with EUR 0.1 million (EUR 0.1 million) in attendance allowances. A further EUR 0.1 million (EUR 0.1 million) arose in connection with supervisory board remuneration at Group companies. There are no pension commitments for 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 granted any remuneration or benefits for personally rendered services.

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:

- Stock Appreciation Rights Plan (in effect since 2000, cancelled in stages from 2011 onwards and currently being wound up)
- 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 term 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 allocation for the year 2011 gave rise to commitments in the 2021 financial year shown in the following table. No further commitments exist after the 2021 financial year.

Stock appreciation rights of Hannover Rück N 96

	Allocation year
	2011
Award date	15.3.2012
Period	10 years
Waiting period	4 years
Basic price (in EUR)	40.87
Participants in year of issue	143
Number of rights granted	263,515
Fair value at 31 December 2021 (in EUR)	32.21
Maximum value (in EUR)	32.21
Weighted exercise price	32.21
Number of rights existing at 31 December 2021	–
Provisions at 31 December 2021 (in EUR million)	–
Amounts paid out in the 2021 financial year (in EUR million)	0.13
Expense in the 2021 financial year (in EUR million)	–

In the 2021 financial year the waiting period expired for 100% of the stock appreciation rights awarded in 2011. 4,147 stock appreciation rights from the 2011 allocation year were exercised. The total amount paid out stood at EUR 0.13 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 Annual General Meeting 2021 modified and expanded the share awards for the Executive Board with effect from the 2021 financial year (“performance shares”).

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 (from 2021 onwards in each case 15 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 20 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% (from 2021 onwards 60%) 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. From the 2021 financial year onwards the calculation of the share awards for the Executive Board is based on the target amount, which – depending on the entrepreneurial and personal target achievement – produces an allocation value that is at most 200% of the target amount.

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 amount paid out for the performance shares is additionally influenced by the development of the Total Shareholder Return (TSR). The TSR captures the share price performance as well as the dividends during the vesting period. The TSR of Hannover Re is considered in relation to the unweighted average TSR of a peer group, comprised of Munich Re, Swiss Re, Everest Re, RGA and SCOR, and produces the relative TSR. The base amount paid out derived from the share price and dividends is multiplied by this TSR, producing the final amount paid out – which is at most 200% of the base amount paid out.

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.

Share awards of Hannover Rück SE

N 97

	Allocation year								
	2021	2020		2019		2018		2017	
	Anticipated allocation	Final allocation 2021 for 2020	Anticipated allocation	Final allocation 2020 for 2019	Anticipated allocation	Final allocation 2019 for 2018	Anticipated allocation	Final allocation 2018 for 2017	Anticipated allocation
Valuation date									
Executive Board	30.12.2021	17.03.2021	30.12.2020	18.03.2020	30.12.2019	14.03.2019	28.12.2018	16.03.2018	29.12.2017
Senior Executives	30.12.2021	24.03.2021	30.12.2020	25.03.2020	30.12.2019	21.03.2019	28.12.2018	23.03.2018	29.12.2017
Valuation per share award in EUR									
Executive Board	167.15	150.42	130.30	139.04	172.30	129.60	117.70	111.65	104.90
Senior Executives	167.15	147.06	130.30	156.39	172.30	129.38	117.70	111.32	104.90
Number of allocated share awards in the allocation year									
Executive Board	25,130	7,851	9,214	7,993	7,278	7,882	9,010	9,060	9,537
Senior Executives	44,477	45,349	53,465	45,426	45,103	58,471	67,421	57,642	64,902
Other adjustments [1]	–	–	–	–	–	(837)	–	(1,835)	–
Total	69,607	53,200	62,679	53,419	52,381	65,516	76,431	64,867	74,439

[1] This figure results from originally granted share awards that have since lapsed.

Development of the provision for share awards of Hannover Rück SE

N 98

in EUR thousand	Allocation year 2021	2020	2019	2018	2017	2016	2015	Total
Provision at 31 December 2019	**–**	**–**	**1,895**	**4,981**	**7,198**	**12,187**	**15,691**	**41,952**
Allocation 2020	–	1,902	1,398	1,040	500	13	–	4,853
Utilisation 2020	–	–	–	–	–	–	14,747	14,747
Release 2020	–	–	–	70	90	105	944	1,209
Provision at 31 December 2020	**–**	**1,902**	**3,293**	**5,951**	**7,608**	**12,095**	**–**	**30,849**
Allocation 2021	2,638	1,863	2,688	3,500	3,595	1,227	–	15,511
Utilisation 2021	–	–	–	–	–	13,322	–	13,322
Release 2021	–	–	655	710	608	–	–	1,973
Provision at 31 December 2021	**2,638**	**3,765**	**5,326**	**8,741**	**10,595**	**–**	**–**	**31,065**

The aggregate provision – recognised under the sundry non-technical provisions – amounted to EUR 31.1 million (EUR 30.9 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 15.5 million (EUR 4.9 million). This consists of the expense for share awards of the 2021 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 1.0 million (EUR 1.4 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 8,629 share awards of the Executive Board finally allocated in 2016 with a value of EUR 150.42 each plus the dividend entitlement of EUR 20.75 were paid out to the eligible members of the Executive Board. The 69,744 share awards of the senior executives for the 2016 financial year were paid out in 2021 with a value of EUR 147.06 each plus the dividend entitlement of EUR 20.75.

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 3,298 (3,132). As at the balance sheet date altogether 3,346 (3,218) staff were employed by the Hannover Re Group, with 1,477 (1,407) employed in Germany and 1,869 (1,811) working for the consolidated Group companies abroad.

Personnel information N 99

	2021					2020	
	31.3.	30.6.	30.9.	31.12.	Average	31.12.	Average
Number of employees (excluding members of the Executive Board)	3,286	3,308	3,333	3,346	3,298	3,218	3,132

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 100

in EUR thousand	2021	2020
a) Wages and salaries	302,594	285,111
	302,594	**285,111**
b) Social security contributions and expenditure on provisions and assistance		
ba) Social security contributions	25,144	23,152
bb) Expenditures for pension provision	29,028	28,851
bc) Expenditures for assistance	4,750	4,792
	58,922	**56,795**
Total	**361,516**	**341,906**

8.5 Earnings per share and dividend proposal

Calculation of the earnings per share N 101

	2021	2020
Group net income in EUR thousand	1,231,334	883,073
Weighted average of issued shares	120,597,003	120,596,996
Basic earnings per share in EUR	10.21	7.32
Diluted earnings per share in EUR	10.21	7.32

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 number of shares does not include 15,766 (16,511) 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 per share

A dividend of EUR 542.7 million (EUR 663.3 million) was paid in the year under review for the 2020 financial year.

It will be proposed to the Annual General Meeting on 4 May 2022 that a dividend of EUR 4.50 as well as a special dividend of EUR 1.25 per share should be paid for the 2021 financial year. This corresponds to a total distribution of EUR 693.4 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 continue 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 debt issued by Hannover Finance (Luxembourg) S.A. in the 2012 financial year in an amount of EUR 500.0 million.

The guarantee given by Hannover Rück SE for the subordinated debt attaches if the issuer fails to render payments due under the bonds. The guarantee covers the nominal amount as well as interest due until the repayment dates. Given the fact that interest on the bond 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 4,305.4 million (EUR 3,939.7 million) and EUR 295.9 million (EUR 208.6 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 3,947.1 million (EUR 2,814.5 million) in the form of so-called "single trust funds". This amount includes a sum equivalent to EUR 3,131.8 million (EUR 2,464.4 million) which was furnished by investors as security for potential reinsurance obligations from ILS transactions.

As part of our business activities we hold collateral available outside the United States in various blocked custody accounts and trust accounts, the total amount of which in relation to the Group's major companies was EUR 3,210.1 million (EUR 3,065.2 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 2,646.8 million (EUR 2,816.2 million) and with various terms maturing at the latest in 2026.

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 1,264.2 million (EUR 1,448.4 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 and net assets" subsection 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 41.9 million (EUR 37.3 million) as collateral for existing derivative transactions. We received collateral with a fair value of EUR 14.4 million (EUR 2.8 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 922.4 million (EUR 662.3 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 1,588.2 million (EUR 1,275.6 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 11.9 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 2021 in connection with leases.

Leases in the balance sheet N 102

in EUR thousand	2021	2020
Investment property	33,391	31,215
Own-use property	68,636	42,821
Fixtures, fittings and equipment	140	54
Sundry assets	1,159	1,456
Lease liabilities	112,553	82,841

The allocation to the right-of-use assets amounted to EUR 35.7 million (EUR 9.2 million) in the financial year. The increase can be attributed primarily to the long-term leasing of new office space.

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 103

in EUR thousand	2021	2020
Investment property	413	429
Own-use real estate	11,728	10,966
Fixtures, fittings and equipment	51	80
Sundry assets	891	893
Total	**13,083**	**12,368**

The interest expenses for lease liabilities totalled EUR 3.7 million (EUR 3.6 million). Expenses in connection with short-term leases were recognised in an amount of EUR 0.4 million (EUR 0.3 million). The total amounts payable for leases came to EUR 14.5 million (EUR 12.2 million).

Rented properties

Future minimum lease payments receivable N 104

in EUR thousand	Amounts receivable
2022	100,487
2023	97,533
2024	87,940
2025	74,145
2026	67,856
Subsequent years	207,926

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 137.0 million (EUR 139.6 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 defined 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 105

	2021		2020	
in EUR thousand	PwC worldwide	thereof PwC GmbH	PwC worldwide	thereof PwC GmbH
Services relating to auditing of the financial statements	9,474	3,067	9,029	2,469
Other assurance services	225	135	186	104
Other services	301	190	391	325
Total	**10,000**	**3,392**	**9,606**	**2,898**

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 reviews. The fees for other services encompass, for example, consultancy services in connection with the adoption of IFRS 17.

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

The impacts of the armed conflict that broke out in February on the territory of Ukraine cannot be assessed at the present point in time. Even though direct consequences of war are normally excluded from reinsurance coverage, the possibility cannot be ruled out that losses may occur in specialty lines and that the sanctions threatened in this connection could indirectly affect Hannover Re.

A number of large loss events have already occurred in the early weeks of 2022. They include severe winter storms that swept across Central Europe with high wind speeds and a car carrier adrift on fire southwest of the Azores in the Atlantic. The amount of the insured losses and our participation in them cannot yet be reliably estimated. Nevertheless, we do not currently expect our pro rata large loss budget for the first quarter to be exceeded as a consequence of this group of claims.

Hannover, 4 March 2022

Executive Board

Henchoz Althoff Chèvre

Jungsthöfel Dr. Miller Dr. Pickel Sehm

Independent Auditor’s Report

(Translation of the auditor`s report issued in German language of the annual/consolidated financial statements prepared in German language by the management of Hannover Rück SE)

To Hannover Rück SE, Hannover

Report on the audit of the consolidated financial statements and of the group management report

Audit Opinions

We have audited the consolidated financial statements of Hannover Rück SE, Hanover, and its subsidiaries (the Group), which comprise the consolidated statement of financial position as at December 31, 2021, 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 January 1 to December 31, 2021, 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 – which comprise the content included to comply with the German legal requirements as well as remuneration report pursuant to § [Article] 162 AktG [Aktiengesetz: German Stock Corporation Act], including the related disclosures, included in section „Remuneration report" of the group management report for the financial year from January 1 to December 31, 2021. 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 German commercial law pursuant to § 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 December 31, 2021, and of its financial performance for the financial year from January 1, to December 31, 2021, 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 for 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). We performed the audit of the consolidated financial statements in supplementary compliance with the International Standards on Auditing (ISAs). Our responsibilities under those requirements, principles and standards 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 Audit of the Consolidated Financial Statements

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 January 1 to December 31, 2021. 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 unsettled claims 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) Financial instruments amounting to EUR 67,519.7 million (81.4% of total assets) are reported in the Company's consolidated financial statements.

Of these financial instruments, financial assets amounting to EUR 49,666.9 million were measured at fair value. Of those financial instruments in turn, the fair value of EUR 45,614.2 million was calculated using valuation models or based on third-party inputs. The measurement of financial instruments whose fair value must be determined based on valuation models and third-party inputs are subject to uncertainty – including in light of the impacts of the coronavirus crisis – because the most recent market data or comparable figures are not always available and therefore estimates must be used in lieu of currently observable market parameters.

In this context, financial instruments measured using models are subject to an increased measurement risk due to their lower objectivity and the underlying judgments, estimates and assumptions of the executive directors, including in light of the impacts of the coronavirus crisis. 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 significant notes disclosures on measurement methods and judgments are necessary, this matter was of particular significance in the context of our audit.

(b) In the course of our audit, we analyzed the financial instruments valued based on models and third-party inputs, with the focus being placed on measurement uncertainties. We assessed the appropriateness and effectiveness of the relevant controls for the measurement of the financial instruments and the model validation. Therewith, we assessed, among other things, the integrity of the underlying data and the process for arriving at 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 used by the executive directors to test the assets for impairment and the inputs used for that purpose. In this context, we also assessed the executive directors' estimate as to the impact of the coronavirus crisis on recoverability. 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, 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 inputs) are suitable overall and that the notes and 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 of the notes to the consolidated financial statements entitled "Accounting policies" and "Notes to the individual items of the balance sheet", subsection "Assets under own management".

(2) Measurement of provisions for unsettled claims in the property reinsurance business segment

(a) In the consolidated financial statements of the Company technical provisions ("claims provisions") amounting to EUR 40,777.7 million (49.2% of total assets) are reported under the "Provisions for unsettled claims" consolidated balance sheet item.

Of that amount, EUR 35,089.4 million was attributable to the Property reinsurance segment.

The claims provisions under property reinsurance are estimated based on cedant information based on experience. 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. This also includes the expected impact of the ongoing coronavirus crisis on the recognition of the claims provision for the business as a whole.

The executive directors calculate the amount of the provision taking into account the results of the actuarial methods and other factors in relation to calculation uncertainty.

The calculation 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 these provisions for the assets liabilities and financial performance of the Group, the measurement of these provisions was of particular significance in the context of our audit.

(b) Given the significance of the claims provision, as part of our audit we worked with our actuaries to assess 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 assessed the appropriateness of the design of the process for recognizing reserves and 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 testing of controls, 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 valuation specialists assessed the appropriateness of the methods used by the Company. Furthermore, our internal valuation specialists also assessed the models and assumptions used by the executive directors based on industry expertise and experience with recognized actuarial practice, and assessed the consistent application of the valuation methods. In this context, we also assessed the executive directors' estimate as to the impact of the coronavirus crisis on the business as a whole.

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 of the notes to the consolidated financial statements entitled "Accounting policies" and "Notes to the individual items of the balance sheet", subsection "Technical provisions". Disclosures on risks are contained in the Group management report in the section entitled "Risk report", subsection "Technical risks of property reinsurance".

(3) Measurement of premium reserves

(a) Technical provisions amounting to EUR 7,541.9 million (9.1% of total consolidated assets) are reported under the "Premium reserves" balance sheet item in the consolidated financial statements. 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 previous 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 actuarial 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 reporting date, less the present value of premiums to be paid in connection with the portfolios subject to standardized management. This also includes the expected impact of the ongoing coronavirus crisis on the premium reserves.

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 judgement to be exercised by the executive directors and the associated estimate uncertainties. 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 and 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 worked with our actuaries to assess 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 testing of controls, 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 tests of details we assessed the correct and proper use of the available cedant settlements when calculating the premium reserves.

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 formed an opinion as to 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.

In this context, we also assessed the executive directors' estimate as to the impact of the coronavirus crisis.

Based on our audit procedures, we were able to satisfy ourselves that the methods and assumptions used by the executive directors to measure premium reserves are appropriate overall.

(c) The Company's disclosures on the premium reserve are contained in the sections of the notes to the consolidated financial statements entitled "Accounting policies" and "Notes to the individual items of the balance sheet", subsection "Technical provisions". Disclosures on risks are contained in the Group management report in the section entitled "Risk report", subsection "Technical risks of personal reinsurance".

(4) Calculation of estimated gross premium

(a) In its consolidated financial statements, the Company reported gross premiums of EUR 27,762.3 million in the income statement.

Acquired reinsurance premiums are accounted for in accordance with the terms and conditions of the reinsurance policies. In the absence of invoices for cedants, the Company made supplementary or complete estimates of the premiums.

The estimates are based on assumptions and are therefore subject to considerable uncertainty and judgment, including with respect to the impact of the coronavirus. Due to the material significance 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 purposes of auditing the estimated gross premium, we first evaluated the design of the contribution and estimation process. In that connection, we identified the material key controls and analyzed their design. Based on that analysis, we evaluated the operating effectiveness by testing the effectiveness of the key controls implemented in the process and to assess the appropriateness of the material assumptions by verifying and analyzing the procedure for calculating and deriving the estimated gross premium. In this context, we also assessed the executive directors' estimate as to the impact of the coronavirus crisis.

In tests of details, we critically reviewed the material assumptions underlying an estimate and asked the Company to explain to us the grounds for such estimates. Based on information on the premiums expected in the previous year, we reconciled the expectations against the actual events 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 used 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 of the notes to the consolidated financial statements entitled "Accounting policies" and "Notes to the individual items of the income statement".

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 „Corporate governance" 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 statement" of the group management report.
- the disclosures on Solvency II reporting included in the group management report that are marked as unaudited.

The other information comprises further all 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 mentioned above, 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 disclosures audited in terms of content or with our knowledge obtained in the audit, or
- otherwise appears to be materially misstated.

If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

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.

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.

The executive directors and the supervisory board are further responsible for the preparation of the remuneration report, including the related disclosures, which is included in a separate section of the group management report and complies with the requirements of § 162 AktG. They are also responsible for such internal control as they determine is necessary to enable the preparation of a remuneration report, including the related disclosures, that is free from material misstatement, whether due to fraud or error.

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) and supplementary compliance with the ISAs 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.

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 controls.
- 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 conformity 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

Report on the Assurance on the Electronic Rendering of the Consolidated Financial Statements and the Group Management Report Prepared for Publication Purposes in Accordance with § 317 Abs. 3a HGB

Assurance Opinion

We have performed assurance work in accordance with § 317 Abs. 3a HGB to obtain reasonable assurance as to whether the rendering of the consolidated financial statements and the group management report (hereinafter the "ESEF documents") contained in the electronic file HannoverRueckSE_KA_LB_2021-12-31-de.zip and prepared for publication purposes complies in all material respects with the requirements of § 328 Abs. 1 HGB for the electronic reporting format ("ESEF format"). In accordance with German legal requirements, this assurance work extends only to the conversion of the information contained in the consolidated financial statements and the group management report into the ESEF format and therefore relates neither to the information contained within these renderings nor to any other information contained in the electronic file identified above.

In our opinion, the rendering of the consolidated financial statements and the group management report contained in the electronic file identified above and prepared for publication purposes com-plies in all material respects with the requirements of § 328 Abs. 1 HGB for the electronic reporting format. Beyond this assurance opinion and our audit opinion on the accompanying consolidated financial statements and the accompanying group management report for the financial year from January 1 to December 31, 2021 contained in the "Report on the Audit of the Consolidated Financial Statements and on the Group Management Report" above, we do not express any assurance opinion on the information contained within these renderings or on the other information contained in the electronic file identified above.

Basis for the Assurance Opinion

We conducted our assurance work on the rendering of the consolidated financial statements and the group management report contained in the electronic file identified above in accordance with § 317 Abs. 3a HGB and the IDW Assurance Standard: Assurance Work on the Electronic Rendering, of Financial Statements and Management Reports, Prepared for Publication Purposes in Accordance with § 317 Abs. 3a HGB (IDW AsS 410 (10.2021)) and the International Standard on Assurance Engagements 3000 (Revised). Our responsibility in accordance therewith is further described in the "Group Auditor's Responsibilities for the Assurance Work on the ESEF Documents" section. Our audit firm applies the IDW Standard on Quality Management 1: Requirements for Quality Management in the Audit Firm (IDW QS 1).

Responsibilities of the Executive Directors and the Supervisory Board for the ESEF Documents

The executive directors of the Company are responsible for the preparation of the ESEF documents including the electronic renderings of the consolidated financial statements and the group management report in accordance with § 328 Abs. 1 Satz 4 Nr. [number] 1 HGB and for the tagging of the consolidated financial statements in accordance with § 328 Abs. 1 Satz 4 Nr. 2 HGB.

In addition, the executive directors of the Company are responsible for such internal control as they have considered necessary to enable the preparation of ESEF documents that are free from material non-compliance with the requirements of § 328 Abs. 1 HGB for the electronic reporting format, whether due to fraud or error.

The supervisory board is responsible for overseeing the process for preparing the ESEF documents as part of the financial reporting process.

Group Auditor's Responsibilities for the Assurance Work on the ESEF Documents

Our objective is to obtain reasonable assurance about whether the ESEF documents are free from material non-compliance with the requirements of § 328 Abs. 1 HGB, whether due to fraud or error. We exercise professional judgment and maintain professional skepticism throughout the assurance work. We also

- Identify and assess the risks of material non-compliance with the requirements of § 328 Abs. 1 HGB, whether due to fraud or error, design and perform assurance procedures responsive to those risks, and obtain assurance evidence that is sufficient and appropriate to provide a basis for our assurance opinion.
- Obtain an understanding of internal control relevant to the assurance work on the ESEF documents in order to design assurance procedures that are appropriate in the circumstances, but not for the purpose of expressing an assurance opinion on the effectiveness of these controls.
- Evaluate the technical validity of the ESEF documents, i. e., whether the electronic file containing the ESEF documents meets the requirements of the Delegated Regulation (EU) 2019/815 in the version in force at the date of the consolidated financial statements on the technical specification for this electronic file.
- Evaluate whether the ESEF documents provide an XHTML rendering with content equivalent to the audited consolidated financial statements and to the audited group management report.
- Evaluate whether the tagging of the ESEF documents with Inline XBRL technology (iXBRL) in accordance with the requirements of Articles 4 and 6 of the Delegated Regulation (EU) 2019/815, in the version in force at the date of the consolidated financial statements, enables an appropriate and complete machine-readable XBRL copy of the XHTML rendering.

Further Information pursuant to Article 10 of the EU Audit Regulation

We were elected as group auditor by the supervisory board on March 10, 2021. We were engaged by the supervisory board on December 3, 2021. We have been the group auditor of Hannover Rück SE, Hanover, 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).

Reference to an Other Matter – use of the Auditor's Report

Our auditor's report must always be read together with the audited consolidated financial statements and the audited group management report as well as the assured ESEF documents. The consolidated financial statements and the group management report converted to the ESEF format – including the versions to be published in the Federal Gazette – are merely electronic renderings of the audited consolidated financial statements and the audited group management report and do not take their place. In particular, the "Report on the Assurance on the Electronic Rendering of the Consolidated Financial Statements and the Group Management Report Prepared for Publication Purposes in Accordance with § 317 Abs. 3a HGB" and our assurance opinion contained therein are to be used solely together with the assured ESEF documents made available in electronic form.

German public auditor responsible for the engagement

The German Public Auditor responsible for the engagement is Mathias Röcker.

Hannover, 7 March 2022

PricewaterhouseCoopers GmbH
Wirtschaftsprüfungsgesellschaft

sgd. Mathias Röcker Wirtschaftsprüfer (German Public Auditor)	sgd. Dennis Schnittger Wirtschaftsprüfer (German Public Auditor)

Independent Practitioner's Report on a Limited Assurance Engagement on Non-financial Reporting

(PricewaterhouseCoopers GmbH has performed a limited assurance engagement on the German version of the combined non-financial statement and issued an independent practitioner`s report in German language, which is authoritative. The following text is a translation of the independent practitioner`s report.)

To Hannover Rück SE, Hannover

We have performed a limited assurance engagement on the combined non-financial statement of Hannover Rück SE, Hannover, (hereinafter the "Company") for the period from 1 January to 31 December 2021 (hereinafter the "Combined Non-financial Statement") included in section "Combined Non-financial Statement" of the combined management report.

Not subject to our assurance engagement are the external sources of documentation or expert opinions mentioned in the Combined Non-financial Statement.

Responsibility of the Executive Directors

The executive directors of the Company are responsible for the preparation of the Combined Non-financial Statement in accordance with §§ (Articles) 315c in conjunction with 289c to 289e HGB ("Handelsgesetzbuch": "German Commercial Code") and Article 8 of REGULATION (EU) 2020/852 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 18. June 2020 on establishing a framework to facilitate sustainable investment and amending Regulation (EU) 2019/2088 (hereinafter the "EU Taxonomy Regulation") and the Delegated Acts adopted thereunder, as well as for making their own interpretation of the wording and terms contained in the EU Taxonomy Regulation and the Delegated Acts adopted thereunder, as set out in section "Disclosures under Article 8 of the EU Taxonomy Regulation" of the Combined Non-financial Statement.

This responsibility includes the selection and application of appropriate non-financial reporting methods and making assumptions and estimates about individual non-financial disclosures of the Group that are reasonable in the circumstances. Furthermore, the executive directors are responsible for such internal controls as the executive directors consider necessary to enable the preparation of a Combined Non-financial Statement that is free from material misstatement whether due to fraud or error.

The EU Taxonomy Regulation and the Delegated Acts issued thereunder contain wording and terms that are still subject to considerable interpretation uncertainties and for which clarifications have not yet been published in every case. Therefore, the executive directors have disclosed their interpretation of the EU Taxonomy Regulation and the Delegated Acts adopted thereunder in section "Disclosures under Article 8 of the EU Taxonomy Regulation" of the Combined Non-financial Statement. They are responsible for the defensibility of this interpretation. Due to the immanent risk that indeterminate legal terms may be interpreted differently, the legal conformity of the interpretation is subject to uncertainties.

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.

Responsibility of the Assurance Practitioner

Our responsibility is to express a conclusion with limited assurance on the Combined Non-financial Statement based on our assurance engagement.

We conducted our assurance engagement in accordance with 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 obtain limited assurance about whether any matters have come to our attention that cause us to believe that the Company's Combined Non-financial Statement, other than the external sources of documentation or expert opinions mentioned in the Combined Non-financial Statement, are not prepared, in all material respects, in accordance with §§ 315c in conjunction with 289c to 289e HGB and the EU Taxonomy Regulation and the Delegated Acts issued thereunder as well as the interpretation by the executive directors disclosed in section "Disclosures under Article 8 of the EU Taxonomy Regulation" of the Combined Non-financial Statement.

In a limited assurance engagement the procedures performed are less extensive than in a reasonable assurance engagement, and accordingly a substantially lower level of assurance is obtained. The selection of the assurance procedures is subject to the professional judgement of the assurance practitioner.

In the course of our assurance engagement, we have, amongst other things, performed the following assurance procedures and other activities:

- Inquiries of the executive directors and relevant employees involved in the preparation of the Combined Non-financial Statement about the preparation process, about the internal control system relating to this process and about disclosures in the Combined Non-financial Statement
- Identification of likely risks of material misstatement in the Combined Non-financial Statement
- Analytical procedures on selected disclosures in the Combined Non-financial Statement
- Reconciliation of selected disclosures with the corresponding data in the consolidated financial statements and combined management report
- Evaluation of the presentation of the Combined Non-financial Statement
- Evaluation of the process to identify taxonomy-eligible economic activities and the corresponding disclosures in the Combined Non-financial Statement

In determining the disclosures in accordance with Article 8 of the EU Taxonomy Regulation, the executive directors are required to interpret undefined legal terms. Due to the immanent risk that undefined legal terms may be interpreted differently, the legal conformity of their interpretation and, accordingly, our assurance engagement thereon are subject to uncertainties.

Assurance Opinion

Based on the assurance procedures performed and evidence obtained, nothing has come to our attention that causes us to believe that the Combined Non-financial Statement of the Company for the period from 1 January to 31 December 2021 is not prepared, in all material respects, in accordance with §§ 315c in conjunction with 289c to 289e HGB and the EU Taxonomy Regulation and the Delegated Acts issued thereunder as well as the interpretation by the executive directors disclosed in section "Disclosures under Article 8 of the EU Taxonomy Regulation" of the Combined Non-financial Statement.

We do not express an assurance opinion on the external sources of documentation or expert opinions mentioned in the Combined Non-financial Statement.

Restriction of Use

We draw attention to the fact that the assurance engagement was conducted for the Company's purposes and that the report is intended solely to inform the Company about the result of the assurance engagement. Consequently, it may not be suitable for any other purpose than the aforementioned. Accordingly, the report is not intended to be used by third parties for making (financial) decisions based on it. Our responsibility is to the Company. We do not accept any responsibility to third parties. Our assurance opinion is not modified in this respect.

Frankfurt am Main, 7 March 2022

PricewaterhouseCoopers GmbH
Wirtschaftsprüfungsgesellschaft

Nicolette Behncke	ppa. Christopher Hintze
Wirtschaftsprüferin	Wirtschaftsprüfer
[German public auditor]	[German public auditor]

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, 4 March 2022

Executive Board

Henchoz Althoff Chèvre

Jungsthöfel Dr. Miller Dr. Pickel Sehm

Supervisory Board

Report by the Supervisory Board

of Hannover Rück SE

In our function as the Supervisory Board we considered at length during the 2021 financial year the position and development of the company and its major subsidiaries. The implications of the Covid-19 crisis remained a focus of our deliberations. 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. The Supervisory Board of Hannover Rück SE held four regular meetings in order to adopt the necessary resolutions after appropriate discussion. In conformity with the applicable safeguards to reduce the risk of infection with Covid-19 the meetings were held in a hybrid format, i.e. with partially physical and partially virtual attendance. With the exception of the meeting in March, in which Dr. Schipporeit was unable to participate, all the Supervisory Board members took part in the Supervisory Board meetings held in 2021. The meetings of the committees were duly attended in all cases by all the members of the respective bodies. In addition, two representatives of the Federal Financial Supervisory Authority attended one meeting of the Supervisory Board on a virtual basis. The individual participation in the meetings is shown in the following table:

	Participation rate	
	Number of meetings	in %
Participation in full meetings of the Supervisory Board		
Torsten Leue	4/4	100
Herbert K. Haas	4/4	100
Natalie Bani Ardalan	4/4	100
Frauke Heitmüller	4/4	100
Ilka Hundeshagen	4/4	100
Dr. Ursula Lipowsky	4/4	100
Dr. Michael Ollmann	4/4	100
Dr. Andrea Pollak	4/4	100
Dr. Erhard Schipporeit	3/4	75
Participation in meetings of the Finance and Audit Committee		
Torsten Leue	4/4	100
Herbert K. Haas	4/4	100
Dr. Ursula Lipowsky	4/4	100
Participation in meetings of the Standing Committee		
Torsten Leue	4/4	100
Herbert K. Haas	4/4	100
Dr. Erhard Schipporeit	4/4	100

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 function holders. The quarterly reports with the components of the financial statements and the key figures for the Hannover Re Group constituted an important source of information for the Supervisory Board. We also held discussions without the presence of the Executive Board, inter alia regarding personnel matters on the level of the Executive Board and regularly in relation to matters of the Supervisory Board's internal organisation.

We received an analysis of the 2020 results in property & casualty and life & health reinsurance as well as a presentation from the Executive Board covering the profit expectations for the 2021 financial year and the operational planning for the 2022 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 company's risk situation. 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 2021 financial year.

Key points of deliberation in the full meetings of the Supervisory Board

At its meeting on 10 March 2021 the Supervisory Board discussed in detail the audited annual and consolidated financial statements as well as the Executive Board's proposal for the appropriation of the disposable profit for the 2020 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 auditors presented the results of the audit and elaborated on the audit procedure. The assurance report on the non-financial information statement was also discussed. The Executive Board outlined the prospects for the current 2021 financial year. The insights gained from the important renewals in property and casualty reinsurance as at 1 January 2021 were described, providing us with a good impression of the development of market conditions and Hannover Re's positioning. We discussed the major findings from the compliance, audit and risk reports. The respective function holders of the key functions were available to answer questions for this purpose. We adopted a resolution on the annual revision of the investment guidelines, in which regard no significant change to the general investment strategy was proposed. At the recommendation of the Finance and Audit Committee, PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft – following its initial appointment for the audit of the 2018 financial year – was again awarded the mandate to audit the annual financial statements. In preparation for the Annual General Meeting on 5 May 2021, the agenda was discussed and approved; in view of the ongoing pandemic situation, we opted to hold the General Meeting in a virtual format without physical attendance. In terms of content, we had already explored at length in the previous year the remuneration system for the Executive Board to be presented to the General Meeting for approval and decided on its contractual implementation at the turn of the year. The remuneration of the Supervisory Board, which had also already been a topic of consideration in 2020, was prepared for adoption of a resolution by the General Meeting. Details of the systems can be found in the Declaration on Corporate Governance on page 118 et seq. as well as in the remuneration report for 2021 on page 124 et seq. In addition, we deliberated on the issuance of a subordinated bond and approved – following a further recommendation of the Finance and Audit Committee – the proposed near-term issuance of regulatory subordinated capital. Placement was consequently completed successfully on 22 March 2021 in the planned volume and with an attractive coupon of 1.375% (https://www.hannover-re.com/1673190/bonds). Furthermore, after in-depth consideration we approved the modification of the schedule of responsibilities for the Executive Board, according to which the global markets in P&C were strategically regrouped under Mr. Althoff and Dr. Pickel. Additionally, 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 individual targets for the 2020 financial year. In this context, as usual, we factored the findings of external remuneration surveys into our deliberations for the purpose of making a market comparison. Dr. Schipporeit was unable to attend one meeting and cast his votes on the relevant resolutions in writing pursuant to § 12 (2) of the Articles of Association of Hannover Rück SE.

At the meeting held on 4 May 2021 the Executive Board reported on the first quarter of 2021, in which regard we also considered at length the objectives of the current strategy cycle (2021-2023) against the backdrop of the uncertainties associated with the pandemic. We explored the overall results of the previous year in greater depth, with the underlying effects on intrinsic value creation (IVC) considered in detail. We also received a report on the return on investment in a peer comparison. In addition to the outlook for the current financial year – which was similarly shaped by the uncertainties around the Covid-19 crisis –, 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. Another focus of the meeting was the discussion of the IT strategy. In light of the increasing importance of digitalisation and innovation and the attention paid to them in all areas of the company, we shall continue to approach this topic more intensively going forward. We also used the meeting to review the Corporate Governance Principles with an eye to their up-to-dateness and the conformity of their language with the other documents describing corporate governance. The version approved by us was published on the company's website following the meeting (https://www.hannover-re.com/50889/corporate-governance-principles.pdf). With regard 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 present extensive list of topics which goes beyond the regulatory requirements will be used again in 2022.

On 3 August 2021, in a meeting that lasted the entire day, the Executive Board reported on the first half of 2021, describing as usual key performance indicators from the underwriting and non-underwriting side and outlining the progress made in attaining the strategic targets. We discussed the major insights from the risk report and the Chief Risk Officer presented the final conclusions of the expert opinion submitted to us on the adequacy of the loss reserves in property and casualty reinsurance. We also received the audit report on the Solvency II balance sheet. Another key topic at the August meeting was the internal approach to dealing with cyber risks. The Supervisory Board was able to obtain a solid picture of the risk management processes. Based on a separate item of the reporting, we also looked at the metrics used to steer the life and health reinsurance business. We received a detailed report on the status of implementation of the new financial reporting standard (IFRS 17) within the company. In this context, more extensive content-related information was provided about the new standard – building on the training in which the Supervisory Board had participated in the previous year. Furthermore, following the necessary process changes completed in the previous year, an account of related party transactions was provided. It was concluded that there were no transactions in the reporting period that fall under the legal requirements governing mandatory approval (§ 111b Stock Corporation Act (AktG)) or compulsory disclosure (§ 111c

Stock Corporation Act (AktG)). Within the subject area of corporate governance we also explored the efficiency of the Supervisory Board's working procedure. The German Corporate Governance Code (DCGK) requires a self-assessment to be conducted regularly in this respect. For this purpose, our individual assessments were surveyed in advance. The consolidated anonymised evaluation of this survey then formed the basis for exploring the findings at the meeting. Similarly building on our further training in the previous year, we again had the opportunity to learn about the latest developments in the area of (group) tax law in reinsurance and their relevance to the company from the responsible expert present at the meeting.

At the last meeting of the year held on 3 November 2021, we deliberated at length on the key preliminary results in the business performance together with the outlook for the current financial year. The large losses in property and casualty reinsurance, which confronted the entire industry with exceptional challenges in the year under review, were our primary focus. The Executive Board also presented to us the operational planning for 2022; we considered this in detail and subsequently approved the annual and 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. The Executive Board provided routine reporting on employee capacities and the elaboration of the remuneration system for senior executives pursuant to § 3 Para. 5 of the Regulation on the Supervisory Law Requirements for Remuneration Schemes in the Insurance Sector (VersVergV). The resolutions to be adopted by us on internal restructuring measures within the Group were a point of emphasis in the meeting. After in-depth discussion of the proposed transaction, we approved the strategic sale of the shares in HDI Global Specialty SE. Following on from the training activities at the August meeting, we received an update on the progress of implementation of IFRS 17 in the internal accounting process as well as a report on the prospects for dealing with relevant new framework conditions in tax law. In addition, we were provided with pertinent information on the sustainability strategy in the current strategy cycle and the latest status of implementation. For this purpose we were able to engage directly with the newly instituted function of Corporate Sustainability Manager. We also devoted a significant part of our discussions in the meeting to corporate governance issues and hence approved the modified Declaration of Conformity (for further details see the Declaration on Corporate Governance on page 118 et seq. of the combined management report). Based on the findings of the "Fit and Proper" self-assessment that had been conducted among the Supervisory Board members, the Supervisory Board 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; the costs incurred in this connection were paid by the company. Topics covered in 2021 included, among others, Solvency II, financial reporting, sustainability/ESG, cyber and recent market developments relating to the pandemic. We also discussed and approved the individual targets for members of the Executive Board for 2022. The focus here was on the findings of the Organisational Health Check, sustainability and the strategic objectives.

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 and the Standing Committee each met on four occasions in 2021. The committee chairs 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 as well as reports of the key functions 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 2021 financial year were defined. The review of the quality of the auditing was carried out using the system defined in the previous year. 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 the rate increases that had been initiated and/or implemented. In one meeting we focused on the capital market risks in life and health reinsurance, while in another we concentrated specifically on the mapping of currencies in the IFRS consolidated financial statement. The increasingly significant issue of sustainability/ESG was also discussed by the Committee on multiple occasions. In cooperation with the Corporate Sustainability

Manager and the Executive Board, we examined in detail the process for compiling the non-financial information statement with an eye to existing and new regulatory requirements. The implementation of the new financial reporting standard (IFRS 17) was another point of emphasis in the Committee's deliberations in the 2021 financial year.

As in the previous years, among other things, the Standing Committee reviewed the adequacy of the remuneration scheme for the members of the Executive Board, determined the variable remuneration of the members of the Executive Board for the 2020 financial year based on the findings pertaining to attainment of their respective targets and examined the remuneration for the Board members who were due for review. We exchanged views with the Chairman of the Executive Board regarding the aforementioned change to the schedule of responsibilities in the area of property and casualty reinsurance. With regard to all these matters the Committee drew up corresponding recommendations for the full Supervisory Board. In the context of the extensions of the terms of office for individual members of the Executive Board that were up for discussion in 2021, we engaged in an ongoing dialogue on medium- and long-term succession arrangements. Furthermore, the individual targets of the members of the Executive Board for 2022 were defined on the basis of the new remuneration scheme and prepared for adoption of a resolution by the full Supervisory Board.

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 defined by the European Securities and Markets Authority (ESMA), auditing activities relating to the implementation of IFRS 17 were also included in the scope of the audit. The mandate for the review report by the independent auditors on the Half-yearly Financial Report and the Solvency II balance sheet 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 Wirtschaftsprüfungsgesellschaft 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 2021 – 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 2021 is in accordance with that of the Executive Board.

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 reviewed the information statement with limited assurance in accordance with the audit standard ISAE 3000 (Revised) (see here the Independent Auditor's Report on page 275 et seq.).

Changes on the Supervisory Board and the Executive Board

There were no changes in the composition of the Supervisory Board or its committees in the year under review. The term of office of the company's Supervisory Board ends pursuant to § 10 (3) of the Articles of Association of Hannover Rück SE at the end of the General Meeting that ratifies the acts of management for the 2023 financial year.

Nor were any changes made to the composition of the Executive Board in the year under review.

Word of thanks to the Executive Board and members of staff

Thanks to the extraordinary performance and prudent management of the Executive Board in this and past years and even though the 2021 financial year once again presented enormous challenges, Hannover Rück SE generated a good result. A great debt of gratitude is owed here in particular to the employees of the company and the Group for their dedication and their considerable flexibility.

The Supervisory Board would like to express its recognition and special appreciation to the Executive Board and above all to the employees for their efforts.

Hannover, 8 March 2022

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., Hannover
Chief Executive Officer of Talanx AG, Hannover

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., Hannover

Natalie Bani Ardalan [4]
Springe
(since 8 May 2019) [5]
Employee

Frauke Heitmüller [4]
Hannover
(since 3 May 2012) [5]
Employee

Ilka Hundeshagen [4]
Hannover
(since 8 May 2019) [5]
Employee

Dr. Ursula Lipowsky [2]
Munich
(since 7 May 2018) [5]
Member of various supervisory boards

Dr. Michael Ollmann
Hamburg
(since 8 May 2019) [5]
Member of various supervisory boards

Dr. Andrea Pollak [3]
Vienna, Austria
(since 3 May 2011) [5]
Independent management consultant

Dr. Erhard Schipporeit [1]
Hannover
(since 3 May 2007) [5]
Independent management consultant

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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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.

Asset/liability management: matching of the invested assets with the liabilities arising out of the reinsurance business.

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

Business continuity management: integrated set of processes to maintain business operations

Capital adequacy ratio: the adequacy ratio is derived from the ratio of the available capital (or own funds) to the required capital – the solvency capital requirement (SCR).

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.

Corporate Social Responsibility: the voluntary contribution made by a company to sustainable development

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: personal rider on the basis of which typically a lump-sum cash payment is made in the event of previously defined severe illnesses

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 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.

Dynamic volatility adjustment: long-term insurance guarantees can be dynamically adjusted due to potentially increased volatility in valuations on capital markets

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.

Economic capital model: cf. → internal model

ESG (Environmental, Social, Governance): sustainability risks are all risks involving environmental, social and governance (ESG) issues. It has become common practice to distinguish the risks a company faces (outside-in view) caused by ESG issues and the impacts a company has on people and the environment (inside-out view).

Excess capital: the amount of available capital in excess of the required capital

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: coinsurance 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, insofar as the latter is written by life insurers.

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 or financial instruments 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: securities or financial instruments that can and are intended to be held until maturity. They are measured at amortised cost.

Other securities, trading: securities or financial instruments that are held solely for short-term trading purposes. They are measured at their fair value at the balance sheet date.

Parametric cover: index-based type of insurance, e.g. to protect against weather risks

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 mostly 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.

Retakaful: reinsurance in accordance with Islamic law (Sharia-compliant). The business model is similar in form to that of mutual insurance and addresses, among other things, the prohibition of interest in Islam.

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 (→ 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.

Risk capital: the capital at risk notionally allocated to a risk category

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.

Silent cyber: unintended coverage of cyber-related losses in traditional reinsurance treaties

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 (SCR): 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.

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

Value-at-Risk: the measure of risk for a company's risk position

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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For reasons of sustainability Hannover Re does not print or mail out the annual and interim reports. The present Group Annual Report of Hannover Re can be accessed online in English and German as an HTML version and downloaded in PDF format:

www.hannover-re.com

This is a translation of the original German text; the German version shall be authoritative in case of any discrepancies in the translation.

The Annual Report of Hannover Rück SE is also available here in English and German.

Financial calendar 2022/2023

10 March 2022
Publication of the annual financial statements 2021
Annual Results Press Conference
Analysts' Meeting

4 May 2022
Quarterly Statement as at 31 March 2022

4 May 2022
Annual General Meeting

4 August 2022
Half-yearly Financial Report 2022

6 October 2022
25th International Investors' Day

3 November 2021
Quarterly Statement as at 30 September 2022

8 February 2023
Results of treaty renewals as at 1 January

9 March 2023
Publication of the annual financial statements 2022
Annual Results Press Conference
Analysts' Meeting

3 May 2023
Annual General Meeting

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