

# Combined management report



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# Foundations of the Group

## Business model

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

With a gross premium volume of around EUR 16 billion, Hannover Re is the third-largest reinsurer in the world. 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: "Long-term success in a competitive business". Our entire business operations are geared to our goal of being the best option for our business partners when they come to choose their reinsurance provider. It is for this reason that our clients and their concerns form the focus of our activities.

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

We also strive for the broadest possible diversification and hence an efficient risk balance. This is achieved by accepting reinsurance risks with mostly little or no correlation in our Property & Casualty and Life & Health business groups across all lines of business as well as by maintaining a global presence. In conjunction with our capital management, this is the key to our comparatively low cost of capital.

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

We transact primary insurance in selected market niches as a complement to our core reinsurance activities. In this context, we always work together with partners from the primary insurance sector.

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

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

In the Life & Health reinsurance business group we are recognised – as customer surveys confirm – as one of the top players and the leading provider of innovative 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 certified internal capital model. The targets are regularly analysed and adjusted in the context of the strategy review conducted at periodic intervals. Our primary focus is on long-term attainment of the strategic targets.

### Target attainment

M01

Business group	Key data	Targets for 2016		Target attainment			
		2016	2015	2014	Ø 2014–2016 <sup>1</sup>		
Group	Investment return <sup>2</sup>	≥ 2.9%	3.0%	3.5%	3.3%	3.3%	
	Return on equity <sup>3</sup>	≥ 9.9%	13.7%	14.7%	14.7%	14.3%	
	Growth in earnings per share (year-on-year comparison)	≥ 6.5%	1.8%	16.7%	10.1%	9.4%	
	Value creation per share <sup>4</sup>	≥ 7.5%	18.6%	13.6%	34.4%	21.0%	
Property & Casualty reinsurance	Gross premium growth	3–5% <sup>5</sup>	-0.2%	8.1%	1.2%	3.0%	
	Combined ratio	≤ 96% <sup>6</sup>	93.7%	94.4%	94.7%	94.3%	
	EBIT margin <sup>7</sup>	≥ 10%	16.8%	16.6%	17.0%	16.8%	
	xRoCA <sup>8</sup>	≥ 2%	7.1%	7.4%	10.7%	8.4%	
Life & Health reinsurance	Gross premium growth	5–7% <sup>9</sup>	-4.3%	9.5%	4.9%	3.2%	
	Value of New Business (VNB) <sup>10</sup>	≥ EUR 220 million	EUR 893 million	EUR 543 million	EUR 448 million	–	
	EBIT margin <sup>7</sup> Financial Solutions/ Longevity	≥ 2%	9.4%	11.0%	5.0%	8.6%	
	EBIT margin <sup>7</sup> Mortality/Morbidity	≥ 6%	3.4%	3.6%	4.8%	3.9%	
	xRoCA <sup>8</sup>	≥ 3%	3.5%	8.9%	7.3%	6.5%	

<sup>1</sup> Average annual growth, otherwise weighted averages

<sup>2</sup> Excluding effects from ModCo derivatives

<sup>3</sup> After tax; target value: 900 basis points above the 5-year average return on 10-year German government bonds

<sup>4</sup> Growth in book value per share including dividend paid

<sup>5</sup> Average over the reinsurance cycle; at constant exchange rates

<sup>6</sup> Including major loss budget of EUR 825 million

<sup>7</sup> EBIT/net premium earned

<sup>8</sup> Excess return on allocated economic capital

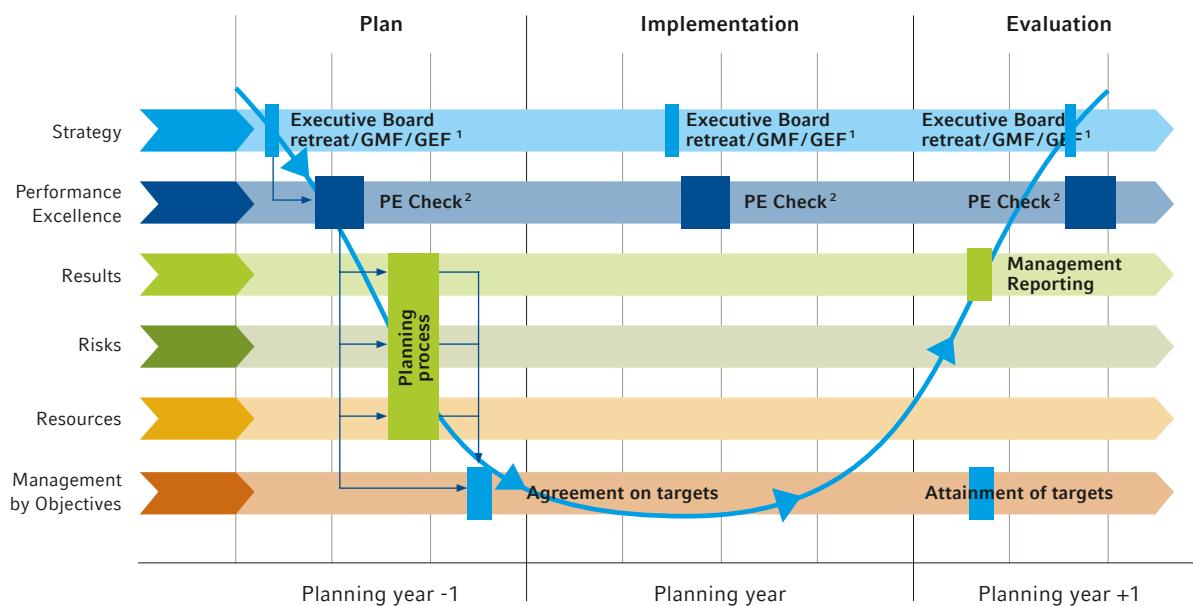
<sup>9</sup> Organic growth only; annual average growth (5 years); at constant exchange rates

<sup>10</sup> Since 2016 based on Solvency II principles and pre-tax reporting; until 2015 MCEV principles (cost of capital already increased from 4.5% to 6% in 2015) and post-tax reporting

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

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

**M 02**



<sup>1</sup> The Global Management Forum (GMF) and the Global Executive Forum (GEF) bring together senior managers of the Hannover Re Group from around the world for the purpose of defining strategic orientations. The parameters developed here serve as the basis for the subsequent planning process.

<sup>2</sup> Verification and elaboration of contributions to the Group strategy

#### **Management by Objectives**

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

#### **Management Reporting**

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

#### **Capital allocation**

The basis of value-based management is the risk-appropriate allocation of capital to the individual business activities. This enables us to evaluate the acceptance of underwriting risks and investment risks both in light of individual risk/return aspects and against the backdrop of our overall risk appetite. Our internal capital model supplies the key parameters for this purpose. Starting out from the Group's overall risk situation, capital is first allocated to the functional areas of underwriting and investments. We then further divide the capital within the underwriting sector, first between the business segments of property & casualty reinsurance and life & health reinsurance and then between the various reinsurance products and 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 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 operating profit (EBIT) – (capital allocated × weighted cost of capital) = IVC

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

**Intrinsic Value Creation and excess return on capital allocated**

**M 03**

in EUR million	2016		2015	
	IVC	xRoCA	IVC	xRoCA
Property and casualty reinsurance	355.7	7.1%	454.9	7.4%
Life and health reinsurance	102.7	3.5%	251.8	8.9%
Investments <sup>1</sup>	325.5	6.2%	(16.4)	-0.6%
<b>Group</b>	<b>783.7</b>	<b>5.9%</b>	<b>688.7</b>	<b>5.4%</b>

<sup>1</sup> Income above risk-free interest after deduction of risk-appropriate cost of capital

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

In calculating the cost of capital, our assumption – based on a Capital Asset Pricing Model (CAPM) approach – is that the investor's opportunity costs are 450 basis points above the risk-free interest rate, meaning that value is created above this threshold. Our strategic return on equity target of 900 basis points above risk-free thus already contains a substantial target value creation. We allocate equity sparingly and use equity substitutes to optimise our average cost of capital. At 4.8%, our average cost of capital is comparatively low.

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

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

## Operational management system

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

## Research and development

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

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 (cf. here also the Opportunity report on page 95 et seq.).

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 the financial year just ended we launched a competition under the name “Journey Re” in which teams composed of talented young people – so-called Millennials – at four different locations (Berlin, Boston, Dublin and Johannesburg) were tasked with developing new product and business ideas. The three most promising ideas were recognised with prize money of EUR 80,000. The fruits of this initiative are now being transformed into projects and will be refined into marketable commodities over the coming months. For further details please see the Opportunity report on page 95 et seq.

# The Hannover Re Group at a glance

## Property & Casualty reinsurance

Gross premium in EUR billion



**6.8**

+6.2% p.a.

**9.2**

2011

2016

## Life & Health reinsurance

Gross premium in EUR billion



**5.3**

+6.3% p.a.

2011

**7.2**

2016

## 10 times “Reinsurer of the Year”

Hannover Re was first crowned “Reinsurer of the Year” by the “The Review” in 1998.



## Growth in the balance sheet total

in EUR billion

**5.3**

1996

(DM 10.3 billion)



**63.5**

2016

## Position on the world market



since 2009:  
third-largest reinsurer

## Research and development



Since 2010 Hannover Re has supported the Global Earthquake Model (GEM). GEM's mission is to improve public understanding and awareness of earthquake risks worldwide and to reduce the impacts of earthquakes on populations.

# Report on economic position

## Macroeconomic climate and industry-specific environment

- Persistently weak global economic growth
- Low interest rate environment remains a drag on the insurance industry
- Capital markets subject to volatility
- Losses from natural disasters exceed four-year average

### Macroeconomic climate

Looking at the year as a whole, the expansion of the global economy in 2016 once again fell short of the previous year at 3.1% (previous year: 3.2%). In the second half of the year the economy benefited from a tangible upward trend: the growth rate of 0.9% recorded in the third quarter was actually the strongest in two and a half years.

The pace of growth in the advanced economies remained moderate, even though manufacturing picked up appreciably from the summer onwards. Impetus derived from, among others, the United States, where inventory investments and exports increased sharply after a depressed first six months. In Japan total economic output rose slightly thanks to a boost from exports. The Eurozone economy continued to expand in 2016, sustaining its moderate growth of the past three years. It was stimulated by private and public consumption and in regional terms enjoyed broad-based support.

Growth in emerging markets was again stronger in 2016, although the economic challenges facing individual countries remain considerable. In China, India and other Southeast Asian nations output surged sharply higher over the six months of summer – driven in part by an expansionary economic policy. In Latin America it was above all Mexico and the Andean countries that picked up on this trend. Brazil, Argentina and Venezuela, on the other hand, remained mired in recession. Output in Russia stabilised again after a soft spring. Economic activity in Turkey suffered an outright collapse following the political turmoil of the summer.

### United States

The US economy proved unable to maintain the previous year's pace of growth. Gross domestic product (GDP) rose by just 1.6% in 2016, a full percentage point less than in the year before. The principal factor here was a soft first six months. While private consumption was still lively, businesses in particular showed marked reticence with their investments in equipment. The trend reversal in the summer was crucially driven by the fact that companies began to rebuild their stocks after five quarters of reductions. What is more, exports started

to pick up again. Consumer prices showed another year-on-year gain (+1.3% as against +0.1% in the previous year) and unemployment fell by a further 0.4 percentage points to a comparatively low level of 4.9%, suggesting a fundamentally positive basic tendency in the United States.

### Europe

The economic climate in the Eurozone maintained its moderate expansionary course: the growth rate fell slightly by 0.2 percentage points to 1.7%. The growth contribution stemming from foreign trade remained modestly negative in the year just ended at -0.2%. In regional terms, the economic expansion was broad-based, with all the nations in the single currency area managing to boost their economic output. Even countries currently facing an intensified struggle with economic difficulties – Portugal (+1.3%), Italy (+0.9%) and Greece (+0.4%) – charted a growth course. The UK economy expanded by 0.5% in the third quarter, notwithstanding the vote in favour of leaving the European Union. Not only private consumption and corporate investments but also exports surged appreciably, contributing to growth of 1.6% for the year.

The state of the labour market in Europe continued to improve. The average jobless rate decreased by 0.8 percentage points to 10.1%, with above all Greece and Spain still struggling to cope with high levels of unemployment. Consumer prices, which had been flat in the previous year, increased by 0.2%.

### Germany

Having enjoyed an upswing over the past three years, the German economy stayed on its expansionary track in 2016. Growth increased again by a modest 0.2 percentage points year-on-year to reach 1.9%. In view of the political uncertainties in the international arena, the willingness of companies to invest softened appreciably over the six months of summer. By year-end, however, economic activity was clearly trending higher again. Low interest rates continued to stimulate spending by private households. The construction industry, in particular, was still operating at the limits of its capacity, with orders on hand standing at their highest level in 16 years at year-end. Private consumption once again played a pivotal role in the favourable economic development: it benefited from a healthy

jobs market, rising real wages and an oil price that was still moderate. German exports overcame a temporary period of softness to put on 2.5% over the year as a whole. Furthermore, industrial new orders from countries outside the Eurozone also surged vigorously in the final months of the year.

The state of the labour market was positive: according to figures published by the Federal Statistical Office, the average number of persons employed over the year increased by 1.0% to a new record high of 43.5 million. The jobless number fell to a historically low 1.76 million, equivalent to an adjusted unemployment rate of 4.1%.

The price trend was positive in 2016 despite the restraining effect of low energy prices. Consumer prices rose by an annual average of 0.5% (0.2%). In December they increased by as much as 1.7% compared to the same month of the previous year.

## Asia

After the rather moderate pace of expansion in 2015 growth was still sluggish as 2016 got underway, but it picked up perceptibly over the course of the year. In China, most notably, gross domestic product rallied strongly during the year thanks to an expansionary economic policy and by year-end it modestly surpassed the growth target set by the government. At 6.7%, however, the increase fell 0.2 percentage points short of the previous year.

In India the implementation of currency reform in late autumn severely hampered economic activity towards the end of the year. Despite this, the growth of 7.1% recorded by Asia's second-largest national economy was not far short of the previous year's good performance (+7.3%). Growth was similarly sustained in the other emerging nations of Southeast Asia: the four economies of Indonesia, Thailand, Malaysia and the Philippines expanded by an average of 4.8%.

Japan was able to boost its exports to the Asian region in the second half of the year despite a strengthening yen. Private and public consumption as well as gross investments remained flat, however, as a consequence of which the country's economy continued to show only slow growth of 1.0% over the year as a whole (+1.2%).

## Capital markets

The investment environment in the period under review was once again challenging and notable for a high degree of uncertainty. Even as the year got underway China unnerved financial markets by devaluing its national currency; this prompted concerns about the state of its economy. The fall in commodity prices as a consequence of excessive supply capacities, global growth worries and a strong US dollar impacted emerging economies first and foremost, but also had sharply negative implications for Western equity markets. The European Central Bank (ECB) and the Bank of Japan responded by extending their expansionary policy, and the pause in the cycle of interest rate hikes announced by the US Federal Reserve (Fed) in the fourth quarter unleashed a rally on stock markets.

The general mood of uncertainty prevailing on financial markets was further exacerbated by the referendum held among the UK population in the middle of the year on leaving the European Union ("Brexit"). From the end of June onwards the doubts surrounding the outcome of this vote gave way to political and legal uncertainties in relation to the concrete procedure for leaving the EU. This situation led to protracted volatility in the United Kingdom, where further sharp declines in yields were observed across all maturity segments until the beginning of the fourth quarter as a consequence of support buying by the Bank of England. German and US government bonds, however, similarly saw clear decreases in yields until the same point in the year. Yet as the fourth quarter began a trend reversal towards rising yields emerged – and subsequently gained further momentum following Donald Trump's victory in the US presidential election in early November. Looking at the entire year, US Treasury securities showed increases in yields across all maturity bands. When it came to the euro and pound sterling, on the other hand – despite the upticks in yields in the fourth quarter –, further considerable declines in what was already a low yield level were seen over the year as a whole. German government bonds at times delivered clearly negative returns almost into the ten-year maturity segment.

Uncertainty also left its mark within the year on the valuation of markets for corporate bonds – primarily at the start of the year in emerging economies – and initially prompted sharp rises in risk premiums. Over the course of the year, however, these increasingly retreated again across all rating classes – sometimes falling appreciably below their respective level in the previous year.

The policies pursued by central banks in our main currency areas varied. Following its cut to 0.05% in 2014, the European Central Bank (ECB) further trimmed the key interest rate for the Eurozone at the beginning of the current reporting period to the historically low level of 0.00%. The Bank of England – which had left the prime rate for pound sterling untouched since 2009 – followed suit by reducing it from 0.5% to 0.25% in response to the Brexit vote. The Fed, on the other hand, raised the base rate for the US dollar slightly from an average of 0.38% to 0.63%.

Stock markets, which we had begun to look at more closely again in the context of our move to rebuild an equity portfolio, climbed to new – in some cases – historic highs in the course of the year. The US market, in particular, booked appreciable price gains over the year. Most European indices, on the other hand, found themselves treading water year-on-year, although the DAX 30 performed relatively well with a gain of some 7%. Markets in emerging economies also delivered a pleasing performance, especially bearing in mind their slump at the start of the year. European equity markets were driven above all by the continued expansionary monetary policy of the ECB and the search by investors for high-return investment opportunities. With this in mind, though, the high price levels were ultimately only partially justified by fundamental metrics. All in all, stock markets once again proved to be broadly robust in the face of crisis warnings. While this is a cause for satisfaction, it can also entail the risk of bubbles forming. It was only growing concerns about the strength of the Chinese economy following a currency devaluation in combination with slumping commodity prices that prompted a marked downturn on stock markets at the beginning of the period under review.

The development of the world economy remains subject to various uncertainties and risks, first and foremost of a geopolitical nature. Global heterogeneity associated with varying economic trends and local flashpoints may be mentioned here as particularly significant considerations. The ongoing risk of terrorism is another factor that needs to be monitored, even though capital markets have hitherto responded to this in robust fashion.

The euro declined again against the US dollar over the course of the year from USD 1.08 to USD 1.05. It also suffered some modest losses against the Australian dollar. The pound sterling, on the other hand, fell sharply against the euro as a consequence of the Brexit vote, with the euro climbing from GBP 0.74 to GBP 0.86.

For more detailed remarks on the development of Hannover Re's investments please see the "Investments" section on page 51 et seq.

## Industry-specific environment

For the international (re)insurance industry the omens were virtually unchanged: the general environment continued to be highly challenging in 2016. In view of the protracted low level of interest rates, the focus remained firmly on preserving the value of investments and generating stable returns.

The year under review was also one of new developments on the regulatory side for the insurance industry. In Europe harmonised insurance supervisory law was successfully implemented in the form of Solvency II. Reflecting an integrated approach to risk, these refined solvency requirements for insurers put in place new measurement principles for assets and liabilities, which are to be recognised at their fair values in future. In China, too, a new risk-based solvency regime (C-ROSS) came into effect at the beginning of the year; it is intended to promote domestic reinsurance placement. The planned launch of a new solvency system in South Africa, known as Solvency Assessment and Management (SAM), was postponed until mid-2017.

The Indian insurance market similarly witnessed some regulatory adjustments: at the end of 2016, for example, the local insurance regulator gave its approval to a small number of foreign reinsurers to establish branches, thereby opening up the growing Indian reinsurance market to international players.

The digital revolution was once again a major preoccupation for the insurance industry in 2016. This can be attributed in part to the cost pressure on primary insurers, which was driven above all by the protracted low level of interest rates and by the competitive environment. For insurers, then, the focus was not only on the development of new products, the optimisation of business processes or innovative impetus in the areas of customer care and acquisition; there was also an industry-wide trend towards participation in and cooperation with start-ups and insurtechs. The (re)insurance industry also leveraged digitisation in the year just ended to optimise its point-of-sale systems and structure internal value-added chains even more efficiently. This trend looks set to continue in the coming years.

In property and casualty reinsurance the pressure of competition remained high in 2016. This was due in part to the healthy capital resources enjoyed by primary insurers, which enabled them to carry high retentions. Another factor was the continued inflow of capital from the ILS sector into the reinsurance market, as a consequence of which the supply of capacity in the market comfortably outstripped demand – hence again putting prices and conditions under pressure in 2016. The burden of major losses was thoroughly moderate in the year under review, as it had been in prior years. However, a number of severe earthquakes and windstorm events led to the heaviest losses from natural catastrophe events in four years.

Against the backdrop of advancing digitisation, demand increased in the year under review for covers to protect against cyber risks. While the vast bulk of the worldwide insurance premium was generated in the United States, growing interest could also be discerned in Europe as the year progressed.

The sustained low interest rate environment similarly had implications for life and health reinsurance in the area of traditional life insurance products, which have now not only lost a considerable part of their appeal but have also to some extent been supplanted by new policies which have been adapted to the changed interest rate situation. Furthermore, in the context of the new Solvency II regulations, many European insurers were compelled to grapple with increased capital requirements – primarily in relation to longevity business. As the year progressed,

therefore, a growing demand for reinsurance was observed. This is also true of the Eastern European market, which is similarly coming under more exacting regulatory requirements.

Demographic change is driving sustained demand for old-age provision products – on the reinsurance as well as the insurance side. Lifestyle products, which offer risk protection tailored to the policyholder's specific life situation, also played a more prominent role. Policies under which the premium is linked to the insured's health-related behaviour enjoyed a particularly brisk surge in demand in the year under review. Although the purchasers of such products have hitherto tended to be in Anglo-Saxon and Asian markets, a tangible interest in this trend can now also be detected in Europe.

## Business development

- New record net income generated
- Very good profit in property and casualty reinsurance
- Solid result in life and health reinsurance
- Very healthy investment income despite challenging conditions
- Reduced return on equity of 13.7% highly satisfactory

We are thoroughly satisfied with the development of business in the 2016 financial year. With Group net income of EUR 1,171.2 million we actually surpassed the anticipated level of at least EUR 950 million. We thus improved by a further 1.8% on the record result of the previous year. This development is particularly gratifying because market conditions for reinsurers remain extremely challenging and the low level of interest rates is increasingly restricting our potential returns. The year-end result was once again supported by a burden of major losses that came in below the envisaged budget.

Please find below a brief summary of the development of our two business groups – Property & Casualty and Life & Health reinsurance – and our investments. More detailed information is to be found on pages 35 to 52.

### Property & Casualty reinsurance

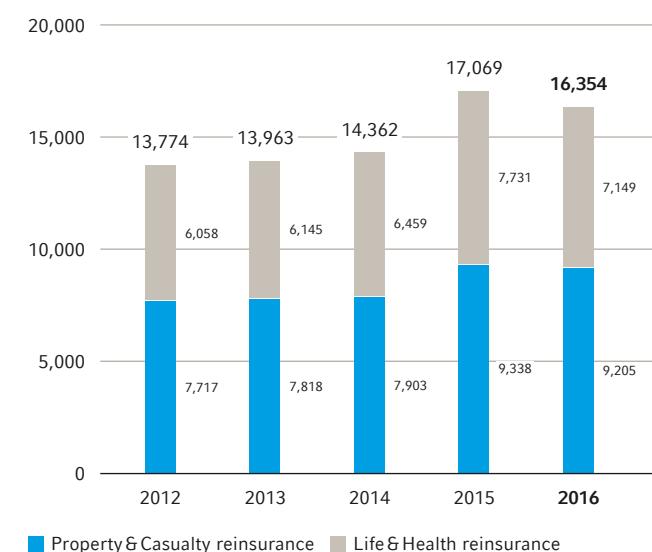
Market conditions in property and casualty reinsurance continued to be fiercely competitive. Reinsurance capacity substantially exceeded demand. Furthermore, additional capacities from the insurance-linked securities (ILS) market put prices and conditions under sustained pressure. Against this backdrop we wrote our business highly selectively, causing gross premium – as anticipated – to contract slightly. It fell by 1.4% as at 31 December 2016 to EUR 9.2 billion (previous year: EUR 9.3 billion). At constant exchange rates the premium volume would have remained stable.

Investment income from assets under own management in property and casualty reinsurance declined by 5.2% year-on-year to EUR 876.9 million (EUR 924.8 million). We are nevertheless highly satisfied with this performance. Reflecting the protracted low interest rate environment, ordinary income contracted in line with our expectations by 5.1% to EUR 899.3 million (EUR 947.4 million).

All in all, the results in property and casualty reinsurance were thoroughly satisfactory. The underwriting result improved again on the already exceptionally positive level of the previous year to reach EUR 479.1 million (EUR 432.2 million). Expenditure on large losses was higher than in the previous year at EUR 626.6 million (EUR 572.9 million), but still within the expected bounds. The combined ratio of 93.7% (94.4%) came in well below our targeted maximum of 96%. The operating profit (EBIT) as at 31 December 2016 remained stable at EUR 1,340.3 million (EUR 1,341.3 million). Reflecting the very good development of our business, the EBIT margin of 16.8% (16.6%) once again beat our minimum target of 10%. Group net income came in at a pleasing EUR 949.9 million (EUR 914.7 million) and thereby surpassed the record level of the comparable period.

## Gross premium by business group in EUR million

M04



## Life & Health reinsurance

Life and health reinsurance business delivered another sizeable contribution to total Group net income in the reporting period just ended. The positive development and stability clearly demonstrated the underlying profitability of the portfolio. Bearing in mind that the sustained profitability of what is in some cases very long-term business does not always begin immediately when a treaty is written, a multi-year perspective is essential in order to make well-founded assessments. Non-recurring effects – both positive and negative – can lead to volatility in the results.

The result for the year under review is largely in line with our expectations for the overall profitability of our life business. The operating profit for 2015 had, however, been boosted by a one-time positive effect of EUR 39 million due to the early termination of a large contract, and to this extent the result in the year under review came in lower.

Gross premium decreased by 7.5% and amounted to EUR 7.1 billion (EUR 7.7 billion). Adjusted for exchange rate effects, this is equivalent to a decline of 4.3%. The decisive factor here was the extraordinary premium growth in 2015. The Value of New Business totalled EUR 893 million and thus beat the targeted level of EUR 220 million.

Our investment income declined to EUR 638.9 million (EUR 709.2 million) in the financial year just ended. This decrease is in line with our expectations. Of the total investment income, EUR 330.8 million (EUR 334.3 million) was attributable to assets under own management and the remaining EUR 308.1 million (EUR 374.9 million) derived from securities deposited with ceding companies.

As reported at the outset, the operating profit (EBIT) fell short of the level in the previous year, which had been boosted by a positive one-off effect. We are nevertheless satisfied with the generated result of EUR 343.3 million (EUR 405.1 million). The EBIT margins achieved within the individual reporting categories were as follows: in mortality and morbidity business we missed the 6% target with an EBIT margin of 3.4%; longevity business reached its stated target of 2% with an EBIT margin of 2.2%; the EBIT margin for financial solutions business amounted to 18.5%, thereby comfortably beating the minimum target of 2%. All in all, life and health reinsurance business thus contributed an amount of EUR 252.9 million (EUR 289.6 million) to Group net income.

## Investments

Given the sustained low interest rate environment and in some instances even further reductions in rates, we are again highly satisfied with the development of our investments as at 31 December 2016. The portfolio of investments under own management stood at EUR 41.8 billion and was thus significantly higher than the comparable level at the end of the previous year (31 December 2015: EUR 39.3 billion). The increase was driven in large measure by positive exchange rate effects – especially associated with the strong US dollar – and higher hidden reserves in the areas of listed equities and private equity, although the primary factor here was a gratifyingly positive operating cash flow.

With interest rates remaining on a low level, ordinary investment income excluding interest on funds withheld and contract deposits fell short of the comparable period at EUR 1,162.0 million (EUR 1,253.4 million), but was exactly in line with our expectations for the year under review.

Net realised gains on investments as at 31 December 2016 comfortably exceeded the previous year's figure at EUR 206.3 million (EUR 135.8 million). Write-downs increased in the year under review to EUR 76.3 million (EUR 38.7 million). They derived from scheduled depreciation taken on real estate as well as impairments due to temporary price losses on equity markets following the Brexit referendum. Income from assets under own management retreated as anticipated to EUR 1,218.3 million (EUR 1,270.1 million). The resulting annual return (excluding ModCo derivatives) amounted to 3.0% and thus beat the 2.9% target. The figure for the previous year had been 3.5%. Investment income including interest on funds withheld and contract deposits contracted to EUR 1,550.4 million (EUR 1,665.1 million), a decline of 6.9% relative to 2015. Interest on funds withheld and contract deposits totalled EUR 332.1 million (EUR 395.0 million).

## Total result

The gross premium in our total business decreased by 4.2% as at 31 December 2016 to EUR 16.4 billion (EUR 17.1 billion). At constant exchange rates the decline would have been 2.1%. This is in line with our expectation of a stable or slightly lower business volume. The level of retained premium climbed to 89.3% (87.0%). Net premium earned consequently fell by just 1.2% to EUR 14.4 billion (EUR 14.6 billion). At unchanged exchange rates growth of 1.0% would have been booked.

Despite the elimination of a non-recurring effect from the previous year in an amount of EUR 39 million, we generated an operating profit (EBIT) of EUR 1,689.3 million in the year under review. This was only narrowly below the level of the record result posted in 2015 (EUR 1,755.2 million). Group net income improved on the previous year to EUR 1,171.2 million (EUR 1,150.7 million), thereby clearly surpassing our guidance for Group net income of at least EUR 950 million. Earnings per share for the Hannover Re Group amounted to EUR 9.71 (EUR 9.54).

The equity position remains highly robust: the equity attributable to shareholders of Hannover Re increased to EUR 9.0 billion (EUR 8.1 billion) as at 31 December 2016. We nevertheless generated another pleasing return on equity of 13.7% (14.7%). The book value per share reached EUR 74.61, beating the previous year's record high (EUR 66.90). All in all, Hannover Re largely achieved the forecasts provided for the 2016 financial year as shown in the following table "Business development in the year under review".

The total policyholders' surplus, consisting of shareholders' equity, non-controlling interests and hybrid capital, amounted to EUR 11.2 billion (EUR 10.3 billion) as at 31 December 2016.

With the publication of the annual financial statement we are also releasing the capital adequacy ratio of the Hannover Re Group calculated in accordance with the requirements of Solvency II. It increased relative to the previous year to reach a level of 230% as at 31 December 2016 (30 September 2015: 221%).

### Business development in the year under review

**M 05**

	Forecast 2016	Target attainment 2016
Gross premium growth (Group)	stable to slightly lower <sup>1</sup>	-2.1% at constant exchange rates -4.2% not adjusted for currency effects
Gross premium growth for Property & Casualty reinsurance	slightly lower <sup>1</sup>	-0.2% at constant exchange rates -1.4% not adjusted for currency effects
Gross premium growth for Life & Health reinsurance	slight increase, stable <sup>1,2</sup>	-4.3% at constant exchange rates -7.5% not adjusted for currency effects
Return on investment <sup>3</sup>	~ 2.9%	3.0%
Group net income	~ EUR 950 million <sup>4</sup>	EUR 1,171.2 million

<sup>1</sup> At constant exchange rates

<sup>2</sup> Organic growth only

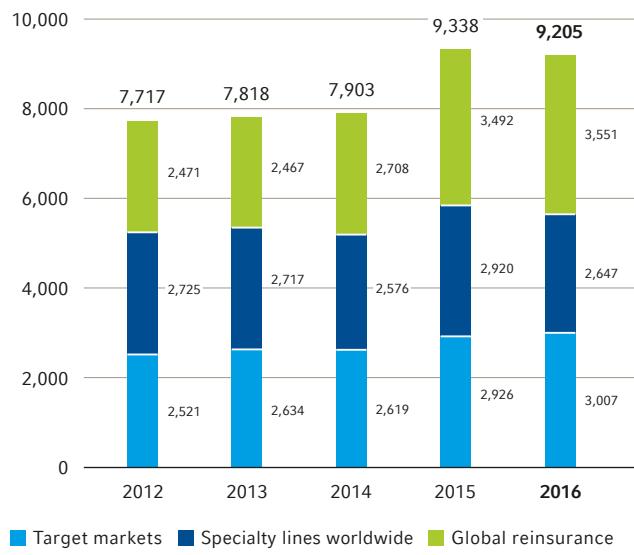
<sup>3</sup> Excluding ModCo derivatives

<sup>4</sup> Assuming stable capital markets and/or major loss expenditure in 2016 that does not exceed EUR 825 million

## Property & Casualty reinsurance at a glance

**Gross written premium in P&C reinsurance  
in EUR million**

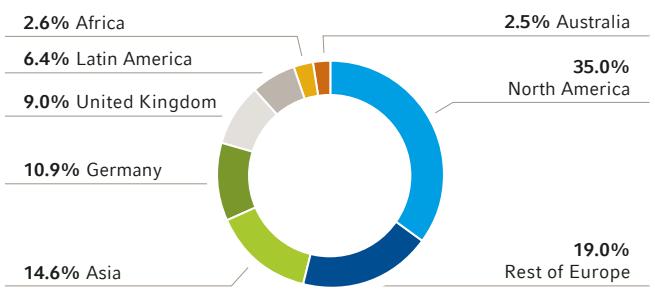
**M06**



■ Target markets ■ Specialty lines worldwide ■ Global reinsurance

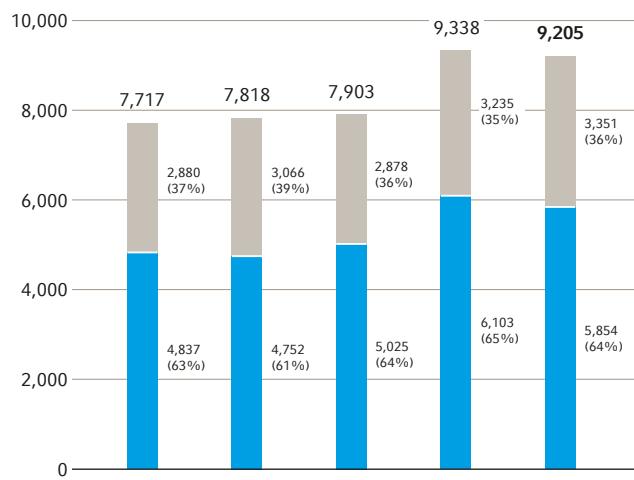
**Geographical breakdown of gross written premium  
in 2016**

**M07**



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

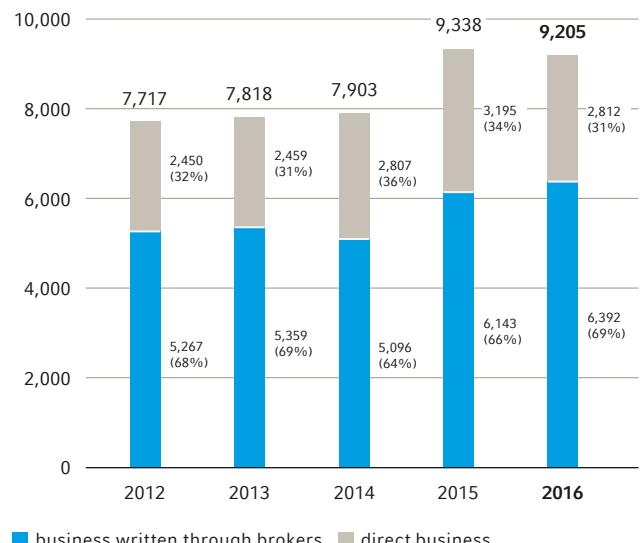
**M08**



■ proportional ■ non-proportional

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

**M09**



■ business written through brokers ■ direct business

# Overall assessment of the business position

Hannover Re is highly satisfied with the development of business in 2016. The company achieved its targets for important key indicators such as the return on investment, Group net income, return on equity as well as the EBIT margin and combined ratio in property and casualty reinsurance. This is all the more pleasing because the business environment for reinsurers remained challenging. The generated investment income and return on investment were very satisfactory despite

the continued low level of interest rates. Group net income again surpassed EUR 1 billion. The company's shareholders' equity showed a thoroughly gratifying increase, causing the total policyholders' surplus to climb to a new record high. At the time of preparing the management report, the business position of the Hannover Re Group remains very good and its financial strength has been further reinforced.

## 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. Supplementary to the information provided here, the "Segment reporting" in section 5 of the notes to this Annual Report shows the key balance sheet items and profit components of the two business groups.

### Property & Casualty reinsurance

- Gross premium volume stable on a currency-adjusted basis
- Large loss expenditure of EUR 627 million lower than budgeted level of EUR 825 million
- Very pleasing combined ratio of 93.7%
- Group net income rises by almost 4%

Accounting for 56% of our premium volume, Property & Casualty reinsurance is Hannover Re's largest business group. It is structured according to our Board areas of responsibility, namely "Target markets", "Specialty lines worldwide" and "Global reinsurance".

Given the continued absence of market-changing large losses, intense competition once again shaped the development of business in the year under review. Primary insurers remain in a position to carry high retentions thanks to their healthy capital resources. At the same time, capital is increasingly flowing into the reinsurance market from the steadily expanding ILS sector (including catastrophe bonds and collateralised reinsurance) owing to the lack of higher-yield investment alternatives. As a result, the available capacity in the reinsurance market continues to clearly outstrip demand.

These factors again cast a shadow over the treaty renewals as at 1 January 2016. Even though the price decline was considerable in some markets, we were still able to preserve healthy profitability for our portfolio thanks to our broad-based diversification. Business with agricultural risks was relatively divorced from the soft property and casualty reinsurance market. Aviation and marine business, on the other hand, saw sharp rate declines, prompting us to scale back our premium volume here. In the further rounds of renewals during the year the rate trend

largely continued along these lines, although indications of a stabilisation in reinsurance prices did emerge in individual lines and markets, including for example in North America.

In this challenging environment it was particularly important for Hannover Re to systematically pursue its margin-oriented underwriting. It remains the case that we expand our business only in areas where the margins are commensurate with the risks. On the other hand, we reduce our involvement in regions and lines where the prices do not meet our profitability standards. We focused heavily on our existing business, and were thus again able in the year under review to benefit from our long-standing customer relationships and our position as one of the world's leading and most financially robust reinsurance groups.

Gross premium contracted as expected in the year under review by a modest 1.4% to EUR 9.2 billion (previous year: EUR 9.3 billion); at constant exchange rates it would have remained stable. This is in line with our forecast of a slight decline in the currency-adjusted gross premium volume. The level of retained premium retreated to 88.5% (89.3%). Net premium earned fell by 1.4% to EUR 8.0 billion (EUR 8.1 billion); adjusted for exchange rate effects, it would have been unchanged.

The most notable large losses in the 2016 financial year were a number of major earthquakes and windstorm events; various man-made losses were also incurred. All in all, however, the burden of losses for our account was in line with our expectations. The most expensive event for our company was the devastating forest fires in the Canadian province of Alberta, with a net loss of EUR 127.9 million. After several years of rather benign storm seasons in the United States and the Caribbean, the year under review brought a costly event in the shape of Hurricane Matthew: the resulting net strain for Hannover Re amounted to EUR 70.3 million. The earthquakes in Ecuador and New Zealand similarly gave rise to significant losses. Total net major loss expenditure for the year under review amounted to EUR 626.6 million (EUR 572.9 million). While this figure is higher than in the previous year, it is still below our budget of EUR 825 million. For a detailed list of our catastrophe and large losses please see page 85. The underwriting result climbed by 10.8% to EUR 479.1 million (EUR 432.2 million). The combined ratio for the year under review of 93.7% (94.4%) was clearly better than our targeted mark of 96%. Aside from the

favourable development of the technical account, this was also partly due to the reversal of reserves from prior years that were no longer required.

Investment income for the Property & Casualty reinsurance business group contracted as expected by 4.7% to EUR 900.9 million (EUR 945.0 million). The operating profit (EBIT) was once again very pleasing at EUR 1,340.3 million; it thus fell fractionally short of the record level in the comparable period (EUR 1,341.3 million). The EBIT margin climbed from 16.6% to 16.8%, hence clearly beating our minimum target of 10%. Group net income came in at EUR 949.9 million, surpassing the previous year's result of EUR 914.7 million by 3.8%. Earnings per share for this business group amounted to EUR 7.88 (EUR 7.58).

On the following pages we report in detail on developments in the individual markets and lines of our Property & Casualty reinsurance business group, split into the three areas of Board responsibility referred to at the beginning of this section.

#### Key figures for Property & Casualty reinsurance

M10

in EUR million	2016	+ / - previous year	2015	2014	2013	2012 <sup>1</sup>
Gross written premium	9,204.6	-1.4%	9,338.0	7,903.4	7,817.9	7,717.5
Net premium earned	7,985.0	-1.4%	8,099.7	7,011.3	6,866.3	6,854.0
Underwriting result	479.1	+10.8%	432.2	351.5	335.5	272.2
Net investment income	900.9	-4.7%	945.0	843.6	781.2	944.5
Operating result (EBIT)	1,340.3	-0.1%	1,341.3	1,190.8	1,061.0	1,091.4
Group net income	949.9	+3.8%	914.7	829.1	807.7	685.6
Earnings per share in EUR	7.88	+3.8%	7.58	6.88	6.70	5.68
EBIT margin <sup>2</sup>	16.8%		16.6%	17.0%	15.5%	15.9%
Retention	88.5%		89.3%	90.6%	89.9%	90.2%
Combined ratio <sup>3</sup>	93.7%		94.4%	94.7%	94.9%	95.8%

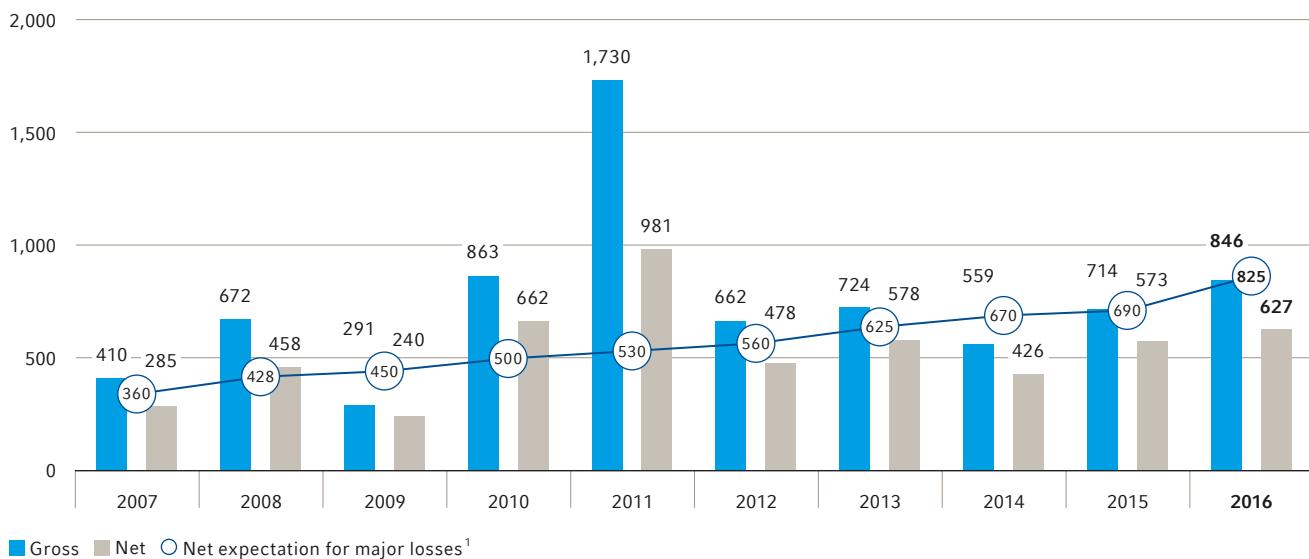
<sup>1</sup> Adjusted pursuant to IAS 8

<sup>2</sup> Operating result (EBIT)/net premium earned

<sup>3</sup> Including expenses on funds withheld and contract deposits

**Property & Casualty reinsurance: Major loss trend<sup>1</sup>**  
in EUR million

M11



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

**Property & Casualty reinsurance: Key figures for individual markets and lines in 2016**

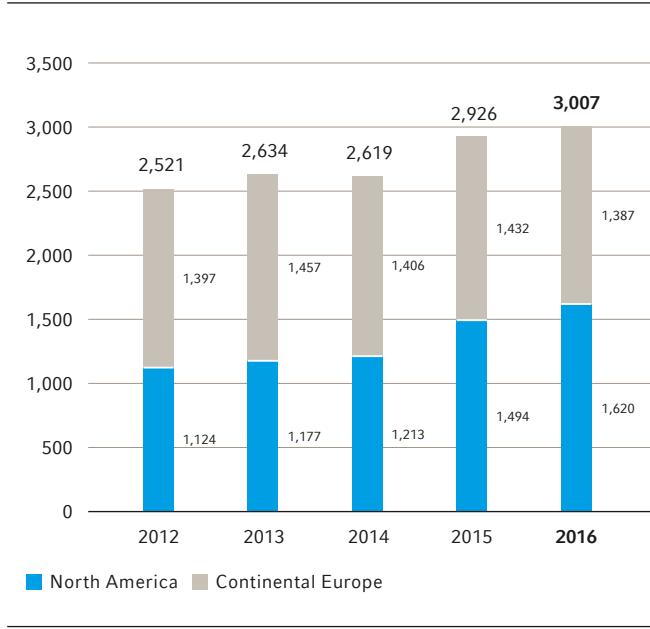
M12

	Gross premium 2016 in EUR million	Change in gross premium relative to previous year	Gross premium 2015 in EUR million	EBIT in EUR million	Combined ratio	Maximum tolerable combined ratio (MtCR)
<b>Target markets</b>	<b>3,007.0</b>	<b>+2.8%</b>	<b>2,925.5</b>	<b>598.2</b>	<b>92.5%</b>	<b>95.4%</b>
North America	1,619.7	+8.4%	1,493.8	393.3	91.0%	96.9%
Continental Europe	1,387.3	-3.1%	1,431.7	204.9	94.3%	93.8%
<b>Specialty lines worldwide</b>	<b>2,646.6</b>	<b>-9.4%</b>	<b>2,920.4</b>	<b>447.8</b>	<b>90.9%</b>	<b>96.7%</b>
Marine	277.5	-6.6%	297.1	138.1	38.5%	93.3%
Aviation	278.7	-26.1%	377.3	108.9	72.8%	99.4%
Credit, surety and political risks	613.5	+1.3%	605.6	8.3	104.9%	94.9%
UK, Ireland, London market and direct business	505.6	-2.7%	519.7	97.5	95.6%	97.6%
Facultative reinsurance	971.4	-13.3%	1,120.7	95.0	95.6%	97.2%
<b>Global reinsurance</b>	<b>3,550.9</b>	<b>+1.7%</b>	<b>3,492.1</b>	<b>294.3</b>	<b>97.1%</b>	<b>95.4%</b>
Worldwide treaty reinsurance	1,885.0	+4.1%	1,810.4	65.5	103.9%	96.1%
Catastrophe XL (Cat XL)	357.2	-4.7%	374.9	154.9	55.9%	79.0%
Structured reinsurance and insurance-linked securities	1,308.7	+0.1%	1,306.8	73.9	97.3%	98.9%

## Target markets

Hannover Re classifies North America and Continental Europe as target markets. The premium volume here increased by 2.8% to EUR 3,007.0 million (EUR 2,925.5 million). Growth lived up to our expectations. The combined ratio improved substantially from 99.0% to 92.5%. The operating profit (EBIT) consequently rose to EUR 598.2 million (EUR 445.1 million).

**Property & Casualty reinsurance:**  
**Breakdown of gross written premium in target markets**  
in EUR million



## North America

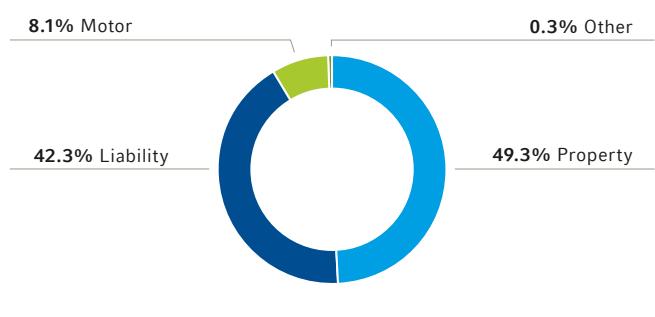
The North American (re)insurance market is the largest single market both worldwide and for Hannover Re. Our business here is written almost exclusively through brokers.

Even though the US economy paused for breath in 2016 and recorded slower growth than in the comparable year, our clients – primary insurers – booked an increase in premium volume, especially in the loss-prone lines of workers' compensation and motor business, for which prices improved. The general rate trend, however, remained negative and ceding companies additionally struggled to cope with low investment income. Some market players are no longer able to generate their target return on equity. Against this backdrop, the level of reserves is dropping and at some companies – particularly those with high exposures to the commercial motor line – there is already a need to set aside additional reserves.

Overall, modest reductions in rates were observed; towards the end of the financial year a trend towards stability could be discerned. On the reinsurance side conditions in US casualty business remained broadly stable and an increase in premium was recorded. Non-proportional property business saw slight rate reductions – especially under profitable, loss-free programmes –, but conditions held up rather well.

We are a valued and respected partner in North America thanks to our long-standing experience and robust financial strength. This has been borne out for more than ten years now by the findings of the "Flaspöhler Broker Survey", in which Hannover Re placed first in the "Best Overall Reinsurer" category. In the year under review we added a very good second place in the corresponding "Cedant Survey". Particularly bearing in mind that in North America we only operate through brokers, this is a pleasing testimony to our efforts. We further enlarged our customer base in the year under review.

**Property & Casualty reinsurance: Breakdown of gross written premium in North America by line of business**



As far as large losses in North America are concerned, mention should be made of two natural disasters: the loss situation in Canada was dominated by the forest fires in the region around Fort McMurray. Hurricane Matthew caused considerable damage in the Bahamas and on the East Coast of the United States between Florida and South Carolina. Details of these losses are provided in the section entitled "Natural catastrophe business" on page 45.

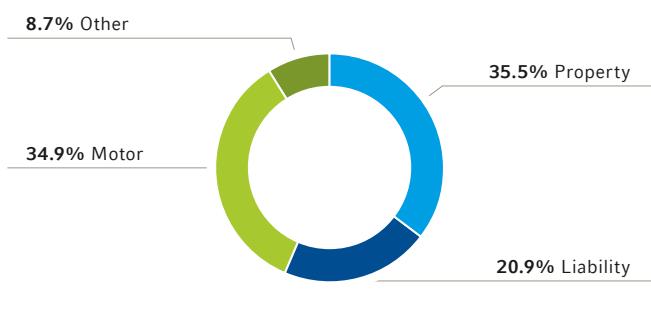
Positive price adjustments are evident in both the United States and Canada. Particularly under loss-impacted programmes and in Canada, we benefited from newly purchased reinstatement covers. In general liability business the rate situation has stabilised somewhat; in the professional indemnity lines we successfully pushed through modest price increases to a limited extent. We are seeing stronger demand for covers in the area of cyber risks, to which we are responding with appropriate capacities.

After exceptionally strong growth in the comparable year, the premium volume for our business in North America rose by a further 8.4% to EUR 1,619.7 million (EUR 1,493.8 million). Mid-single-digit percentage growth was similarly booked after adjustment for exchange rate effects. The combined ratio was lower than in the previous year at a very pleasing 91.0% (99.6%). The operating profit (EBIT) climbed to EUR 393.3 million (EUR 242.0 million), a result with which we are thoroughly satisfied.

## Continental Europe

We group together the markets of Northern, Eastern and Central Europe as Continental Europa. The largest single market here is Germany. The premium volume for our business in Continental Europe in the year under review came in at EUR 1,387.3 million (EUR 1,431.7 million). The combined ratio improved to 94.3% (98.4%). The operating profit (EBIT) nudged higher to EUR 204.9 million (EUR 203.2 million).

**Property & Casualty reinsurance: Breakdown of gross written premium in Continental Europe by line of business** M 15



## Germany

The German market – the second-largest in the world for property and casualty reinsurance – is served within the Hanover Re Group by our subsidiary E+S Rück. As the “dedicated reinsurer for Germany”, the company is a sought-after partner thanks to its very good rating and the continuity of its business relationships. E+S Rück is superbly positioned in its domestic market and a market leader in property and casualty reinsurance.

The German insurance market also remains under considerable competitive pressure, especially in commercial and industrial business. New competitors with additional capacities entered the market despite protracted insufficient profitability, as a consequence of which the rehabilitation efforts undertaken by established providers proved partially ineffective.

Owing to the intensely competitive environment, there was no easing in the pressure on conditions in industrial property insurance. Only in general liability business and the engineering insurance lines could adequate rates be obtained. The development of the industrial fire line was once again unsatisfactory on account of heavy losses.

The situation in retail business was also strained. The largest line – motor insurance – offered little scope to cover the cost of capital in view of the higher average claim cost. Homeowners’ comprehensive insurance failed to move back into the black despite the steps taken in recent years to restore business to profitability. The positive results booked in the general liability, householders’ and accident lines nevertheless ensured that – taken together and allowing for run-off profits – all lines of property and casualty insurance closed with a combined ratio of less than 100%.

On the reinsurance side the German market showed significantly greater stability. Scarcely any sharp upward or downward deviations were observed here. Improved conditions were obtained under proportional treaties in various fire and fire loss of profits programmes. Premium income in proportional motor insurance showed modest growth, driven primarily by higher-value motor vehicle equipment – which is pushing up the costs associated with both collision damage and the rapidly rising theft losses.

Two developments are taking on growing significance in the German market: in the first place, the trend towards greater protection against cyber attacks in commercial and industrial insurance lines and, secondly, the technological advances being made in motor insurance. The proliferation of (partially) self-driving vehicles is expected to bring a reduction in claims expenditure and, as a result, a drop in motor premiums. With an eye to the roll-out of telematics tariffs, E+S Rück has entered into a cooperation arrangement with a mobile telephony provider in order to offer its customers support in this new subsegment.

Losses from natural catastrophes were lower in the year under review than in the previous year. From a long-term perspective, however, it is apparent that the alternation between years of light and heavy losses is shortening in duration. Localised events, in particular, caused significant losses in the 2016 financial year. Storms alone cost insurers some EUR 2 billion in 2016, for example, although this amount was around 20% lower than the average of recent years. Costing around EUR 1 billion, half of the losses were caused by the heavy rain-storm events Elvira and Friederike.

All in all, we are satisfied with the development of our German portfolio. Premium income for the year under review showed moderate growth; we had anticipated a slight contraction in premium volume in our guidance.

## Rest of Continental Europe

There was no change in the fierce competition prevailing on European markets; this was especially true of most nature markets such as France and Northern Europe. Along with challenging economic circumstances, surplus capacities continued to adversely impact the insurance industry; the Northern European and French markets consequently saw further rate reductions and deteriorations in conditions. We nevertheless preserved our market share in France by expanding some existing customer relationships and writing more business in less competitive lines. In long-tail liability business, above all in the motor sector, we are continuing to see a challenging environment and participate only selectively.

We successfully asserted our leading position in builder’s risk insurance in France. Another focus of our activities continues to be the accident line, in which we have enlarged our premium volume over recent years.

Developments in the Netherlands, where we expanded our portfolio across all lines of business, were pleasing.

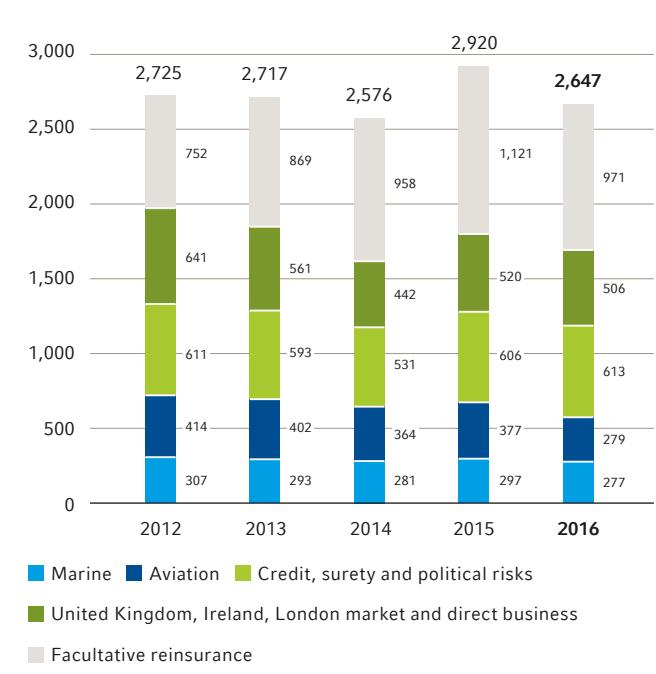
Overall, despite fierce competition in Central and Eastern European markets, growth rates here were above the European average. Over the medium to long term Hannover Re anticipates further growth in the premium volume from these markets. Given the intensely competitive climate, the reinsurance market for the most part saw price reductions. This did not apply, however, to motor business in Poland and Hungary, where rates climbed on the back of increased loss expectancies. On the whole, we obtained rates and conditions that were broadly commensurate with the risks for the region of Central and Eastern Europe in the year under review, hence enabling us – on the back of stable premium volume – to generate satisfactory results. On the claims side the region was impacted by a number of smaller events.

### Specialty lines worldwide

Under specialty lines we include marine and aviation reinsurance, credit and surety reinsurance, business written on the London Market as well as direct business and facultative reinsurance.

The premium volume for specialty lines in the year under review amounted to EUR 2,646.6 million (EUR 2,920.3 million). The combined ratio was stable at 90.9%. The operating profit (EBIT) for specialty lines contracted to EUR 447.8 million (EUR 518.5 million), in part also due to reduced investment income.

**Property & Casualty reinsurance: Breakdown of gross written premium in worldwide specialty lines in EUR million** M16



### Marine

As anticipated, the rate decline in marine insurance was sustained in 2016. Underlying factors such as the low oil price, faltering global economy and surplus capacities in the market for the transportation of freight and cargo have left their mark on our customers. In the face of falling prices for commodities and other goods, the premium volume in the market contracted significantly for the first time in years. Combined with a slight increase in the supply of capacity, this has further stepped up the pressure on original rates in both offshore energy and marine insurance business.

In the year under review the market was not confronted with a marine loss on the scale of the explosions at the Port of Tianjin in 2015. Nevertheless, the insurance industry was not spared losses in this year either. The damage to a production facility off the coast of Ghana in combination with the subsequent business interruption resulted in a significant offshore energy loss. In view of the conservatively oriented underwriting policy that we had pursued in prior years, the impact of this loss on our account was disproportionately slight relative to our market share.

The gross premium for our marine portfolio consequently fell by 6.6% to EUR 277.5 million (EUR 297.1 million). Despite the aforementioned loss expenditure and assisted, *inter alia*, by a positive run-off of loss reserves from old underwriting years, the combined ratio improved to 38.5% (60.0%) and the underwriting result consequently increased. The operating profit (EBIT) rose to EUR 138.1 million (EUR 112.3 million).

### Aviation

International aviation (re)insurance remained under strain in 2016, even though at the reporting date – aside from the burden of attritional losses – the market had only incurred two large claims that marginally exceeded a loss amount of USD 100 million.

The aviation line continues to experience a considerable supply of surplus capacity. In the case of the airline sector, this was equally true of the original market and the reinsurance side. The situation in general aviation business was somewhat more stable, although here too an excess supply of insurance capacities and the associated premium reductions were the dominant factors.

We adhered to our disciplined underwriting strategy in this soft market phase and kept a clear focus on non-proportional business. In this segment we operate as one of the market leaders. In proportional reinsurance, on the other hand, we reduced our shares – especially in customer portfolios dominated by airline business.

The premium volume for our total aviation portfolio contracted sharply in the year under review from EUR 377.3 million to EUR 278.7 million. Given that the large loss expenditure was more moderate than in the previous year, the combined ratio improved to 72.8%. The operating profit (EBIT) for our aviation portfolio grew to EUR 108.9 million (EUR 70.5 million).

#### Credit, surety and political risks

Hannover Re ranks among the market leaders in worldwide credit and surety reinsurance.

Economic growth around the world was rather weak on the whole in 2016. To some extent, the trend was downwards in certain emerging markets owing to the decline in commodity prices. Global growth in the primary insurance market therefore remained minimal. Reinsurance cessions rose slightly, in part because the more exacting capital requirements associated with Solvency II led to a greater need to pass on business. We write a large share of our acceptances in credit, surety and political risks in the form of proportional treaties, under which cost reimbursements in the year under review increased only moderately.

Gross premium income in these lines climbed by 1.3% in 2016 to EUR 613.5 million (EUR 605.6 million). Premium growth was boosted by modestly increased reinsurance cessions as well as the acquisition of new clients and the expansion of existing customer relationships.

The claims frequency in credit and surety business increased in the year under review, particularly in emerging markets. In addition, a few sizeable insolvency losses were recorded. The loss ratio in political risk insurance also rose slightly from a low level. The combined ratio of 104.9% for the entire portfolio was thus higher than in the previous year (98.9%). The operating profit (EBIT) shrank by 87.0% to EUR 8.3 million (EUR 63.7 million).

#### United Kingdom, Ireland, London Market and direct business

##### United Kingdom, Ireland and the London Market

The property and casualty business that we reinsure for companies in the United Kingdom and on the London Market developed largely satisfactorily in 2016. The intense competition in the primary sector was sustained in most lines and led to rate reductions. Based on our long-standing experience in the market we are a sought-after partner not only for our existing customers but also for start-ups, most notably Lloyd's syndicates. This enabled us to offset the premium erosion in existing business with new business. Pleasing double-digit rate increases were recorded in UK and Irish motor insurance business.

On the reinsurance side the rate reductions were not quite as marked overall as they were in original business. In non-proportional UK motor business – following at times appreciable increases in the years 2011 to 2014 – rates remained stable or rose slightly at the beginning of 2016, as in the previous year. Based on the increases in original business, it is pleasing to note that we are also expecting higher premium income through adjustments. In the other property and casualty lines we saw an easing in the pressure on rates compared to the past two years. Coverage extensions were also in demand. In keeping with our cycle management we scaled back our shares in programmes under which the prices or conditions were not considered attractive. No major losses were incurred.

##### Direct business

We also write primary insurance business through our subsidiary International Insurance Company of Hannover SE (Inter Hannover). This essentially involves tightly defined portfolios of niche or other non-standard business that complements our principal commercial activity as a reinsurer.

We write a large portion of this direct business in the London Market and through our Swedish branch, although it increasingly derives from Canada, Australia and Germany as well. The result from direct business was again substantially boosted in the financial year just ended. This is a very good performance, especially bearing in mind the intensive competition prevailing among the insurers and reinsurers writing business in these markets.

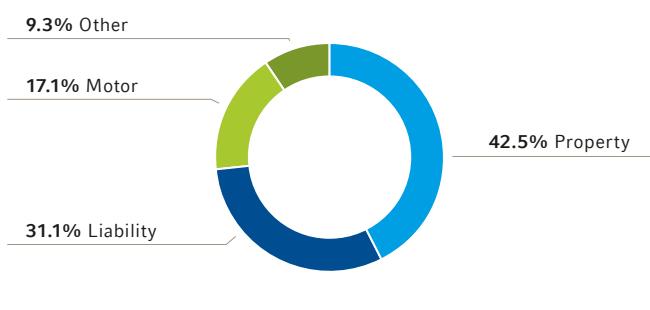
The gross premium booked from the United Kingdom, Ireland, the London Market and direct business retreated by 2.7% from EUR 519.7 million to EUR 505.6 million. The combined ratio stood at 95.6% (86.6%). The operating profit (EBIT) contracted accordingly to EUR 97.5 million (EUR 153.7 million).

## Facultative reinsurance

In contrast to obligatory reinsurance, a reinsurer underwrites primarily individual risks in facultative business. The general environment for both types of reinsurance in the various markets is, however, for the most part comparable.

Extended coverage concepts and price reductions were observed across all areas in the year under review. In the case of offshore business as well as oil and gas risks, in particular, there was no sign of a trend reversal despite elevated claims activity. In view of this market climate we wrote our business selectively, and the premium income for these lines consequently declined.

**Property & Casualty reinsurance: Breakdown of gross written premium in facultative reinsurance** M 17



The strategy that we put in place in recent years to expand our writing of cyber risks, personal accident/sports covers and renewables has already led to premium growth in these areas. The reorientation in US casualty business also began to bear fruit in 2016. What is more, it ensures that we will be able to generate additional growth in the years ahead.

Despite the protracted soft market we are highly satisfied with the development of our overall facultative portfolio in the year under review. The premium volume remained stable, even after deduction of a one-off special effect recorded in 2015.

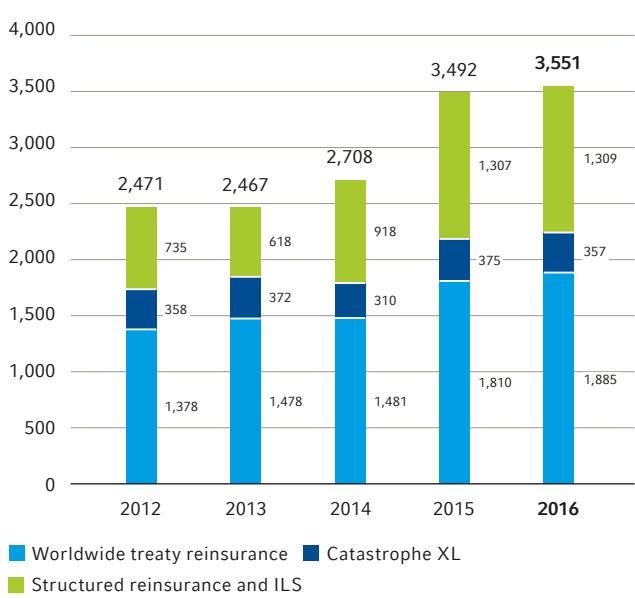
The 2016 financial year did not bring any particularly conspicuous developments in facultative reinsurance. Losses were incurred across all regions and lines, however, with an elevated frequency of natural catastrophe losses compared to previous years. Our results benefited from our limited risk appetite with respect to regions with natural hazards exposure. On the other hand, our portfolio was again impacted by losses from heavy industry. Here, too, however, our defensive strategy avoided any disproportionate strain on the total result. The combined ratio came in higher than the previous year (94.1%) at 95.6%. The operating profit (EBIT) decreased to EUR 95.0 million (EUR 118.3 million).

## Global reinsurance

We combine all markets worldwide under global reinsurance with the exception of our target markets and specialty lines. This segment also encompasses global catastrophe business, the reinsurance of agricultural risks, Sharia-compliant retakaful business as well as structured reinsurance and insurance-linked securities.

The premium volume increased by 1.7% in the year under review to EUR 3,550.9 million (EUR 3,492.1 million). The combined ratio deteriorated from 93.1% to 97.1%. The operating profit (EBIT) declined from EUR 377.7 million to EUR 294.3 million.

**Property & Casualty reinsurance: Breakdown of gross written premium in global reinsurance in EUR million** M 18

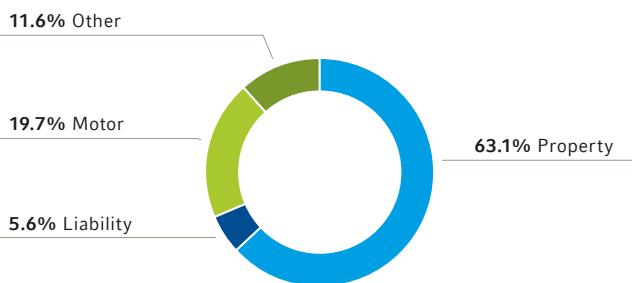


## Worldwide treaty reinsurance

We are satisfied with the development of our worldwide treaty reinsurance business. The gross premium volume grew in line with our expectations to EUR 1,885.0 million (EUR 1,810.4 million). The combined ratio of 103.9% was higher than in the previous year (95.7%). The operating profit (EBIT) contracted from EUR 165.7 million to EUR 65.5 million.

## Property & Casualty reinsurance: Breakdown of gross written premium in worldwide treaty reinsurance

M 19



### Asia-Pacific region

In the year under review Hannover Re again booked profitable growth in a fiercely competitive and strategically significant region.

The development of our business in Japan – one of our most important markets – was thoroughly satisfactory. Thanks to our excellent market position, our share of Japanese property and casualty reinsurance business continued to grow despite consolidation in the domestic market of Japanese cedants. Reinsurance conditions softened further under sustained competitive pressure, making this market, too, a challenge.

On the claims side the year under review was notable for the Kumamoto earthquake in April and a highly active typhoon season. In addition, the result in Japanese liability business was adversely impacted by pharmaceutical losses. Thanks to our broad-based positioning with our core customers in Japan across all lines of business, we were able to generate another positive profit contribution for Hannover Re despite the loss expenditure.

In China we again booked premium growth in the double digits. Working in close cooperation with the specialists back in Hannover, our locally licensed branch in Shanghai successfully expanded the portfolio with a small number of selected clients in our preferred lines and hence put our overall business relationships in China on a broader footing.

Results in the year under review were nevertheless overshadowed by an above-average number of mid-sized natural events, including several months of flooding in areas along the Yangtze River as well as various windstorms. The resulting losses were reflected not only in the reinsurance treaties but also in the books of many of our customers. From an overall perspective, the underlying conditions have not improved sufficiently despite the losses from the explosions at a container terminal in the Port of Tianjin and they are in need of further adjustment.

Primary insurance markets in South and Southeast Asia continue to generate disproportionately strong growth. We have been represented in this region for more than 20 years by a branch in Kuala Lumpur. Even though the underlying market

conditions have been detrimentally affected by the underlying market conditions, we have nevertheless succeeded in expanding new and less competitive business segments. Not only has this led to appreciable premium growth, it also improved the balance of the book of business written. The business performance in the year under review was thoroughly gratifying, reflecting the absence of sizeable natural disasters in the region as well as a generally low burden of attritional losses.

Having taken the initial steps in 2015 towards licensing of a branch in India, Hannover Re received final approval from the Indian insurance regulator on 23 December 2016.

In Australia and New Zealand the growth in gross premium was sustained – as in the previous year too – by large individual transactions. There was no change in the extremely competitive state of these markets. The first three quarters of the year under review passed off unusually favourably in this region. This was attributable to the fact that natural catastrophe events largely failed to materialise. The fourth quarter, on the other hand, was impacted by claims associated with the series of earthquakes in New Zealand in November. The area to the north of the city of Christchurch extending as far as the capital Wellington was particularly hard hit. Australia was additionally affected by a number of regional weather events that further increased the loss expenditure prior to year-end.

### South Africa

Our property and casualty reinsurance business in South Africa is supported by three companies: our subsidiary Hannover Reinsurance Africa Limited writes reinsurance in all lines. Compass Insurance is responsible for direct business generated through so-called underwriting management agencies (UMAs). The third company, Lireas Holdings, holds interests in several of these UMAs. This enables us to comprehensively steer and control the business. Agency business forms the pillar of our activities in South Africa, although reinsurance business is also written on the open market in South Africa and other African countries.

The economy on the African continent generated minimal growth in the year under review, in part owing to protracted political uncertainties. The planned solvency regime SAM (Solvency Assessment and Management) did not have any effects on our South African portfolio in the year under review, with implementation postponed to mid-2017.

In the face of unchanged heavy competition, results in direct insurance improved only slightly in the year under review. The major loss situation remained moderate.

Against this backdrop both Compass Insurance and Hannover Reinsurance Africa performed satisfactorily in the 2016 financial year. The premium volume remained stable.

## **Latin America**

Despite the sustained competitive environment, Hannover Re is very well positioned in Latin America and a market leader in some countries. The most important markets for our company are Brazil, where we are present with a representative office, as well as Mexico, Argentina, Colombia and Ecuador.

Most Latin American markets are continuing to enjoy very dynamic growth. Primary insurance premiums are increasing by between 5% and 15% a year depending on the market. Growth is even stronger in Argentina and Venezuela, although high inflation rates are the principal driver here. The strongest demand for reinsurance covers is in the area of natural catastrophe risks, not only within individual markets but also increasingly across national boundaries.

The severe earthquake in Ecuador gave rise to net loss expenditure of EUR 58.3 million for Hannover Re's account; see also the list of major losses on page 85. Treaty conditions consequently improved appreciably in the subsequent round of renewals.

In the year under review, as had been the case in 2015, reinsurance premiums declined. The downward trend can be attributed to the devaluation of some Latin American currencies and to the higher retentions carried by primary insurers.

In Argentina we took an increasingly selective approach to writing our business in order to ensure that we met our margin requirements. We maintained our position in Brazil despite ongoing concentration on the primary insurance side. The primary market here is progressively stabilising, albeit on a low level. At the same time a tendency towards consolidation can be discerned.

Broadly speaking, we are satisfied with the development of our business in Latin America.

## **Agricultural risks**

The insurance of agricultural risks was one of Hannover Re's fastest growing segments in the year under review. We further expanded our market position and rank among the preferred partners for agricultural covers. In addition, we have been taking on an increasingly active role in the development of original products. We entered into cooperative arrangements with governments, development banks and international organisations in the year under review with a view to expanding protection for agricultural risks.

Rates and conditions largely held stable on the primary insurance side. Conditions in reinsurance business came under pressure in the established markets due to new market players.

We were successful in our efforts to further diversify our portfolio mix in terms of both countries and lines of business. A contributory factor here, for example, was an enlarged share of business involving insurance products for small farmers, predominantly in emerging and developing countries.

We are satisfied with the development of our agricultural risks business. Particularly in the southern hemisphere, the loss situation in 2016 was influenced by the prevailing, exceptionally intense El Niño phenomenon: this was associated with, among other things, algae blooms in the Pacific as well as heavy rainfall and hail events in South America. There were also periods of drought in Australia and bushfires exacerbated by the dry weather. Leaving aside hail and outwintering losses, results for multi-risk insurance in the northern hemisphere were satisfactory. To this extent, the continued improvement in the diversification of our portfolio adequately alleviated and offset the extent of the negative results.

## **Retakaful business**

We write retakaful business, i. e. reinsurance transacted in accordance with Islamic law, worldwide. Our focus is currently on the Middle East, North Africa and Southeast Asia. This business is written by our subsidiary in Bahrain. We also maintain a branch there with responsibility for traditional reinsurance in the Middle East. Our retakaful business has been growing very vigorously for some years now and we enjoy a strong position in the market. Overall, we are satisfied with the development of business in the year under review.

As we had already observed in the previous year, the takaful and retakaful markets have now become extremely competitive – in part also owing to the entry of new market players. Rates continued to be under pressure – as we had anticipated –, with the exception of a few areas. The most notable decline in the year under review was for construction risks written on a facultative basis. This was also a reflection of the slowing pace of economic growth in the region and the fall in oil prices.

We responded to this soft market environment by writing our business highly selectively. This led to a moderate contraction in the premium booked in the year under review.

## **Catastrophe XL (Cat XL)**

Hannover Re writes the bulk of its catastrophe business out of Bermuda, the worldwide centre of competence for this segment. In the interest of diversifying the portfolio, our subsidiary Hannover Re (Bermuda) Ltd. has also written risks in some of the specialty lines since 2013. Furthermore, the company has established itself as a provider of reinsurance products in the area of cyber risks.

Given that large losses again came in below expectations – with the associated good results for insurers and reinsurers – and in view of considerable surplus capacities, catastrophe business continues to be intensely competitive.

With this in mind, the pressure on rates in US property catastrophe business was sustained, although increases were only in the single-digit percentage range at a pace that was clearly slowing. As anticipated, rates similarly declined in the mature markets of Europe, in Japan and in Australia. Only in isolated cases, primarily under loss-impacted programmes, did rates move higher.

Although more natural catastrophe events were recorded in the year under review than in the previous year, losses were for the most part moderate for insurers and reinsurers alike and they remained within the modelled claims expectations. Nevertheless, our company was impacted by three sizeable events. In the first place, the forest fires in the area around Fort McMurray in the Canadian province of Alberta resulted in a net strain of EUR 127.9 million for our account. Secondly, the United States and the Caribbean suffered their first fairly costly windstorm event for some time in the shape of Hurricane Matthew. This storm did not, however, prove to be as destructive as originally anticipated. The net loss incurred by Hannover Re from Hurricane Matthew amounted to EUR 70.3 million. In addition, the serious earthquake in New Zealand gave rise to loss expenditure of EUR 56.3 million.

The gross premium volume for our global catastrophe business decreased from EUR 374.9 million to EUR 357.2 million. The combined ratio deteriorated to 55.9% (50.2%). The operating profit (EBIT) was stable at EUR 154.9 million (EUR 154.6 million).

### **Structured reinsurance and insurance-linked securities**

#### **Structured reinsurance**

Operating under its Advanced Solutions brand, Hannover Re is one of the largest providers in the world for structured and tailor-made reinsurance solutions, the purpose of which – among other things – is to optimise the cost of capital for our ceding companies. In this area we also offer alternative reinsurance solutions that provide solvency relief or protect our clients against frequency losses. The implementation of Solvency II in Europe and other risk-based solvency regimes in various countries has altered the risk-awareness of our customers, as a result of which we enjoyed further growth in demand in the 2016 financial year.

In keeping with our objective we continued to enlarge our customer base and further improved the regional diversification of our portfolio in the year under review. The adoption of new capital requirements (C-ROSS) in China prompted the discontinuation of large-volume quota share arrangements on motor business. This decrease was, however, offset by new quota share cessions for capital management purposes in North America and Europe. The premium volume in structured reinsurance therefore remained stable in the year under review while the number of contracts increased.

#### **Insurance-linked securities (ILS)**

The strong demand on the capital market for (re)insurance risks remains undiminished, particularly given the diversifying nature of such investments. The worldwide volume of risks transferred to the capital market continued to grow in the year under review.

Through our activities we leverage the entire spectrum of opportunities offered by the so-called insurance-linked securities market. On the one hand we take out reinsurance with ILS investors, while at the same time we transfer risks for our customers to the capital market as a service. This is done in the form of catastrophe bonds or through collateralised reinsurance. We are also active ourselves as an investor in catastrophe bonds.

Thus, for example, we were able to renew the protection cover for Hannover Re known as the “K cession” – a modelled quota share cession consisting of non-proportional reinsurance treaties in the property, catastrophe, aviation and marine (including offshore) lines that has been placed *inter alia* on the ILS market for more than 20 years now – at an increased level of roughly USD 520 million for 2016. In addition to the K cession we use the ILS market for other protection covers as well. In this regard, we attach special significance to the fact that ILS investors must furnish collateral for their liabilities to us.

It remains the case that the currently available capital exceeds the available opportunities for making new investments in catastrophe bonds. This has prompted investors to look for other means of investing in the reinsurance sector. Collateralised reinsurance, in particular, grew market-wide in the year under review and surpasses by far the volume of funds invested in catastrophe bonds. A modest decline in the area of catastrophe bonds was more than offset by collateralised reinsurance business.

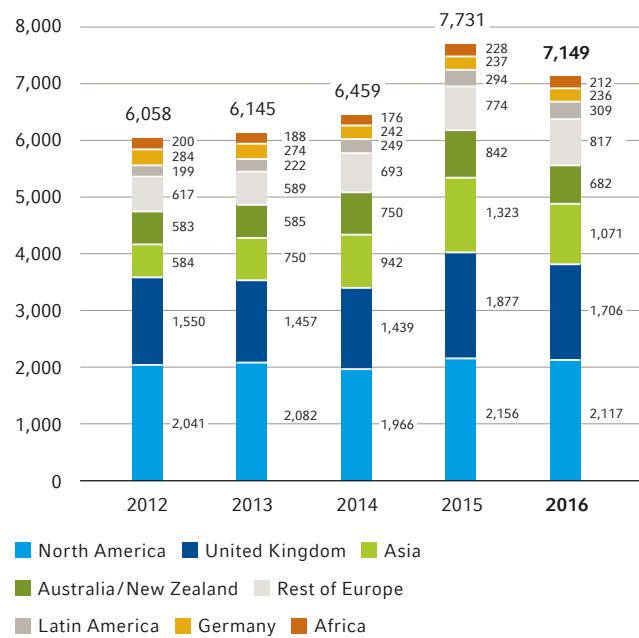
Under collateralised reinsurance programmes the investor assumes reinsurance risks that are normally collateralised in the amount of the limit of liability. In this business Hannover Re assists its clients with the transfer of reinsurance risks to the capital market; the company maintained its cooperation with selected fund managers on a consistently high level in the year under review and generated attractive margins.

In addition, we successfully transferred further life reinsurance risks to the capital market.

The gross premium volume in structured reinsurance and from ILS activities was stable at EUR 1,308.7 million. The combined ratio stood at 97.3% (98.4%). The operating profit (EBIT) increased to EUR 73.9 million (EUR 57.4 million).

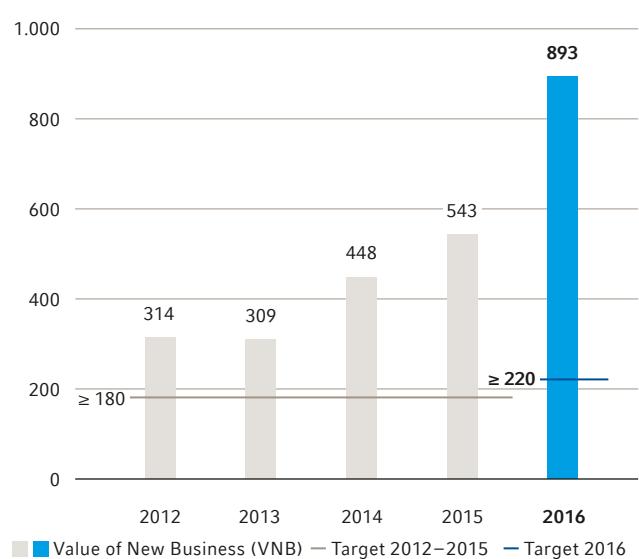
## Life & Health reinsurance at a glance

**Breakdown of gross premium by markets**  
in EUR million



M 20

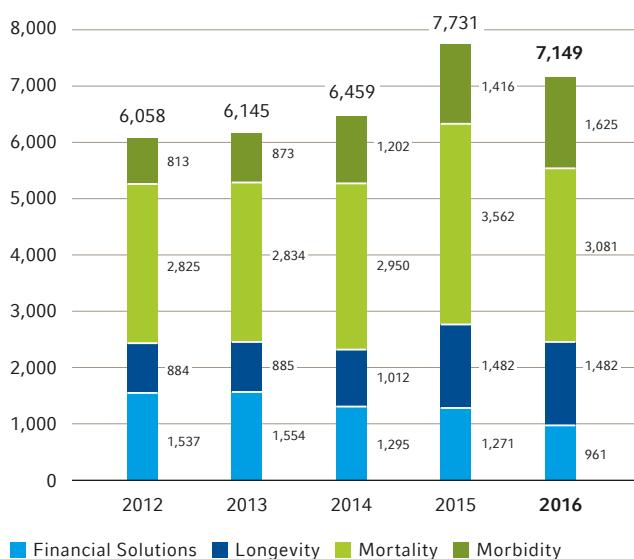
**Value of New Business (VNB) growth<sup>1</sup>**  
in EUR million



M 21

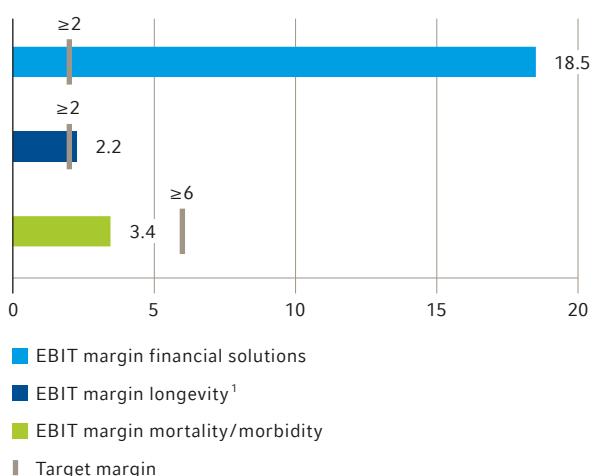
<sup>1</sup> Since 2016 based on Solvency II principles and pre-tax reporting; until 2015 MCEV principles (cost of capital already increased from 4.5% to 6% in 2015) and post-tax reporting

**Breakdown of gross written premium by reporting categories**  
in EUR million



M 22

**EBIT-margin per reporting category vs. target margins 2016**  
in %



M 23

<sup>1</sup> Including a longevity treaty that was previously classified under financial solutions

## Life & Health reinsurance

- Result confirms the profitability of underlying business
- Participations in innovative start-up companies
- Automated underwriting system hr | ReFlex continues its success story following 2015 launch

Life and health reinsurance contributed 44% (previous year: 45%) of Group gross premium in the financial year just ended. One of our two business groups, Life & Health reinsurance plays a key part in the success of our Group: in the first place through its positive stable business results and, secondly, through its diversification with property and casualty reinsurance. The consistency and enduring nature of its partnership-based business relations are particular hallmarks of life and health reinsurance. Thanks to our global network and our know-how, we retain our ability to shape developments and especially to drive innovations in the markets. The profitability and quality of the generated business nevertheless remain our overriding priority.

### Total business

All in all, the financial year just ended developed in line with our expectations. Conditions in the individual markets were often very dynamic.

In Germany many of our activities are concentrated on the implications of the Solvency II regime implemented on 1 January 2016. Fulfilment of the required capital adequacy ratio posed a major challenge for German life insurers. Yet beyond Germany's borders too – and in fact right across Europe – Solvency II has affected the (re)insurance industry. It was evident that the increase in regulatory requirements constitutes a global trend. Regulators in China, Australia and South Africa have either adopted or are currently planning more rigorous supervisory regimes. For the (re)insurance industry this means a constant need to adapt to changing requirements. Drawing on our global expertise, we engage intensively with the new policies in order to be able to cater to the resulting, country-specific needs of our customers and offer potential reinsurance concepts.

Quite aside from this, our longevity business also developed thoroughly favourably. International inquiries about longevity protection continued to increase in the financial year just ended.

Furthermore, topics such as digitisation and online insurance sales – which are preoccupying the worldwide insurance industry as a whole – played a prominent role in our talks with clients. We have explored these issues and the potential business opportunities in depth and already embarked on a number of activities.

As a reinsurer, we grow particularly strongly wherever the insurance market is growing. We have therefore focused closely on leveraging new business potentials outside of traditional (re)insurance by entering into partnerships with start-up

companies – such as fintechs – as a strategic investment. For companies such as these equipped with innovative ideas, the robustly capitalised Hannover Re – with its long-standing, international experience – represents an attractive partner. Partnerships such as these create an optimal platform for addressing, in particular, the members of a generation who are both tech-savvy and attach great importance to their health and quality of life: given how difficult such individuals are to reach via the traditional distribution channels of the life insurance industry, we seek to play an active part in these trends.

In the year under review we generated gross premium of EUR 7,149.0 million (EUR 7,730.9 million) in life and health reinsurance, a decline of 7.5%; the decrease was 4.3% adjusted for exchange rate effects. The determining factor here was the exceptional premium growth booked in 2015. The level of retained premium stood at 90.4% (84.2%). Net premium earned reached EUR 6,432.4 million (EUR 6,492.4 million), equivalent to growth of 2.2% after adjustment for exchange rate effects.

In view of the low level of interest rates, investment income in life and health reinsurance contracted – as expected – year-on-year and totalled EUR 638.9 million (EUR 709.2 million). The share of the income attributable to assets under own management amounted to EUR 330.8 million (EUR 334.3 million), while the contribution made by income from securities deposited with ceding companies came in at EUR 308.1 million (EUR 374.9 million).

The operating result (EBIT) in life and health reinsurance fell short of the previous year's figure at EUR 343.3 million (EUR 405.1 million); this was due in particular to the elimination of a one-off effect in the amount of EUR 39 million. We are satisfied with this very solid result, since it reflects the sustainable profitability and quality of the underlying portfolio. Group net income for life and health reinsurance contracted by 12.7% to EUR 252.9 million (EUR 289.6 million).

We report below on developments in life and health reinsurance in greater detail. The reporting is structured according to our internal risk management system and hence is split into the categories of financial solutions and risk solutions. For the purposes of differentiation by biometric risks, the category of risk solutions is further divided into longevity, mortality and morbidity. In the final section on underwriting services we provide a summary account of our extensive range of services that go above and beyond pure risk transfer.

in EUR million	2016	+/- previous year	2015	2014	2013	2012 <sup>1</sup>
Gross written premium	7,149.0	-7.5%	7,730.9	6,458.7	6,145.4	6,057.9
Net premium earned	6,432.4	-0.9%	6,492.4	5,411.4	5,359.8	5,425.6
Investment income	638.9	-9.9%	709.2	614.2	611.5	685.1
Claims and claims expenses	5,480.3	+0.4%	5,459.0	4,636.2	4,305.7	4,023.5
Change in benefit reserve	80.5	-20.4%	101.1	28.6	146.5	529.4
Commissions	1,032.6	-3.9%	1,075.1	946.4	1,169.0	1,098.0
Own administrative expenses	202.0	+2.4%	197.3	175.7	156.7	144.1
Other income/expenses	67.1	+86.9%	35.9	25.1	(42.9)	(36.7)
Operating result (EBIT)	343.3	-15.3%	405.1	263.8	150.5	279.0
Net income after tax	252.9	-12.7%	289.6	205.0	164.2	222.5
Earnings per share in EUR	2.10	-12.7%	2.40	1.70	1.36	1.84
Retention	90.4%		84.2%	83.9%	87.7%	89.3%
EBIT margin <sup>2</sup>	5.3%		6.2%	4.9%	2.8%	5.1%

<sup>1</sup> Adjusted pursuant to IAS 8

<sup>2</sup> Operating result (EBIT)/net premium earned

## Financial solutions

The financial solutions reporting category encompasses reinsurance solutions that focus on the management of our clients' solvency and capital position. They can take many different forms and are always tailored to the individual customer. Additional elements may, for example, be the optimisation of liquidity management or the (pre)financing of our customers' new business. The decisive criterion is that while biometric risks are transferred in principle, this does not constitute the primary motivation for the reinsurance coverage. The focus of these product solutions is on optimising and supporting the financial situation of our clients. The central importance of financial solutions business is reflected not only in the business volume – which has been growing year by year and which we write successfully in all parts of the world – but also in our long-standing experience and broad-ranging expertise. Our international teams work closely with our customers on individual, complex reinsurance structures optimally tailored to their varying requirements.

Our US subsidiary played a vital part in the success of our financial solutions business. Complex reinsurance solutions designed to optimise solvency and provide capital and reserve relief are a key driver of the Value of New Business in the United States. Numerous new contracts were once again written in the financial year just ended, and particularly in future reporting periods these will deliver an appreciable profit contribution.

Financial solutions business in Asia developed less vigorously than had been anticipated in some areas, although on balance the positive effects outweigh the negative. We view European markets with similar satisfaction. Stimulated by the requirements of Solvency II, we saw increased demand in the year

under review for reinsurance solutions geared both to providing capital relief and covering longevity risks. In our domestic German market, in particular, customers showed considerable interest in reinsurance financing solutions that reduce the supplementary reserves needed for life products promising guaranteed returns in excess of an official reference rate ("Zinszusatzreserve"). We were particularly pleased to successfully close the first contracts protecting against the risk of excessive policyholder lapse rates on the basis of Solvency II requirements.

Altogether, gross premium of EUR 961.2 million (EUR 1,271.3 million) was generated in the financial solutions reporting category. This corresponds to a share of 13.4% of the total gross premium income booked in life and health reinsurance. The operating result (EBIT) came in at EUR 168.0 million (EUR 203.2 million).

## Longevity

We classify reinsurance business under which the longevity risk constitutes the primary risk as longevity business. This consists principally of traditional annuity policies, pensions blocks taken out for new business and so-called enhanced annuities, which guarantee annuitants with a pre-existing condition a higher annuity payment for their remaining shortened life expectancy. By far the bulk of our portfolio is made up of business that is already in the pay-out phase.

In the financial year just ended the United Kingdom continued to be not only the world's largest but also its most competitive longevity market. Particularly in this market, the implementation of Solvency II has increased the capital requirements for annuity insurance business, hence prompting a surge in demand for commensurate reinsurance protection. There are

even some instances where individual customers have withdrawn entirely from the longevity market. It is therefore exceptionally pleasing to report that in the United Kingdom we were able to successfully launch our new product with deferred annuity payments aimed specifically at older generations.

Worldwide, too, demand for reinsurance solutions to protect against the longevity risk has risen in response to increased regulatory reporting and risk management requirements in the international insurance industry as well as the parallel increase in life expectancy. Substantial, long-term commitments are putting primary insurers under ever greater strain. Yet most insurance companies have hitherto had little or no experience with the transfer of longevity risks, and what is more there is already considerable global competition. We engage in intensive discussions with our customers, in which we contribute our robust, wide-ranging expertise in order to devise bespoke reinsurance structures for them.

On a global level the gross premium for longevity business totalled EUR 1,482.4 million (EUR 1,482.1 million) in the financial year just ended. The operating result (EBIT) amounted to EUR 25.7 million (EUR 54.0 million). Bearing in mind our deliberately prudent reserving policy, the result is entirely in line with our expectations.

## Mortality and Morbidity

The biometric risks of mortality and morbidity are often joint elements of a business relationship in international (re)insurance business, and in some cases they are even covered under the same reinsurance treaties. We therefore measure the profit contribution made by these two reporting categories on a consolidated basis. Consequently, only the significant developments of the past year in the two reporting categories are discussed separately.

### Mortality

Mortality-exposed business forms the core of our traditional life and health reinsurance portfolio. We provide reinsurance solutions that protect our customers against the risk that the actually observed mortality may diverge negatively from the originally expected mortality.

US mortality business is an important market for our company. We are a sought-after business partner and we offer the entire spectrum of mortality-oriented reinsurance solutions. Part of our existing business has fared more poorly than anticipated and also affected the result for the year under review. Nevertheless, the US life insurance market is distinguished by its considerable power of innovation, which consistently generates new business potential. In the financial year just ended we wrote substantial volumes of new business, thereby all but offsetting the aforementioned negative effect.

The Latin American market proved to be extremely competitive in the financial year just ended. It is therefore all the more gratifying that we were able to successfully renew our large treaties

with existing customers, especially in our company's key markets of Mexico, Colombia, Peru and Chile. On European markets, too, we were able to at least maintain – and here and there even improve – our current market position. In Italy, for example, we significantly grew our portfolio, primarily in the bancassurance sector. Bearing in mind the comparatively poor result posted in 2015, the business development in France was very positive: our branch in Paris generated a pleasing profit from its new business and the total result has also returned to its accustomed level. In addition, new business in Africa and the Middle East also developed favourably.

The gross premium in the mortality reporting category amounted to EUR 3,080.9 million (EUR 3,561.6 million). Altogether, it accounted for 43.1% (46.1%) of the total gross premium income booked in life and health reinsurance.

### Morbidity

In the morbidity reporting category we group together the business that covers the risk of deterioration in a person's state of health due to disease, injury or infirmity. A hallmark of this business is the wide range of possible combinations of different covered risks, including for example strict (any occupation) disability, occupational disability and various forms of long-term care insurance. A specialist team of staff stands ready to support our entities worldwide, thereby enabling our local customers to optimally benefit from our global expertise.

In Central and Eastern Europe we are engaged in an intensive dialogue with primary insurance customers with a view to promoting the development of the private health insurance sector in these regions. In the United Kingdom we are already an established and sought-after reinsurance partner. This market is, however, notable for its exceptionally competitive and price-sensitive environment. Solid profitability is therefore a fundamental prerequisite for the acquisition of new business. Our book of US health reinsurance clearly outperformed our expectations and plays a major part in our total morbidity portfolio. The development of the Asian market was also extremely gratifying: we enjoyed brisk demand for reinsurance solutions for health insurance business and were thus able to roll out numerous new critical illness products here in cooperation with our local customers. The scope of coverage provided by the individual products is entirely new to these markets and enables policyholders to obtain enhanced and more all-round insurance protection. In India we are also involved in what are known as mass health schemes. Aimed particularly at more deprived sections of the population, these government-sponsored health insurance schemes open up access to a basic form of coverage.

The dynamic growth observed in Asia demonstrates the considerable demand existing in these increasingly ageing, large populations. In these markets we are seeing a steady rise in demand for products designed to protect against disease, disability and the need for long-term care.

Our worldwide morbidity business generated a gross premium volume of EUR 1,624.6 million (EUR 1,415.9 million) in the financial year just ended.

Taken together, the two reporting categories of mortality and morbidity produced gross premium of EUR 4,705.5 million (EUR 4,977.5 million). This gave rise to an operating result (EBIT) of EUR 149.5 million (EUR 147.8 million).

#### **Underwriting services**

Our relations with our customers are grounded on a partnership-based exchange. In the financial year just ended it was very evident that services above and beyond pure risk transfer have increased enormously in importance and are now considered by life insurers to be a major component of the business relationship.

Demand for automated underwriting processes was especially strong in the context of the digitisation of customer communication. Our own underwriting systems, specifically hr|ReFlex and hr|Quirc, enable us to optimally cover local and market-specific customer requirements. Thanks to its modular structure, hr|ReFlex can be adjusted with the utmost flexibility to fit the individual customer's particular situation. The system makes standardised and consistent underwriting decisions, thereby reducing the operational risk. Furthermore, hr|ReFlex offers detailed management evaluation options that facilitate targeted analysis and constant monitoring. An undogmatic and quickly implemented alternative, hr|Quirc is a particularly interesting option for developing markets. It has been used in South Africa for several years with considerable success.

First launched in 2015, we actively pressed ahead with the roll-out of our automated underwriting system hr|ReFlex in 2016. For example, we were able to successfully implement hr|ReFlex at customers in Norway, Sweden, France and America. In the United States, for example, it has been honoured with the distinction of "Most Transformative Solution". A host of international clients have signalled their interest in this underwriting system. In the coming year numerous implementations are already planned at notable primary insurance

customers. Not only that, we are continuing with our marketing efforts and expect to see a further rise in interest around the world. We consider the integration of policyholders into the underwriting process to be crucially important. Accessible from anywhere and capable of concluding insurance contracts in a quick and uncomplicated manner – these are the essential criteria for future (re)insurance solutions. Along with these implementation activities, we also entered into cooperation arrangements with (online) platforms specialising in insurance products in the 2016 financial year. This secures access for us to the valuable group of customers who take their health and quality of life seriously and tend to keep a constant eye on their bio-signs using mobile, wearable technology. It is especially important to raise awareness of insurance products among this generation. Such partnerships offer a superb basis for addressing the needs of these younger generations, in particular. In addition, they enable us – as a reinsurer – to access the underlying insurance business. Combining the application process with the lifestyle habits of policyholders facilitates a more appropriate and individual risk assessment. For policyholders, this is reflected in premiums and benefits that are customised to their needs. There is an unmistakeable trend towards life insurance products increasingly taking on a more direct lifestyle relevance, with the actual insurance product merely constituting one component rather than being the exclusive focus.

As a traditional reinsurer we assume biometric risks from life insurers. In view of developments on capital markets and the more exacting requirements imposed by Solvency II in relation to the coverage of capital market risks, many insurance companies have signalled a need to pass on not only the biometric risk but also capital market risks. In order to ensure that we remain able to offer our customers the accustomed support in all situations, we have acquired minority interests in two companies specialising in the transfer of capital market risks.

Our customers are the absolute focus of our attention in every situation. A long-term and expert partner, we always make every effort to anticipate current and future requirements in the international (re)insurance markets.

## Investments

- Very good investment income despite challenging climate
- Return on investment at 3.0% slightly above the target figure
- High-quality investment portfolio even more diversified through equity exposure

We are highly satisfied with the development of our investments. Although the year under review was another challenging one owing to continued low interest rates and a global economic trend influenced by a range of uncertainties and risks, we were spared defaults in our fixed-income portfolio and – even in the aftermath of the unexpected outcome of the Brexit referendum halfway through the year – were compelled to take only moderate temporary impairments in our equity portfolio. Our exposures to the credit risk, emerging markets and private equity were also rewarded by the good performance of these markets. This is similarly true of the real estate sector. Ordinary investment income excluding interest on funds withheld and contract deposits delivered a gratifying performance to reach EUR 1,162.0 million (previous year: EUR 1,253.4 million). While it fell short of the previous year's level, it entirely lived up to our expectations. The challenging interest rate environment is increasingly making itself felt here, along with the elimination of the positive special effect from life and health reinsurance in the previous year. We were nevertheless able to partially make up for the diminished potential returns associated with the protracted low interest rate level through stronger income from dividends.

Net realised gains on disposals totalled EUR 206.3 million (EUR 135.8 million) and were in large measure attributable to regrouping moves as part of regular portfolio maintenance, the streamlining of our private equity portfolio through the sale of older exposures as well as internal capitalisation and financing measures within the Group. Gains were also realised in connection with the adjustment of the rating structure of our fixed-income portfolio (see here also the subsection on investments in the section "Financial position and net assets" on page 55).

We recognise a derivative for the credit risk associated with special life reinsurance treaties (ModCo) under which securities deposits are held by cedants for our account; the performance of this derivative in the year under review gave rise to positive fair value changes recognised in income of EUR 0.5 million (-EUR 26.1 million). Altogether, the positive changes in the fair values of our financial assets recognised at fair value through profit or loss amounted to EUR 26.1 million (EUR 0.9 million). The principal items recognised here are various derivative financial instruments relating to the technical account or taken out as currency or interest rate hedges as well as fixed-income assets for which the fair value option provided by IAS 39 was applied.

### Investment income

M 25

in EUR million	2016	+/- previous year	2015	2014	2013	2012
Ordinary investment income <sup>1</sup>	1,162.0	-7.3%	1,253.4	1,068.4	1,041.3	1,088.4
Result from participations in associated companies	9.1	-52.5%	19.2	1.0	12.5	10.4
Realised gains/losses	206.3	+51.9%	135.8	182.5	144.2	227.5
Appreciation	0.3	-52.3%	0.6	0.1	0.3	2.7
Depreciation, amortisation, impairments <sup>2</sup>	76.3	+97.1%	38.7	27.7	19.4	21.7
Change in fair value of financial instruments <sup>3</sup>	26.1		0.9	(33.3)	(27.1)	89.3
Investment expenses	109.1	+7.8%	101.2	95.3	97.3	96.4
Net investment income from assets under own management	1,218.3	-4.1%	1,270.1	1,095.8	1,054.5	1,300.2
Net investment income from funds withheld and contract deposits	332.1	-15.9%	395.0	376.1	357.3	355.5
<b>Total investment income</b>	<b>1,550.4</b>	<b>-6.9%</b>	<b>1,665.1</b>	<b>1,471.8</b>	<b>1,411.8</b>	<b>1,655.7</b>

<sup>1</sup> Excluding income and expenses on funds withheld and contract deposits

<sup>2</sup> Including depreciation/impairments on real estate

<sup>3</sup> Portfolio at fair value through profit or loss and trading

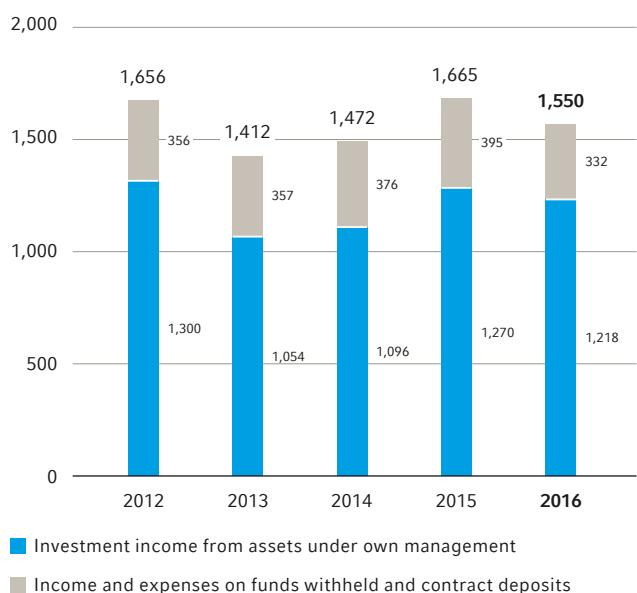
Impairments and depreciation totalling EUR 76.3 million (EUR 38.7 million) were taken, thereof EUR 30.1 million (EUR 1.9 million) on equities – primarily on account of lower prices following the Brexit decision. These write-downs have, however, to a large extent since been opposed by a reversal, which has correspondingly increased the valuation reserves. Impairments of EUR 11.7 million (EUR 5.9 million) were recognised on alternative investments. The write-downs taken on fixed-income securities amounted to just EUR 0.7 million (EUR 2.8 million). Scheduled depreciation on directly held real estate rose to EUR 28.9 million (EUR 23.7 million), a reflection of the further increase in our involvement in this sector. These write-downs contrasted with write-ups of altogether EUR 0.3 million (EUR 0.6 million).

Our investment income (including interest and expenses on funds withheld and contract deposits) came in below the previous year's level at EUR 1,550.4 million (EUR 1,665.1 million); bearing in mind the low interest rate level, the maturity and currency matching of liabilities and the elimination of positive effects from the previous year, it is nevertheless thoroughly satisfactory and indeed even somewhat better than our expectations. Income from assets under own management accounted for an amount of EUR 1,218.3 million (EUR 1,270.1 million). This produces a return on investment of 3.0%, which is also slightly higher than our target of 2.9%. The primary drivers here were our exposures to high-yield bonds and private equity as well as our investments in emerging markets, which generated somewhat stronger income than originally forecast. Interest on funds withheld and contract deposits decreased to EUR 332.1 million (EUR 395.0 million).

#### Development of investment income

M26

in EUR million



## Development of Group net income

in EUR million

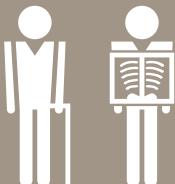
### Property & Casualty reinsurance

**455.6** → **949.9**  
2011                    2016



### Life & Health reinsurance

**182.3** → **252.9**  
2011                    2016



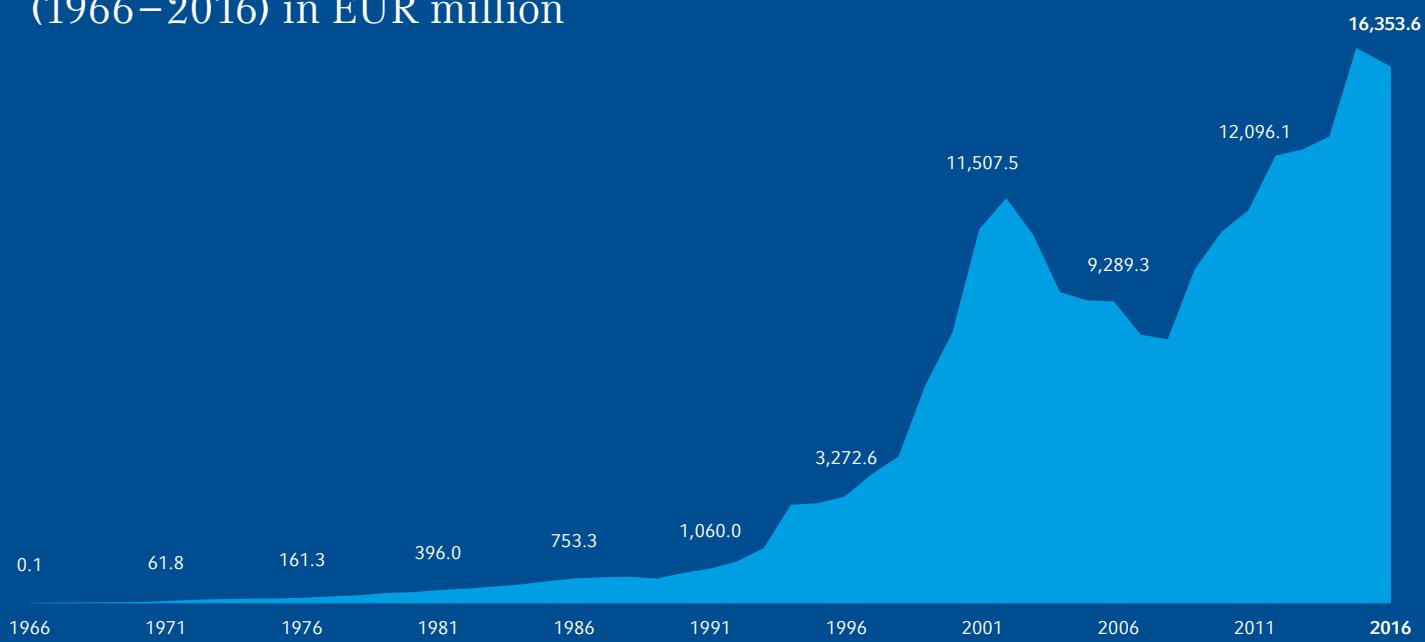
## Total gross premium by regions (2016)

<b>32.6%</b>	North America
<b>15.7%</b>	Rest of Europe
<b>15.5%</b>	United Kingdom
<b>14.8%</b>	Asia
<b>7.6%</b>	Germany
<b>5.5%</b>	Australia
<b>5.5%</b>	Latin America
<b>2.8%</b>	Africa



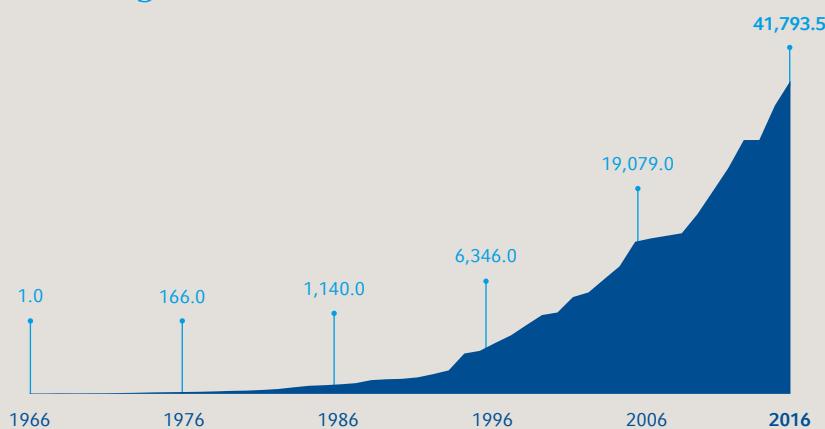
## Development of gross premium

(1966–2016) in EUR million



## Development of assets under own management 1966–2016

in EUR million



The losses caused by Hurricanes Katrina, Rita and Wilma made 2005 the costliest year to date in the history of Hannover Re.

# Financial position and net assets

- Risk-commensurate investment policy
- Diversification of high-quality investment portfolio improved even further
- Asset allocation adjusted to safeguard the return
- Further strengthening of shareholders' equity thanks to another excellent Group result

## 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 the liquidity and solvency of Hannover Re at all times;
- high diversification of risks;
- limitation of currency exposures 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. With this in mind 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 we kept the modified duration of our fixed-income portfolio broadly neutral, as a result of which it stood at 5.0 (previous year: 4.4) as at 31 December 2016. The higher figure reflects a modest business-related increase on the liabilities side which had to be covered by the portfolio. Furthermore, through active and regular management of the currency spread in our fixed-income portfolio we bring about extensive matching of currencies on the assets and liabilities sides of the balance sheet, as a consequence of which fluctuations in exchange rates have only a limited effect on our result.

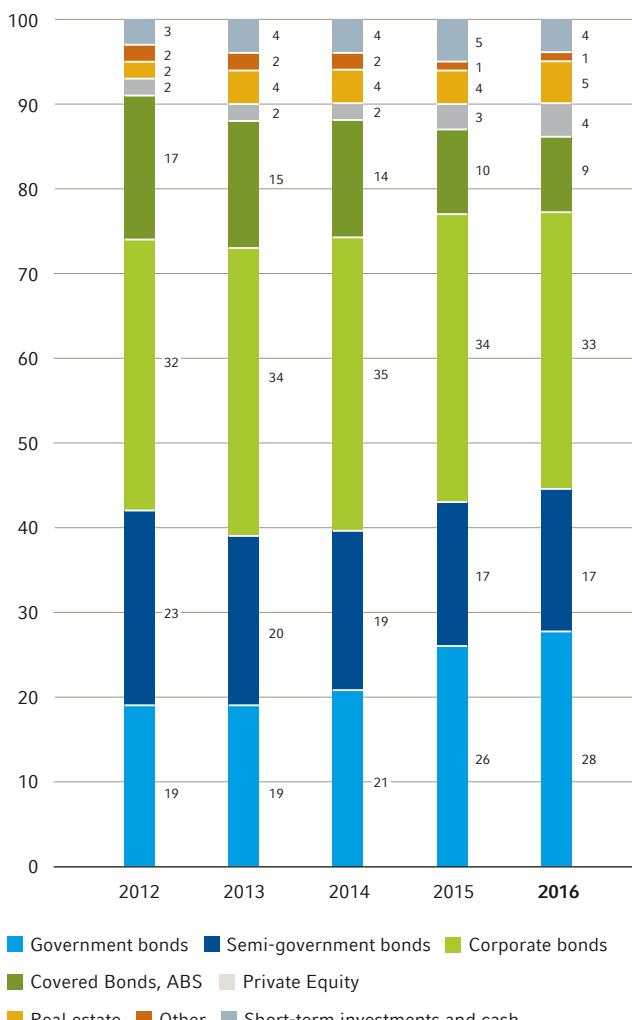
At year-end 2016 we held 30.2% (30.8%) of our investments in euro, 48.3% (46.7%) in US dollars, 6.9% (8.3%) in pound sterling and 5.1% (5.1%) in Australian dollars.

### Investment portfolio

M 27

in EUR million	2016	2015	2014	2013	2012
Funds withheld	11,844	13,990	15,919	14,343	14,751
Investments under own management	41,793	39,347	36,228	31,875	31,874
<b>Total</b>	<b>53,637</b>	<b>53,337</b>	<b>52,147</b>	<b>46,219</b>	<b>46,625</b>

## Breakdown of investments under own management M28 in %

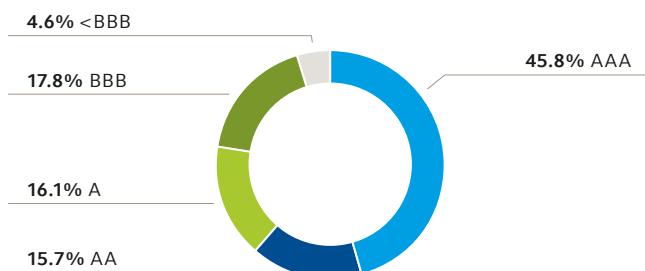


M28

continued stable returns, while maintaining the overall risk level of our fixed-income portfolio virtually unchanged. We also expanded the share of the portfolio attributable to investments in emerging markets. In addition, we moved to further enlarge our portfolio of listed equities in view of more attractive purchase prices. Another step that we took as early as the first quarter was the streamlining of our private equity portfolio through the sale of older exposures. We also moved to further increase slightly the share attributable to real estate as part of the strategic expansion of this asset category. 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 35.5 billion (EUR 33.6 billion). Hidden reserves for available-for-sale fixed-income securities, which are allocable to shareholders' equity, totalled EUR 728.2 million (EUR 635.6 million). This reflects the yield decreases observed in the course of the reporting period, especially in the area of EUR- and GBP-denominated sovereign bonds, and above all lower risk premiums on corporate bonds. As to the quality of the bonds – measured in terms of rating categories –, the proportion of securities rated "A" or better remained on a virtually unchanged high level as at year-end at 77.6% (79.8%).

## Rating of fixed-income securities M29



M29

## Investments

Our portfolio of assets under own management improved to EUR 41.8 billion, a level considerably higher than at the end of the previous year (31 December 2015: EUR 39.3 billion). This growth was due in part to positive exchange rate effects – primarily associated with the strong US dollar – as well as increased hidden reserves in the areas of listed equities and private equity and, above all, to a gratifyingly positive operating cash flow.

In response to the challenging interest rate environment we adjusted the allocation of our investments to the individual classes of securities in the year under review such that we further enlarged our holding of fixed-income securities rated BBB or lower while at the same time increasing the proportion of government bonds in our portfolio. In this way we can achieve increased liquidity of the portfolio and generate

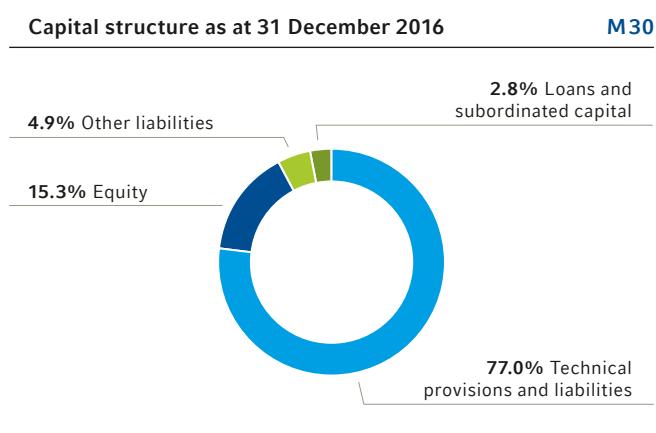
Holdings of alternative investment funds increased appreciably. As at 31 December 2016 an amount of EUR 722.4 million (EUR 781.5 million) was invested in private equity funds; a further EUR 750.7 million (EUR 678.8 million) was attributable predominantly to investments in high-yield bonds and loans. In addition, altogether EUR 390.7 million (EUR 371.3 million) was invested in structured real estate investments. The uncalled capital with respect to the aforementioned alternative investments totalled EUR 1,096.4 million (EUR 837.1 million).

As already mentioned above, we were again able to somewhat increase our real estate allocation in the course of the year. Two properties were acquired in the United States for this purpose; further projects are presently under review, and the real estate allocation should therefore keep rising steadily as planned. It currently stands at 4.6% (4.4%).

At the end of the year under review we held a total amount of EUR 1.7 billion (EUR 1.9 billion) in short-term investments and cash. Funds withheld amounted to EUR 11.8 billion (EUR 14.0 billion).

## Analysis of the capital structure

The capital structure and the composition of the liabilities of Hannover Re are shaped by our activity as a reinsurer. By far the largest share is attributable to technical provisions and liabilities. 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 2016, broken down into percentages of the balance sheet total.



The technical provisions and liabilities shown above, which include funds withheld/contract deposits and reinsurance payable, make up 77.0% (78.5%) 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 15.3% (13.9%) of the balance sheet total as well as the loans and – especially – subordinated capital at altogether 2.8% (2.8%) 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. For further information please see the following section “Management of policyholders’ surplus”.

## Management of policyholders’ surplus

A key strategic objective of Hannover Re is long-term capital preservation. Just as in previous years, we issued hybrid capital as an equity substitute in order to keep the cost of capital on a low level. The policyholders’ surplus is an important

management ratio in the context of Hannover Re’s comprehensive capital management. The total policyholders’ surplus is defined as follows:

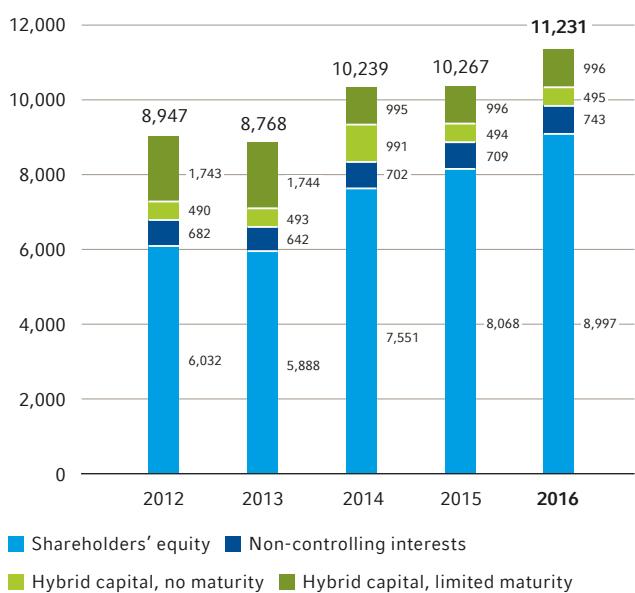
- shareholders’ equity excluding non-controlling interests, composed of the common shares, additional paid-in capital, other comprehensive income and retained earnings,
- non-controlling interests and
- hybrid capital used as an equity substitute, which takes the form of subordinated bonds.

The policyholders’ surplus totalled EUR 11,231.4 million (EUR 10,267.3 million) as at the balance sheet date. The increase was due principally to the rise in retained earnings, in the foreign currency gains and losses recognised in equity and in the unrealised gains and losses, which are similarly recognised in equity. Overall, the policyholders’ surplus recorded significant growth with an increase of 9.4%.

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 the lowest possible 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 22 et seq. of this report.

## Development of policyholders’ surplus

in EUR million



In its capital management Hannover Re is guided by the requirements and expectations of the rating agencies that assess the Group 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. If, despite the capital allocation mechanisms described above, a scenario occurs in which there is a danger of minimum capital requirements being undershot, suitable options are immediately discussed and measures set in motion to counteract such an eventuality. From the Group perspective we manage Hannover Re's solvency using our internal capital model (cf. "Opportunity and risk report", page 73 et seq.).

## Group shareholders' equity

In view of another very positive result, the development of the shareholders' equity of the Hannover Re Group was pleasing. Compared to the position as at 31 December 2015, it surged by EUR 963.1 million – or 11.0% – in the year under review to EUR 9,740.5 million. After adjustment for non-controlling interests, it rose by EUR 928.9 million to EUR 8,997.2 million. The book value per share increased accordingly by a substantial 11.5% to EUR 74.61. The changes in shareholders' equity were shaped chiefly by the following developments:

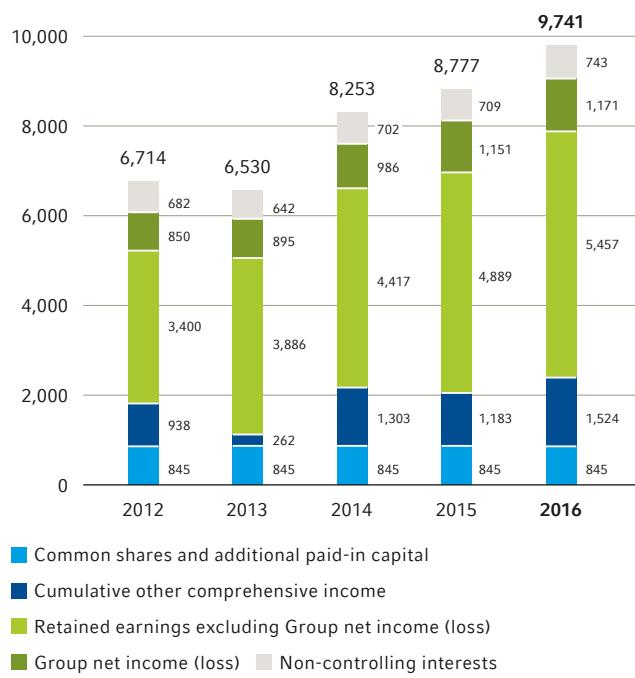
Net unrealised gains on investments stood at EUR 904.2 million, a rise of EUR 192.2 million compared to the beginning of the year under review. This increase was mainly due to price gains on fixed-income securities, equities and investment funds.

The foreign currency gains and losses climbed by EUR 170.9 million from EUR 509.2 million to EUR 680.1 million as a consequence of exchange rate movements of foreign currencies against the euro in the financial year. The rise in the reserve for currency translation adjustment resulted principally from the appreciation of the US dollar and translation of the shareholders' equity of those subsidiaries whose equity is denominated in USD.

Non-controlling interests in shareholders' equity increased by EUR 34.2 million to EUR 743.3 million as at 31 December 2016. The bulk of this – in an amount of EUR 696.6 million – is attributable to the non-controlling interests in E+S Rückversicherung AG.

The Group net income for 2016 attributable to the shareholders of the Hannover Re Group climbed to EUR 1,171.2 million (EUR 1,150.7 million). The non-controlling interest in the profit generated in the year under review totalled EUR 55.2 million (EUR 64.0 million).

**Development of Group shareholders' equity** M 32  
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 was essentially composed of subordinated bonds issued to ensure lasting protection of our capital base – in part also in observance of rating requirements. The total volume of debt and subordinated capital stood at EUR 1,804.2 million (EUR 1,798.3 million) as at the balance sheet date.

Our subordinated bonds supplement our equity 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 three subordinated 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 subordinated bonds				M 33
in EUR million				
Hannover Finance (Luxembourg) S.A., subordinated debt, EUR 500 million; 2010/2040	14.9.2010	5.75	498.9	498.7
Hannover Finance (Luxembourg) S.A., subordinated debt, EUR 500 million; 2012/2043	20.11.2012	5.00	497.5	497.2
Hannover Rück SE, subordinated debt, EUR 500 million; 2014/undated	15.9.2014	3.375	494.5	494.0
<b>Total</b>			<b>1,490.9</b>	<b>1,489.9</b>

Several Group companies have also taken up long-term debt – principally in the form of mortgage loans – amounting to EUR 313.4 million (EUR 308.5 million).

For further explanatory information please see our remarks in the notes to this report, section 6.12 "Debt and subordinated capital", page 208 et seq., and section 6.13 "Shareholders' equity and treasury shares", page 212.

Various financial institutions have provided us with letters of credit for the collateralisation of technical liabilities. Both bilateral agreements and an unsecured syndicated guarantee facility existed as at the balance sheet date with a number of financial institutions for this purpose. The guarantee facility was terminated in January 2016 and partially refinanced through bilateral credit facilities. We report in detail on existing contingent liabilities in the notes, section 8.7 "Contingent liabilities and commitments", page 233 et seq.

## Analysis of the consolidated cash flow statement

### Liquidity

We generate liquidity primarily from our operational reinsurance business, investments and financing measures. Regular liquidity planning and a liquid investment structure 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 140 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.

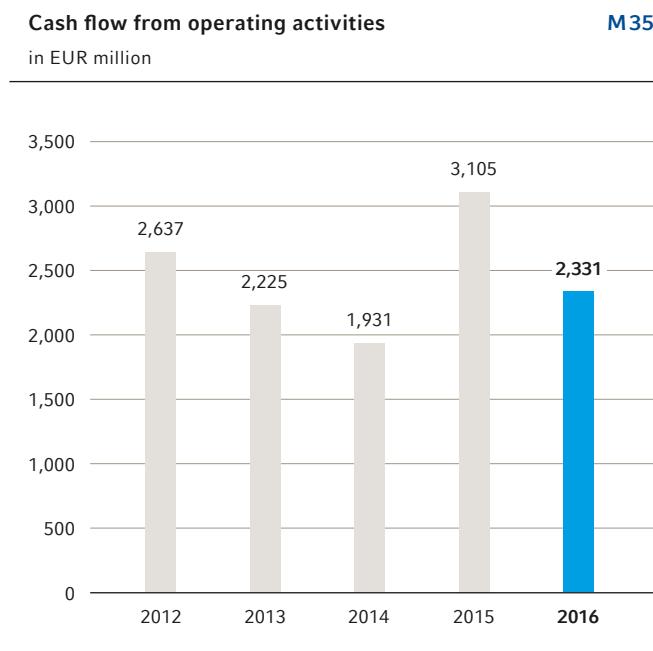
**Consolidated cash flow statement**

in EUR million	2016	2015 <sup>1</sup>	M34
Cash flow from operating activities	2,331.3	3,104.9	
Cash flow from investing activities	(1,711.6)	(2,107.6)	
Cash flow from financing activities	(626.9)	(1,054.8)	
Exchange rate differences on cash	34.9	24.0	
<b>Change in cash and cash equivalents</b>	<b>27.7</b>	<b>(33.5)</b>	
Cash and cash equivalents at the beginning of the period	821.0	854.5	
Change in cash and cash equivalents according to cash flow statement	27.7	(33.5)	
<b>Cash and cash equivalents at the end of the period</b>	<b>848.7</b>	<b>821.0</b>	

<sup>1</sup> Restated pursuant to IAS 8 (see section 3.1 of the notes "Changes in accounting policies")

**Cash flow from operating activities**

The cash flow from operating activities, which also includes inflows from interest received and dividend receipts, amounted to EUR 2,331.3 million in the year under review as opposed to EUR 3,104.9 million in the previous year. The reduction of altogether EUR 773.6 million was essentially due to the payment of retrocession premiums for certain financial solutions contracts in life and health reinsurance, under which the corresponding premiums for assumption of the business had already been received in the previous year. The lower premium level was also a factor in the decreased cash flow from operating activities.

**Cash flow from investing activities**

The balance of cash inflows and outflows from operating activities and financing activities in an amount of EUR 1,711.6 million (EUR 2,107.6) million was invested in accordance with the company's investment policy, giving particular consideration to matching of currencies and maturities on the liabilities side of the technical account. Regarding the development of the investment portfolio please see also our remarks at the beginning of this section.

**Cash flow from financing activities**

The cash outflow from financing activities decreased from -EUR 1,054.8 million to -EUR 626.9 million in the year under review. The higher outflow in the previous year was mainly due to redemption of a EUR 500.0 million subordinated debt.

Overall, allowing for the restatements pursuant to IAS 8, the cash and cash equivalents therefore increased year-on-year by EUR 27.7 million to EUR 848.7 million.

For further information on our liquidity management please see page 95 of the risk report.

**Financial strength ratings**

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

**Financial strength ratings of the Hannover Re Group** **M36**

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

Financial strength ratings of subsidiaries		M37	
	Standard & Poor's	A.M. Best	
E+S Rückversicherung AG	AA-	A+	The following companies hold direct or indirect capital participations that exceed 10% of the voting rights: Talanx AG, Hannover, directly holds 50.2% (rounded) of the company's voting rights. HDI-Haftpflichtverband der Deutschen Industrie Versicherungsverein auf Gegenseitigkeit, Hannover, which holds a stake of 79.0% in Talanx AG, therefore indirectly holds 39.7% (rounded) of the voting rights in the company.
Hannover Life Reassurance Africa Ltd. <sup>1</sup>	BBB+	-	
Hannover Life Reassurance Bermuda Ltd.	AA-	A+	
Hannover Life Reassurance Company of America	AA-	A+	
Hannover Life Re of Australasia Ltd.	AA-	-	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.
Hannover Reinsurance Africa Ltd. <sup>1</sup>	BBB+	-	
Hannover Re (Ireland) Designated Activity Company	AA-	A+	
Hannover Re (Bermuda) Ltd.	AA-	A+	
Hannover ReTakaful B.S.C. (c)	A+	-	
International Insurance Company of Hannover SE	AA-	A+	

<sup>1</sup> With regard to the financial strength ratings of the South African subsidiaries we would also refer to our remarks in section 8.10 of the notes "Events after the balance sheet date" on page 235.

## Issue ratings of issued debt

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 issued debt		M38	
	Standard & Poor's	A.M. Best	
Hannover Rück SE, subordinated debt, EUR 500 million; 2014/undated	A	a	
Hannover Finance (Luxembourg) S.A., subordinated debt, EUR 500 million; 2012/2043	A	a+	
Hannover Finance (Luxembourg) S.A., subordinated debt, EUR 500 million; 2010/2040	A	a+	

## Information pursuant to § 315 Para. 4 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 paragraphs explain major agreements concluded by the company that are subject to reservation in the event of a change of control, inter alia following a takeover bid, and describe the resulting effects. Some letter of credit lines extended to Hannover Rück SE contain standard market change-of-control clauses that entitle the banks to early termination of a credit facility if Talanx AG loses its majority interest or drops below the threshold of a 25% participation or if a third party acquires the majority interest in Hannover Rück SE. For details of the letter of credit lines please see our explanatory remarks on the letter of credit (LoC) facilities in the notes, section 8.7 "Contingent liabilities and commitments", page 233.

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 Commercial Code (HGB))

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

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

The annual financial statement of Hannover Rück SE – from which the balance sheet and profit and loss account in particular are reproduced here in condensed form – has been submitted to the operator of the electronic Federal Gazette and can be accessed via the webpage of the Companies Register. This

annual financial statement can also be accessed on the company's website ([www.hannover-re.com](http://www.hannover-re.com)) and may be requested from Hannover Rück SE, Karl-Wiechert-Allee 50, 30625 Hanover, Germany.

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

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

## Results of operations

The 2016 financial year passed off highly satisfactorily for Hannover Rück SE. The gross premium of Hannover Rück SE in total business decreased as anticipated by 15.7% to EUR 11.9 billion (previous year: EUR 14.1 billion). The level of retained premium contracted from 73.0% to 72.4%. Net premium earned also fell, declining by 16.1% to EUR 8.5 billion (EUR 10.2 billion).

### Condensed profit and loss account of Hannover Rück SE

M39

in EUR thousand	2016	2015
Earned premiums, net of retrocession	8,534,768	10,178,602
Allocated investment return transferred from the non-technical account, net of retrocession	237,271	328,840
Other technical income, net of retrocession	–	15
Claims incurred, net of retrocession	6,905,906	7,222,016
Changes in other technical provisions, net of retrocession	331,795	(1,020,247)
Bonuses and rebates, net of retrocession	30	(12)
Operating expenses, net of retrocession	1,860,197	2,105,799
Other technical charges, net of retrocession	902	1,056
<b>Subtotal</b>	<b>336,799</b>	<b>158,351</b>
Change in the equalisation reserve and similar provisions	8,724	(136,129)
<b>Net technical result</b>	<b>345,523</b>	<b>22,222</b>
Investment income	1,385,001	1,862,593
Investment charges	98,049	166,675
Allocated investment return transferred to the technical account	(277,463)	(532,949)
Other income	171,464	160,761
Other charges	284,704	281,979
<b>Profit or loss on ordinary activities before tax</b>	<b>1,241,772</b>	<b>1,063,973</b>
Taxes on profit and income and other taxes	292,540	158,172
<b>Profit for the financial year</b>	<b>949,232</b>	<b>905,801</b>
Profit brought forward from previous year	85,163	2,462
Allocations to other retained earnings	395	250,263
<b>Disposable profit</b>	<b>1,034,000</b>	<b>658,000</b>

The underwriting result (before changes in the equalisation reserve) improved in the year under review from EUR 158.4 million to EUR 336.8 million. Following an allocation of EUR 136.1 million in the previous year, an amount of EUR 8.7 million was withdrawn from the equalisation reserve and similar provisions.

Major loss expenditure in the year under review was notable for several severe earthquakes as well as windstorm events. Man-made losses were also recorded. Altogether, the burden of large losses for Hannover Rück SE was in line with expectations, despite coming in higher than in the previous year. The largest single loss for our account was the earthquake in Ecuador with a net strain of EUR 46.3 million. In addition, after several years of moderate storm seasons in the United States and the Caribbean, a costly event was incurred in the shape of Hurricane Matthew. The resulting loss for our company amounted to EUR 39.8 million. The total net expenditure from large losses for Hannover Rück SE was EUR 340.1 million (EUR 330.6 million).

Ordinary investment income including deposit interest fell clearly short of the previous year's level at EUR 1,197.9 million (EUR 1,737.8 million). This was due principally to the non-recurrence of special distributions made by our investment holding companies in the previous year as well as to reduced income from funds withheld and contract deposits owing to expiring contracts at our branch in China. This decrease is offset by the corresponding non-recurrence of interest expenses on funds withheld and contract deposits associated with the very same contracts, as reflected under other income and charges. Net gains of EUR 132.9 million (EUR 94.0 million) were realised on disposals. Write-downs of just EUR 34.9 million (EUR 83.2 million) were taken on investments. They were attributable principally to bearer debt securities held as current assets. The write-downs contrasted with write-ups of EUR 25.9 million (EUR 5.1 million) that were made on assets written down in previous periods in order to reflect increased fair values.

All in all, our net investment result retreated to EUR 1,287.0 million (EUR 1,695.9 million).

The profit on ordinary activities increased to EUR 1,241.8 million (EUR 1,064.0 million). The year under review closed with a profit for the year of EUR 949.2 million (EUR 905.8 million).

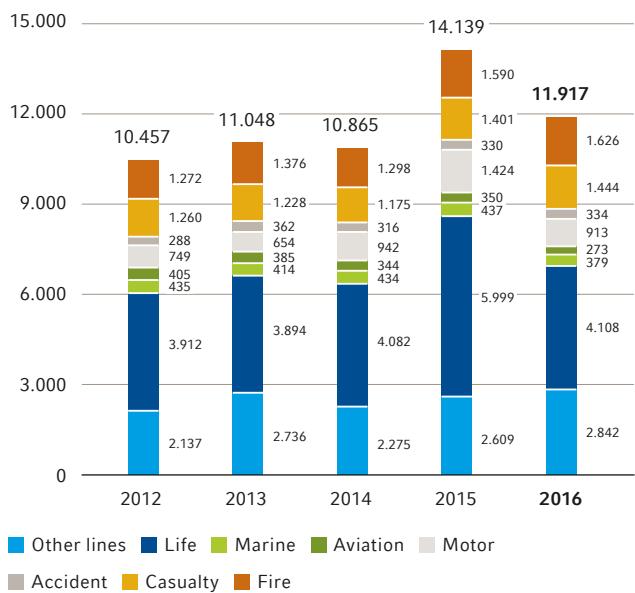
## Development of the individual lines of business

The following section describes the development of the various lines of business. We would like to point out that with effect from the beginning of the 2014 financial year the exchange of business under joint underwriting arrangements between Hannover Rück SE and E+S Rückversicherung AG was reorganised. In property and casualty reinsurance, however, a retrocession from Hannover Rück SE to E+S Rückversicherung AG has been maintained. The proportion of Hannover Rück SE's gross written premium attributable to business accepted from E+S Rückversicherung AG stood at 0.2% (0.2%) in the year under review and relates to the run-off of the 2013 and prior underwriting years.

**Hannover Rück SE: Breakdown of gross premium by individual lines of business**

M 40

in EUR million



### Fire

Total gross premium income for the fire line climbed by 2.2% in the 2016 financial year to EUR 1,625.5 million (EUR 1,590.3 million). The net loss ratio rose in the year under review from 53.9% to 67.7%. The underwriting profit contracted to EUR 57.5 million (EUR 149.4 million). An amount of EUR 211.6 million (EUR 83.6 million) was withdrawn from the equalisation reserve and similar provisions in the year under review.

## Casualty

Gross premium in casualty business climbed by 3.1% to EUR 1,443.7 million (EUR 1,400.9 million). The loss ratio decreased from 82.6% to 78.0%. The underwriting result improved to -EUR 17.4 million (-EUR 69.5 million). An amount of EUR 190.3 million was allocated to the equalisation reserve and similar provisions in the year under review; the allocation in the previous year had totalled EUR 139.6 million.

## Accident

Gross premium increased for the accident line by a modest 1.2% to EUR 333.8 million (EUR 329.8 million). The loss ratio decreased from 70.3% to 64.8%. The underwriting result came in at EUR 22.0 million, after EUR 9.9 million in the previous year. An amount of EUR 20.6 million (EUR 23.7 million) was withdrawn from the equalisation reserve and similar provisions.

## Motor

Gross premium income for the motor line contracted by 35.9% to EUR 913.1 million (EUR 1,423.6 million). The loss ratio also decreased to 68.1% (85.5%). The underwriting result closed at EUR 53.2 million after -EUR 159.4 million in the previous year. An amount of EUR 106.5 million was allocated to the equalisation reserve and similar provisions in the year under review, after a withdrawal of EUR 13.1 million in the previous year.

## Aviation

The gross premium volume fell by 21.9% from EUR 349.7 million to EUR 273.0. The loss ratio decreased again, improving from 77.8% to 57.7% in the year under review. The underwriting result came in at EUR 39.3 million (EUR 2.5 million). An amount of EUR 23.3 million (EUR 15.5 million) was allocated to the equalisation reserve and similar provisions in the year under review.

## Marine

Gross written premium for the marine line contracted by 13.3% to EUR 378.7 million (EUR 436.9 million). The net loss ratio decreased markedly from 74.3% to 30.8%. Against this backdrop the underwriting result increased very substantially from EUR 8.2 million to EUR 105.7 million. Releases of loss reserves from prior years that were no longer required were a particularly key factor here. An amount of EUR 86.7 million was withdrawn from the equalisation reserve and similar provisions in the year under review, after an allocation of EUR 48.2 million in the previous year.

## Life

Gross premium income in the life line fell by 31.5% in the financial year just ended to EUR 4,107.8 million (EUR 5,998.7 million). This contraction had been anticipated in view of the above-average premium growth booked in 2015. Developments in the international markets were highly dynamic in many instances, opening up both new business opportunities and challenges. The protracted low level of interest rates, for example, continued to impact the development of business around the world, most notably causing the appeal of traditional (re)insurance products with savings components to further diminish. Regulatory changes such as the newly implemented Solvency II regime in Europe also ranked among the international challenges. It was particularly noticeable that primary insurers are increasingly seeking relief from the strain associated with capital-intensive longevity business.

The underwriting result in life business closed at EUR 97.0 million (EUR 163.3 million) in the year under review.

## Other lines

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

The total gross premium volume in the other lines climbed by 8.9% to EUR 2,841.6 million (EUR 2,609.4 million). The net loss ratio rose in the year under review from 68.4% to 72.5%. The underwriting result closed at -EUR 20.5 million, after EUR 54.0 million in the previous year. An amount of EUR 9.8 million was withdrawn from the equalisation reserve and similar provisions, following an allocation of EUR 53.4 million in the previous year.

## Assets and financial position

Balance sheet structure of Hannover Rück SE

M 41

in EUR thousand	2016	2015
<b>Assets</b>		
Intangible assets	76,359	77,960
Investments	35,646,313	41,338,228
Receivables	2,753,154	2,959,324
Other assets	384,729	331,197
Prepayments and accrued income	162,441	168,241
<b>Total assets</b>	<b>39,022,996</b>	<b>44,874,950</b>
<b>Liabilities</b>		
Subscribed capital	120,597	120,597
Capital reserve	880,608	880,608
Retained earnings	630,511	630,511
Disposable profit	1,034,000	658,000
<b>Capital and reserves</b>	<b>2,665,716</b>	<b>2,289,716</b>
Subordinated liabilities	1,500,000	1,500,000
Technical provisions	30,880,118	30,285,024
Provisions for other risks and charges	531,367	408,726
Deposits received from retrocessionaires	2,286,675	8,795,263
Other liabilities	1,159,116	1,596,213
Accruals and deferred income	4	8
<b>Total liabilities</b>	<b>39,022,996</b>	<b>44,874,950</b>

Our portfolio of assets under own management grew in the year under review to EUR 27.3 billion (EUR 25.7 billion). This corresponds to an increase of 6.4% and is reflected above all in the increased portfolio of bearer debt securities. The balance of unrealised gains on fixed-income securities and bond funds climbed to EUR 685.1 million (EUR 610.3 million). This reflects the yield decreases observed in the course of the year under review for EUR- and GBP-denominated bonds as well as reduced risk premiums for corporate bonds across all rating classes. Opposing effects derived from US Treasuries, which recorded yield increases across all maturity segments over the year as a whole.

Deposits with ceding companies, which are shown under the investments, fell to EUR 8.3 billion (EUR 15.6 billion) in the year under review; this was attributable primarily to expiring contracts at our branch in China.

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 34,011.8 million (EUR 33,416.7 million). The balance sheet total of Hannover Rück SE decreased to EUR 39.0 billion (EUR 44.9 billion).

A dividend of EUR 3.25 plus a special dividend of EUR 1.50 per share, equivalent to EUR 572.8 million (EUR 512.5 million), was paid in the year under review for the 2015 financial year.

It will be proposed to the Annual General Meeting on 10 May 2017 that a dividend of EUR 3.50 plus a special dividend of EUR 1.50 per share should be paid for the 2016 financial year. This corresponds to a total distribution of EUR 603.0 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 Hanover 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. The risks are set out in the risk report. The relations with participating interests of Hannover Rück SE may also 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 losses requiring compensation as defined by § 311 Para. 1 Stock Corporation Act (AktG).

Hannover Rück SE maintains branches in Australia, Bahrain, Canada, China, France, 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 2017" on page 131, which also reflect in particular the expectations for Hannover Rück SE.

Given that the loss-heavy year of 2001 will no longer be included in the 15-year observation period used to calculate the equalisation reserve, Hannover Rück SE additionally anticipates a positive one-off effect from the release of equalisation reserves in 2017 that is expected to significantly increase the profit for the financial year reported under the German Commercial Code (HGB).

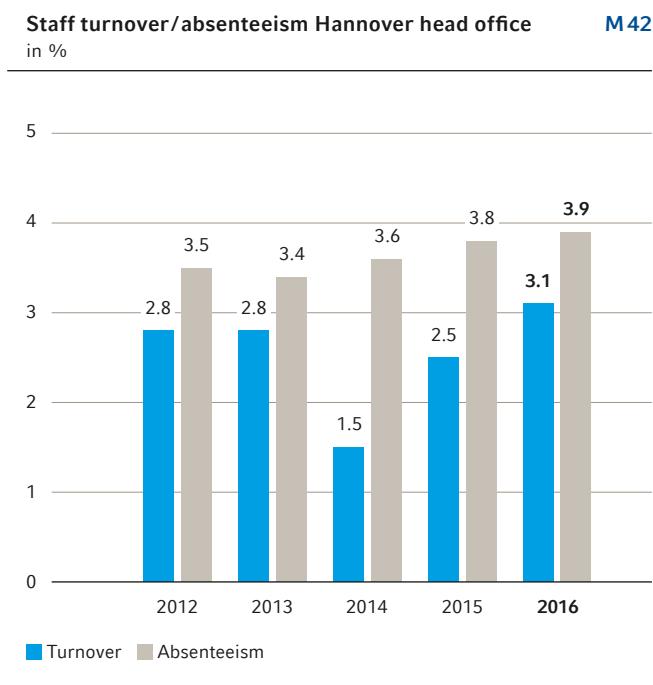
In terms of the dividend for the current financial year, we envisage a payout ratio in the range of 35% to 40% of the IFRS Group net income. This ratio may increase in light of capital management considerations if the present comfortable level of capitalisation remains unchanged.

# Other success factors

## Our staff

### Key personnel ratios

The Hannover Re Group employed 2,893 staff as at 31 December 2016 (previous year: 2,762). The turnover ratio at our head office in Hannover of 3.1% (2.5%) was higher than the level of the previous year. The rate of absenteeism – at 3.9% – was slightly higher than in the previous year (3.8%). The turnover ratio and rate of absenteeism continue to be below the average expected across the industry as a whole.



### Health management expanded

The expansion of our strategic health management was a focus of our activities in the financial year just ended. In so doing, we are responding to the demands of shifting demographics and helping to preserve the capacity of our managers and staff to do their job and to cope with the challenges placed upon them.

By way of introduction to this topic, we offered our managers a presentation event on working capacity, coping and health management that was geared to their concerns. The most visible measure, however, was undoubtedly the first company-wide health day, at which we communicated holistic knowledge on various issues of in-house health management in the form of talks and activities. A range of hands-on measures made for a lively setting and provided our managers and staff alike with pointers for initiating wellness-promoting measures on a direct and individual basis.

Given that relaxation know-how was an aspect that met with a particularly positive reception, we took this as an opportunity to design a specially tailored seminar as part of our regular in-house programme of further training. This training activity enables participants to create their own personal relaxation profile and to learn how to integrate the insights gained into their everyday routine.

A further important component of our health management is the Employee Assistance Programme. This has been available to our managers, staff and their family members since August 2016. The programme offers free and anonymous immediate counselling on personal, professional and psychological/health concerns as well as a service for families. This measure, too, contributes to wellness and serves a preventive function, thereby helping to ensure that challenges do not become burdens and that working capacity is preserved for the long term – in the interests of both our employees and the company.

## Recruitment efforts intensified

In our recruitment efforts we find ourselves faced with a tightening applicant market and increasingly challenging demographic factors. Nevertheless, going forward it remains incumbent upon us to ensure that at the right moment we are able to attract those candidates who are the best fit both for the company in general and for the specific position. With this in mind, we have revamped our recruitment activities.

As our starting point, we evaluated a number of external studies, some of which were specially oriented towards our needs. We were able to obtain up-to-date and detailed information about the career expectations and employer preferences of our primary applicant target groups. We combined these findings with insights gained from internal surveys. This produced a clear picture of the messages that we, as an employer, should communicate externally in a genuine manner.

The Employer Value Proposition elaborated on the basis of these insights forms the basis of our personnel marketing communication. On the one hand it is integrated into our established recruiting processes and tools, while at the same time we use it as a platform for picking up on new trends so as to reach out even better to our target groups.

Among the new tools that we have drawn on in order to advance our recruiting efforts particular mention should be made of online chat sessions with HR consultants or the improved individual support offered to students, to name just two examples. Furthermore, with a view to specifically addressing (young) professionals even better as a group, the profile of the Hannover Re Group in the business network Xing was reworked with a more polished look.

Reinsurance is a business that often needs some form of explanation, even for many young professionals and qualified graduates. We tackle this challenge by using recruitment tools that lend themselves particularly well to closing this knowledge gap. Thus, for example, we are increasingly placing employee reports in university magazines and on online platforms and we are expanding our use of testimonial films. These short films present the varied range of tasks and job profiles within our company and map out a successful entry to the reinsurance industry. Factors such as an adequate work-life balance as well as support for diversity and equal treatment at our company – all concerns of increasing importance to our target groups – are also addressed.

## Breakdown of employees by country

M 43

	2016	2015
Germany	1,349	1,337
USA	312	284
South Africa	276	271
United Kingdom	235	156
Sweden	180	170
Australia	98	103
China	71	72
Malaysia	62	53
France	55	54
Bermuda	46	45
Bahrain	45	46
Ireland	43	51
Colombia	27	27
Canada	23	16
India	18	27
Italy	12	11
Korea	9	10
Japan	9	7
Spain	7	7
Mexico	7	7
Brazil	5	4
Taiwan	4	4
<b>Total</b>	<b>2,893</b>	<b>2,762</b>

## **Results of the employee survey acted on**

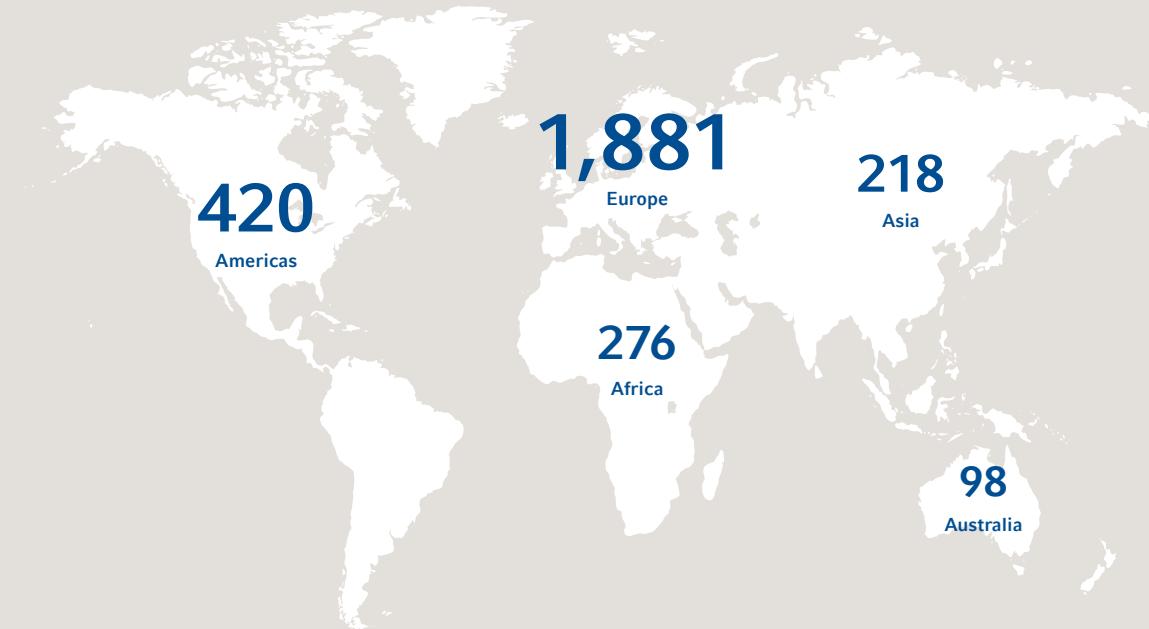
In the financial year just ended we also continued to engage with the findings of the first international employee survey conducted within the Hannover Re Group. Once all the units had received their results, they were tasked with developing individual measures to leverage identified potentials and safeguard existing strengths. Activities here centred around communication and information, further training and delegation as well as the fostering of (international) cooperation. All in all, our assessment of the first international employee survey is positive, both in terms of the pleasing survey findings and the quality of the measures that have been initiated.

## **Word of thanks to our staff**

The Executive Board would like to thank all employees for their dedication in the past year. At all times the workforce identified with the company's objectives and successfully pursued them. We would like to express our appreciation to the members of staff and the representatives who participated in our co-determination bodies for their critical yet always constructive cooperation.

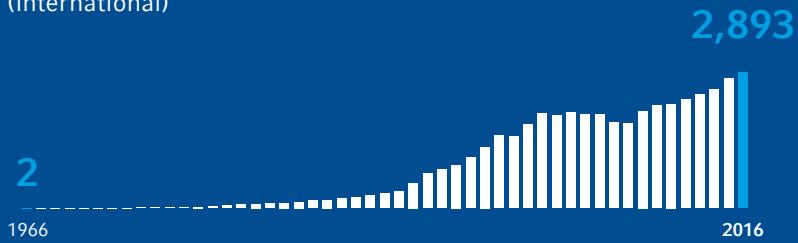
# Workforce by continents

as at 31 December 2016



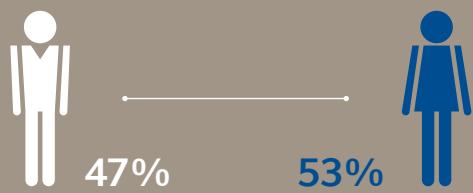
## Growth in staff numbers

(international)



## Gender distribution

(2016, Hannover head office)



# 42



The average age of all employees at Hannover head office is 42.

# 11

is the average length of service with the Hannover Re Group (Hannover head office).

## Nationalities at Hannover head office

(2016)

Georgian Austrian Italian Dutch  
Belarusian Serbian Brazilian Romanian  
Nepalese British Israeli Uzbek  
Ecuadorian Russian Spanish Slovak Belgian  
Uruguayan Japanese Turkish Chinese  
Moldovan Ukrainian Polish Chilean  
Colombian Peruvian Korean Czech  
American Venezuelan Swedish Greek  
Kazakh Mexican Portuguese Maltese  
Venezuelan Lithuanian French  
Mexican Argentinian

# Sustainability at Hannover Re

## Sustainability strategy of the Hannover Re Group

For Hannover Re, sustainability means a commitment to long-term value creation combined with the forward-looking concept of good corporate governance, a voluntary undertaking to conserve the environment and social responsibility. Our day-to-day business as a reinsurer involves the professional handling of highly diverse risks. Our value contribution lies in our ability to bring together our extensive risk expertise with sophisticated underwriting practice. In so doing, we help to make risks in both private and business life manageable. An anticipatory approach to dealing with risks in the areas of reinsurance and investment management is of special importance inasmuch as we must keep our payment promises to our clients not only today but also 20 or 30 years from now. With this in mind, in 2011 we drew up a Sustainability Strategy for Hannover Re that reflects in concrete terms the corporate strategy of the Group and in which we explicitly commit to our strategic objective of sustainable value creation.

Our current Sustainability Strategy for the years 2015 to 2017 was developed on the basis of a materiality analysis. It defines four action fields and further specifies 14 concrete goals and 42 measures.

We set out below our primary avenues for moving forward on sustainability and the most significant developments in 2016. The Sustainability Report of the Hannover Re Group containing detailed information on our strategy, our approach and our advances in matters of sustainability can be accessed on our corporate website at [hannover-re.com/60729/sustainability](http://hannover-re.com/60729/sustainability).

## Corporate Governance and dialogue

As an internationally operating company, Hannover Re bears responsibility in various senses. This is true of its compliance with relevant laws and regulations, but also applies to its relationship with staff, shareholders, the public at large and the cultures within which the company operates. As a European company (Societas Europaea – SE) based in Germany, the formal framework that shapes Hannover Re's corporate governance is determined by German law. The fundamental hallmarks of this corporate governance are a two-tier system with its transparent and effective split into management (Executive Board) and its oversight (Supervisory Board), the appointment of shareholder and employee representatives to the Supervisory Board and the rights of co-administration and

supervision exercised by shareholders at the Annual General Meeting. The interplay between these bodies is regulated by German stock corporation law and by the company's Articles of Association. Furthermore, our Group Strategy, the Corporate Governance principles and our Code of Conduct form the basis of our enterprise management. The highest authority for sustainability issues is the Executive Board, whose members pursue the sustainability objectives on a collective basis.

In addition to our continuous engagement with the changing legal framework conditions, since 2003 we have provided an annual Declaration of Conformity with the German Corporate Governance Code (DCGK); this is published on our corporate website and reproduced on page 98 et seq. of the present Annual Report. The Corporate Governance principles of Hannover Rück SE are also subject to regular review and fulfil the recommendations of the currently valid version of the German Corporate Governance Code as amended.

Given that the trust of our stakeholder groups and an immaculate reputation advance the success of our company, we also make every effort to continuously maintain an active dialogue with our stakeholders. Through conferences, roadshows and one-to-one meetings, for example, we stay in contact with representatives of the capital market. Our employees cultivate the dialogue with our worldwide customers through direct, face-to-face discussions. Furthermore, we regularly measure customer satisfaction with the assistance of external market research institutes. We similarly engage in an ongoing dialogue with political decision-makers, supervisory authorities and insurance industry associations. The primary focus here is on topical issues in insurance supervision and financial market regulation in Germany, the European Union and on the international level. In this context Hannover Re contributes its specialist expertise from business practice to the public debate. Hannover Re is also a member of various associations, advocacy groups and organisations.

In our annually published Sustainability Report we provide ongoing information about our achievements as a responsible company. In this regard we follow the currently applicable and internationally recognised guidelines of the Global Reporting Initiative (GRI). Furthermore, a favourable rating testifies to the fact that our sustainability communication lives up to the transparency requirements of Environmental, Social and Governance (ESG) rating agencies: in June 2015 Hannover Re received confirmation for the first time of its inclusion in the worldwide FTSE4Good Index Series from the FTSE Environmental, Social and Governance Advisory Committee – an index on which it has been listed since that date.

## Sustainable insurer and responsible investor

Our range of reinsurance products and services is geared to the needs of the market and our clients. Hannover Re is active in virtually all lines of reinsurance business. Our products range from traditional reinsurance to complex individual solutions for risk transfer and the optimisation of our clients' capital requirements. As a leading player in the reinsurance industry, the commercial success of Hannover Re is crucially dependent on the correct assessment of present and emerging risks. These include not only the recent proliferation of geopolitical and economic uncertainties, but also developments such as demographic change, shifting mobility patterns in populations, increasing digitisation and the resulting cyber risks as well as climate changes and the associated discussions centred on food and water security. By organising topically specific conferences, visiting clients and attending trade fairs and expert gatherings we enable our customers to share our knowledge and we use the internally and externally acquired experience in order to be able to offer them better or innovative (re)insurance solutions and to strengthen our customer relationships.

As far as our core business is concerned, in the growing market for microinsurance products we intensified our cooperation with primary insurers in Pakistan, the Philippines and Indonesia. Furthermore, the protection of agricultural production is of considerable relevance to the development of more deprived regions. We therefore continued our cooperative efforts with government and international organisations to expand agricultural insurance. We have encouraged the development of products in response to climate change, such as weather insurance and coverage for energy-saving warranties, among other things by supporting the extension of energy-saving warranties to other European countries. In life and health reinsurance demographic changes around the world are leading to stronger demand for reinsurance in the area of longevity solutions. We are also seeing rising demand for so-called lifestyle insurance products, where the premium is linked to an insured's healthy lifestyle (e.g. fitness and nutritional habits).

When it comes to the management of our investment portfolio, we aim to generate a commensurate market return in the interests of our clients and shareholders. This is done in accordance with our Sustainability Strategy by incorporating ESG (environmental, social and governance) criteria into our investment policy. Specifically, since 2012 we have been guided by the ten principles of the United Nations Global Compact and thus also recognise the aspects of human rights, working conditions, the environment and anti-corruption. Since 2013 our investments have been reviewed half-yearly to verify compliance with these ESG standards. Altogether around 90% of our investments are screened every six months according to ESG criteria.

## Attractive employer

Our employees are one of our company's most important success factors. Employing successful staff on a long-term basis is one of the ten key points of our Group Strategy. With this in mind, we systematically support the professional growth, personal development and health-related well-being of our employees and enshrine this approach in the strategic principles governing our human resources management. When it comes to preserving the well-being of our staff, we are continuing our commitment to health management with a focus on the prevention of disease.

One of the cornerstones of our successful business activities, along with our employees' skills and commitment, is the considerable degree of diversity in the workforce – since this is vital to safeguarding our high global quality standard. At Hannover head office alone the members of staff come from 39 different nations, a reflection of the international dimension of our business operations. By expanding our mentoring programme we help women at our company to reflect on their professional development so far and take active steps to shape their future career path. Our range of seminars serves to develop all the company's employees and is designed to encourage a positive attitude towards life-long learning, even among our more seasoned staff. The co-determination of our staff is enshrined in their right to have a say through the Group-wide and/or local Employee Council. In addition, the three employee representatives on the Supervisory Board of Hannover Re ensure the participation of our staff in this oversight body.

We also stress the importance of enabling our employees to strike the right balance between their career and private life. Consequently, we offer individually customisable part-time and telecommuting models as well as flexitime working arrangements with no core hours. By offering such flexibility we want to help our employees organise their daily routine in various stages of life such as starting a family or preparing for retirement, e.g. through partial retirement opportunities for older staff.

## Environmental management and social responsibility

The environmental impacts of Hannover Re's business operations are comparatively slight. We nevertheless take our responsibility for the environment very seriously and with the implementation of our environmental management system – which was certified according to DIN EN ISO 14001 in 2012 – we have put in place standard processes for dealing with environmental protection and specified concrete measures in our environmental programme.

In the year under review Hannover Re completed the successful changeover and certification of its environmental management system according to DIN EN ISO 14001:2015. In addition, we drew up our first environmental statement in accordance with the Eco Management and Audit Scheme (EMAS) Regulation and had it validated by an environmental verifier. Major features of the EMAS Regulation include a rigorous orientation towards continuous improvement of environmental efficiency, the use of consistent performance indicators in relation to key environmental aspects as well as verification of compliance with legal requirements.

The focus of our efforts to conserve the environment is on reducing carbon dioxide (CO<sub>2</sub>) emissions associated with the supply of electricity and heating to our premises as well as with our business travel. Having already converted our power supply at the German location to renewables, we now want to extend this progressively to our international offices as well.

Hannover Re's carbon dioxide emissions at its German location in 2016 amounted to 9,023 (previous year: 8,581) tonnes, some 5.2% more than in the previous year. This is equivalent to per capita CO<sub>2</sub> emissions of 6.7 tonnes (+4.2% compared to the previous year).

In 2016, as in previous years, we compensated for our unavoidable CO<sub>2</sub> emissions caused by business travel by making voluntary offsetting payments to the international organisation "atmosfair". In addition, the 2016 financial year was the first

one in which we offset emissions from the use of district heating and from our paper consumption by purchasing climate certificates for the moorland project of Friends of the Earth Germany (BUND – Bund für Umwelt und Naturschutz Deutschland). We were thus successful for the first time in operating with a net zero carbon footprint at the Hannover location.

In the financial year just ended, as in prior years, we reported on our measures to reduce carbon dioxide emissions as part of the international initiative overseen by the Carbon Disclosure Project (CDP); in this context we achieved a score of B (Management).

The table below breaks down Hannover Re's consumption and emissions over the past five years.

Our commitment to society has a long tradition. Hannover Re has been active as a sponsor of culture and social projects for several decades. Our activities extend beyond our location in Germany to our subsidiaries with their specific projects catering to social concerns in their own country. Content-wise, we concentrate our non-profit activities today on the areas of research, learning, art and music as well as on assisting our employees with their voluntary contributions to society.

Detailed explanatory remarks on our consumption of resources as well as extensive information on our social commitment can be found at [www.hannover-re.com/60729/sustainability](http://www.hannover-re.com/60729/sustainability).

#### Resources consumed at Hannover head office

**M 44**

	2016 <sup>2</sup>	2015 <sup>2</sup>	2014 <sup>1</sup>	2013 <sup>1</sup>	2012 <sup>1</sup>
Number of staff	1,349	1,337	1,289	1,219	1,164
Electricity (in kWh)	9,008,650	8,868,345	8,969,975	9,114,482	8,802,262
Heat (in kWh)	3,097,942	2,746,698	2,748,014	3,359,694	2,319,854
Water (in l)	16,664,000	17,088,000	15,176,000	15,778,000	14,961,000
Paper (in sheets)	5,753,750	6,600,810	7,551,200	8,502,060	8,766,000
Waste (in kg)	162,890	156,880	193,760	214,250	205,790
Business trips (in km)	20,738,566	20,530,043	20,447,867	18,185,062	16,654,504
CO <sub>2</sub> emissions (in kg) <sup>3</sup>	9,023,000	8,581,000	7,798,000	7,203,000	4,984,000

<sup>1</sup> Karl-Wiechert-Allee 50, Roderbruchstraße 21 and 26 as well as infant daycare centre, Karl-Wiechert-Allee 57 (pro rata), Hannover

<sup>2</sup> Karl-Wiechert-Allee 50, Roderbruchstraße 21 and 26 as well as infant daycare centre, Karl-Wiechert-Allee 57, Hannover

<sup>3</sup> Radiative Forcing Index: 2.7

# Opportunity and risk report

## Risk report

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

## Strategy implementation

Our current corporate strategy encompasses ten guiding principles that safeguard the realisation of our vision “Long-term success in a competitive business” across the various divisions. For further information on the corporate strategy and the strategic principles please see the section entitled “Our strategy” on page 14 et seq.

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

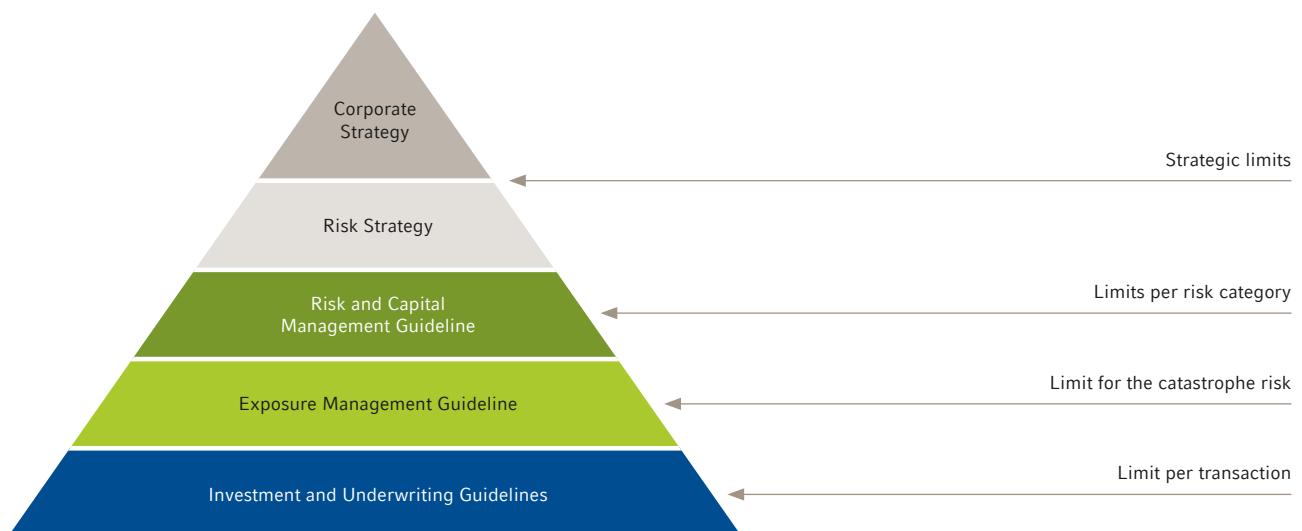
- We manage risks actively.
- We maintain an adequate level of capitalisation.
- We are committed to sustainability, integrity and compliance.

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

1. We adhere to the risk appetite set by the Executive Board.
2. We integrate risk management into value-based management.
3. We promote an open risk culture and the transparency of our risk management system.
4. We fulfil regulatory requirements.
5. We fulfil the requirements of rating agencies.
6. We act in light of materiality and proportionality considerations.
7. We make balanced use of both quantitative and qualitative methods.
8. We ensure the independence of the risk management function.

### Risk management through multiple levels of limits

M 45



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

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

Strategic targets for risk position	M46	
	Limit	31.12.2016
Probability of positive net income under IFRS	>90%	98.1%
Probability of loss of shareholders' equity under IFRS	<0.03%	0.01%
Probability of loss of economic equity	<0.03%	<0.01%

## Major external factors influencing risk management in the financial year just ended

**Regulatory developments:** Effective 1 January 2016 the new insurance supervisory regime Solvency II entered into force. Hannover Re implemented the extensive standards relating to capital requirements, governance and reporting in a timely manner.

Hannover Re received approval from the regulatory authorities to calculate its solvency requirements using a partial internal capital model when Solvency II entered into effect. The model approved by regulators covers the underwriting, market and counterparty default risks that are most relevant to enterprise management. Our internal capital model enables us to optimally map the risk structure of our reinsurance business and our investments, which would not be possible using a standard model. Regulatory approval also means that the risks can be better reflected when determining the regulatory capital requirements. Our internal target capitalisation with a confidence level of 99.97% comfortably exceeds the target level of 99.5% set by Solvency II, thereby ensuring a comfortable level of capital adequacy under Solvency II if the internal target is achieved. Our next step will be a full internal capital model that also includes the operational risks.

We comprehensively fulfilled the supervisory reporting requirements, inter alia by compiling a Day 1 report and a report on the Own Risk and Solvency Assessment (ORSA) for Hannover Rück SE and other European insurance companies within the Group.

Parallel to the regulatory developments in Europe, we are seeing adjustments worldwide to the regulation of (re)insurance undertakings. It is often the case that various local supervisory authorities take their lead from the principles of Solvency II or the requirements set out by the International Association of Insurance Supervisors (IAIS).

**Capital market environment:** Another major external influencing factor is the protracted low level of interest rates, especially with an eye to the return that can be generated on our investments. The move by the European Central Bank to extend its purchases of corporate bonds and the United Kingdom's decision to leave the European Union led to a further drop in interest rates (in the United Kingdom). For further information please see the "Investments" section of the management report on page 51 et seq.

## Risk capital

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

The capitalisation prescribed by regulatory requirements diverges from the capitalisation shown in accordance with the Hannover Re Group's internal capital model. In the first place, non-controlling interests cannot be fully recognised according to Solvency II parameters, while on the other hand the sub-risk comprised of operational risks is calculated according to the parameters of the Solvency II standard formula. The solvency ratio calculated in accordance with Solvency II stood at 230.2% as at 31 December 2016.

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

#### Available capital and required risk capital

M 47

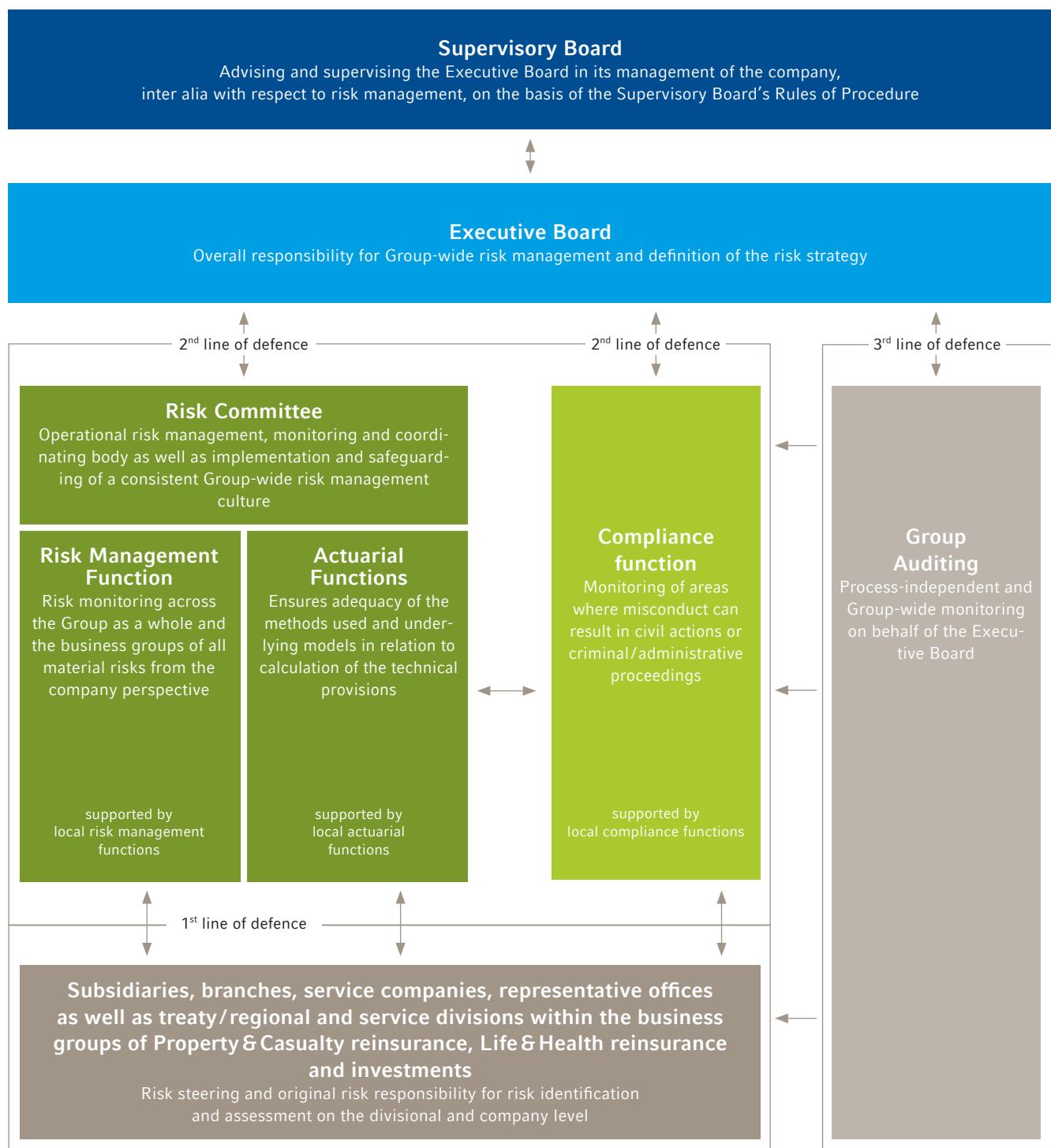
in EUR million	31.12.2016 (economic)	31.12.2016 (Solvency II)	30.9.2015 (economic)	30.9.2015 (Solvency II)
Available economic capital/Eligible capital	13,484.9	12,859.2	12,614.7	11,956.3
<b>Confidence level</b>	<b>99.97%</b>	<b>99.5%</b>	<b>99.5%</b>	<b>99.5%</b>
Required risk capital/ Solvency capital requirement	10,381.7	5,149.5	5,585.9	9,593.0
Excess capital	3,103.2	8,335.4	7,273.3	5,126.3
Capital adequacy ratio	129.9%	261.9%	230.2%	246.1%
				6,553.6
				221.3%

The figures shown above refer to the Hannover Re Group. In addition, Hannover Rück SE is also subject to regulatory capital requirements; these were clearly fulfilled with a solvency ratio of 242.6 % as at 31 December 2016. 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 hold additional capital above all to meet the requirements of the rating agencies for our target rating and to be able to act flexibly on business opportunities. We strive for a rating from the rating agencies most relevant to our industry that facilitates and secures our access to all reinsurance business worldwide. Hannover Re is analysed by the rating agencies Standard & Poor's (S & P) and A.M. Best as part of an interactive rating process. The current financial strength ratings are assessed as "AA-" (Very Strong, stable outlook) by Standard & Poor's and "A+" (Superior, stable outlook) by A.M. Best. Standard & Poor's evaluates Hannover Re's risk management as "Very Strong", the best possible rating. In this regard particular mention was made of the company's very good risk management, the consistent and systematic implementation of corporate strategy by management and its excellent capital resources. Hannover Re's internal capital model was also subjected to expert appraisal. As a result of this review, Standard & Poor's factors the results of the Hannover Re Group's internal capital model into the determination of the target capital for the rating.

#### Organisation and processes of risk management

Hannover Re has set up risk management functions and bodies Group-wide to safeguard an efficient risk management system. The organisation and interplay of the individual functions in risk management are crucial to our internal risk steering and control system. The central functions of risk management are closely interlinked in our system and the roles, tasks and reporting channels are clearly defined and documented in terms of the so-called "3 lines of defence". The first line of defence consists of risk steering and the original risk responsibility on the divisional or company level. Risk management ensures the second line of defence – risk monitoring. It is supported in this regard by the actuarial function and the compliance function. 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.

## **Key elements of our risk management system**

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

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

### **Risk-bearing capacity concept**

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

### **Risk identification**

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

### **Risk analysis and assessment**

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

### **Risk steering**

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

### **Risk monitoring**

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

### **Risk communication and risk culture**

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

### **Risk reporting**

Our risk reporting provides systematic and timely information about all material risks and their potential implications. The central risk reporting system consists primarily of regular risk reports, e.g. on the overall risk situation, adherence to the parameters defined in the risk strategy or on the capacity utilisation of natural catastrophe scenarios. Complementary to the regular risk reporting, immediate internal reporting on material risks that emerge at short notice takes place as necessary. The already existing range of risk reports will be supplemented in the context of Solvency II implementation by further reports, including for example the "Regular Supervisory Report" (RSR) and the "Solvency and Financial Condition Report" (SFCR, from 2017 onwards). In recent years Hannover Re has already made every effort to include the foreseeable contents of the public SFCR in its IFRS reporting.

## **Process-integrated/-independent monitoring and quality assurance**

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

## **Internal control system**

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

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

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

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

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

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

## Risk landscape of Hannover Re

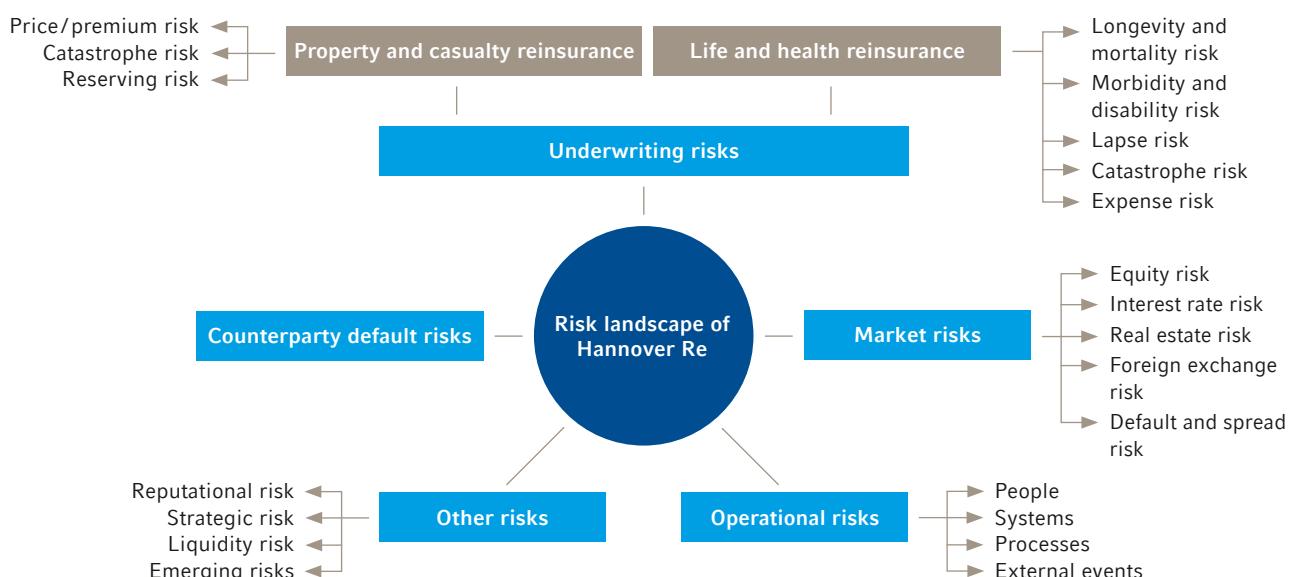
In the context of its business operations the Hannover Re Group enters into a broad variety of risks. These risks are deliberately accepted, steered and monitored in order to be able to act on the associated opportunities. The parameters and decisions of the Executive Board with respect to the risk appetite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

The risk landscape of Hannover Re encompasses:

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

At the present time our most significant risks are the default and spread risks within the market risks, the reserving and catastrophe risks within the underwriting risks of property and casualty reinsurance and the risk of changes in mortality within the underwriting risks of life and health reinsurance. With regard to mortality risks, as a general principle annuity portfolios are impacted by improvements in mortality while death benefit portfolios are adversely affected by deteriorations in mortality.

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



## Internal risk assessment

In this section we compare the available economic capital with the required risk capital in greater detail. Hannover Re calculates the economic equity as the difference between the market-consistent value of the assets and the market-consistent value of the liabilities. While fair values are available for most investments, the market-consistent valuation of reinsurance treaties necessitates a specific valuation model. We establish the market-consistent value of technical items as the present value of projected payments using actuarial methods. This is adjusted by a risk loading that factors in the fluctuation in future payments. Such fluctuations result from risks that cannot be hedged by means of capital market products, such as underwriting risks. For the discounting of future cash flows we use the risk-free basic yield curves without volatility adjustment or matching adjustment calculated in accordance with Solvency II rules. 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 13,484.9 million as at 31 December 2016 compared to EUR 12,614.7 million as at 30 September 2015. This was due principally to the successful business performance in the last five quarters as well as positive effects from the weakening of the euro against our major foreign currencies, in particular the US dollar. The economic valuation of the technical provisions is largely stable relative to the position as at 30 September 2015. The change in the other items derives primarily from an increased valuation of the subordinated liabilities attributable principally to the decline in Eurozone interest rates. Conversely, the value of the available capital from hybrid capital also rose. The changes relating to taxes resulted from the aforementioned valuation differences as well as from refinements in accounting policies. The deduction for foreseeable dividends is higher because allowance was not made for special dividends as at 30 September 2015.

### Reconciliation (economic capital/shareholders' equity)

M50

in EUR million	31.12.2016	30.9.2015
Shareholders' equity including minorities	9,740.6	8,428.1
Adjustments for assets under own management	513.4	510.6
Adjustments for technical provisions <sup>1</sup>	3,870.6	3,791.0
Adjustments due to tax effects and other <sup>2</sup>	(1,648.8)	(1,318.6)
<b>Economic equity</b>	<b>12,475.8</b>	<b>11,411.1</b>
Hybrid capital	1,656.1	1,583.6
Foreseeable dividends	(647.0)	(380.0)
<b>Available economic capital<sup>3</sup></b>	<b>13,484.9</b>	<b>12,614.7</b>

<sup>1</sup> Adjustments for technical provisions including risk margin

<sup>2</sup> In contrast to the Annual Report 2015 the deduction of foreseeable dividends is not included in this position, but shown separately.

<sup>3</sup> The figures are based on the Solvency II reporting as of 31 December 2016. The related audits are at present (not fully) completed.

The required risk capital of the Hannover Re Group at the target confidence level of 99.5% rose slightly to EUR 5,149.5 million as at 31 December 2016, compared to EUR 5,126.3 million as at 30 September 2015. The bulk of the increase was due to the weaker euro against our major foreign currencies and the associated higher foreign-currency volumes underlying the risks, including for example the volume of investments. These increases in volume driven by exchange rate movements caused the risk capital to climb in all risk categories.

The elevated risk in relation to market risks was not only volume-driven but also reflected the higher allocation of equity in the investment portfolio. As a further factor, the exchange rate risk increased owing to a larger proportion of own funds held in US dollars.

The underwriting risks in property and casualty reinsurance increased primarily on account of higher catastrophe risks, which can be attributed above all to the stronger US dollar. The underwriting risks in life and health reinsurance remained largely stable. Counterparty default risks increased principally as a result of a larger volume with respect to ceding companies and retrocessionaires.

The model for operational risks was revised. The stand alone operational risk rose as a consequence of the model change, although the new model also makes explicit allowance for diversification effects with other risk categories. All in all, the model change for operational risks therefore led to a decrease in the total required risk capital.

The increase in the tax effects reflects model refinements relating to the calculation of the loss-absorbing effect of taxes.

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

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

#### Required risk capital

M51

	31.12.2016	30.9.2015
in EUR million	Confidence level 99.5%	Confidence level 99.5%
Underwriting risk property and casualty reinsurance	3,552.9	3,408.9
Underwriting risk life and health reinsurance	2,117.9	2,109.6
Market risk	4,225.4	3,903.1
Counterparty default risk	296.5	279.9
Operational risk	503.9	431.1
Diversification	(3,773.8)	(3,329.5)
Tax effects	(1,773.3)	(1,676.8)
<b>Required risk capital of the Hannover Re Group</b>	<b>5,149.5</b>	<b>5,126.3</b>

## Underwriting risks in property and casualty reinsurance

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

Diversification within the Property & Casualty reinsurance business group is actively managed through allocation of the cost of capital according to the contribution made to diversification. A high diversification effect arises out of the underwriting of business in different lines and different regions with different business partners. In addition, the active limitation of individual risks – such as natural catastrophes – enhances the diversification effect. The risk capital with a confidence level of 99.5% for underwriting risks in property and casualty reinsurance breaks down as follows:

Required risk capital <sup>1</sup> for underwriting risks property and casualty		M52
in EUR million	31.12.2016	30.9.2015
Premium risk (including catastrophe risk)	2,470.4	2,237.4
Reserve risk	2,281.8	2,292.5
Diversification	(1,199.3)	(1,121.0)
<b>Underwriting risk property and casualty</b>	<b>3,552.9</b>	<b>3,408.9</b>

<sup>1</sup> Required risk capital at a confidence level of 99.5%

The largest share of the required risk capital for the premium risk (including catastrophe risk) is attributable to risks from natural disasters. The following table shows the required risk capital for our four largest natural hazards scenarios:

Required risk capital<sup>1</sup> for the four largest natural hazards scenarios

M53

in EUR million	2016	2015
Hurricane US/Caribbean	1,477.3	1,338.0
Earthquake US West Coast	1,035.8	1,103.9
Winter storm Europe	698.8	828.6
Earthquake Japan	750.4	780.0

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

The reserve risk, i. e. the risk of under-reserving losses and the resulting strain on the underwriting result, is a high priority in our risk management. We attach the utmost importance to a conservative reserving level and therefore traditionally have a high confidence level (> 50%). In order to counter the risk of under-reserving we calculate our loss reserves based on our own actuarial estimations and establish, where necessary, additional reserves supplementary to those posted by our cedants as well as the segment reserve for losses that have already occurred but have not yet been reported to us. Liability claims have a major influence on the segment reserve. The segment reserve is calculated on a differentiated basis according to risk categories and regions. The segment reserve established by the Hannover Re Group amounted to EUR 7,413.6 million in the year under review.

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

Our own actuarial calculations regarding the adequacy of the reserves are also subject to annual quality assurance reviews conducted by external firms of actuaries and auditors. For further remarks on the reserve risk please see our comments in section 6.7 “Technical provisions” on page 198 et seq.

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

in EUR million	2016			2015		
	Individual loss reserves	IBNR reserves	Survival ratio in years	Individual loss reserves	IBNR reserves	Survival ratio in years
Asbestos-related claims/ pollution damage	35.5	210.5	24.6	36.0	203.3	26.9

In order to partially hedge inflation risks Hannover Re holds inflation-linked instruments in its portfolio that protect parts of the loss reserves against inflation risks. 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. This inflation protection was initially ensured by way of inflation swaps. From 2012 onwards we also increasingly obtained parts of the inflation protection for our loss reserves by purchasing bonds with inflation-linked coupons and redemption amounts. In 2015 the inflation protection was converted to the exclusive use of such bonds.

Licensed scientific simulation models, supplemented by the expertise of our own specialist departments, are used to assess our material catastrophe risks from natural hazards (especially earthquake, windstorm and flood). Furthermore, we establish the risk to our portfolio from various scenarios in the form of probability distributions. The monitoring of the risks resulting from natural hazards is rounded out by realistic extreme loss scenarios.

#### Stress tests for natural catastrophes after retrocessions M55

Aggregate annual loss <sup>1</sup> in EUR million	2016		2015
	Effect on forecast net income		
<b>Winter storm Europe</b>			
100-year loss	(391.4)	(469.6)	
250-year loss	(541.4)	(570.1)	
<b>Hurricane US/Caribbean</b>			
100-year loss	(850.3)	(772.7)	
250-year loss	(1,139.4)	(1,003.7)	
<b>Typhoon Japan</b>			
100-year loss	(223.9)	(204.7)	
250-year loss	(281.9)	(265.1)	
<b>Earthquake Japan</b>			
100-year loss	(363.1)	(343.7)	
250-year loss	(623.5)	(606.0)	
<b>Earthquake US West Coast</b>			
100-year loss	(440.6)	(519.4)	
250-year loss	(795.4)	(823.2)	
<b>Earthquake Australia</b>			
100-year loss	(201.0)	(202.8)	
250-year loss	(432.3)	(400.6)	

<sup>1</sup> Converted to aggregate annual loss on grounds of consistency with the limit and threshold system for the natural catastrophe risk and the corresponding analyses (see tables M54 and M57)

The previous approach (based on the maximum annual loss) was replaced in 2016 with an approach based on the aggregate annual loss. The figures for 2015 were recalculated retroactively using this approach. This changeover was motivated by the fact that our limit and threshold system for the natural catastrophe risk is geared to the aggregate annual loss and not individual losses. This is applicable both to the global and local risk measures and to the underwriting capacities. To this extent, the new approach is consistent with the approaches in natural catastrophe risk management and with the analysis of the required risk capital on page 82.

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

For the purposes of risk limitation, maximum amounts are also stipulated for various extreme loss scenarios and return periods in light of profitability criteria. Risk management ensures adherence to these maximum amounts. The Executive Board, Risk Committee and P & C Executive Committee are kept regularly updated on the degree of capacity utilisation. The limits and thresholds for the 200-year aggregate loss as well as the utilisation thereof are set out in the following table:

#### Limit and threshold for the 200-year aggregate annual loss as well as utilisation thereof M56

in EUR million	Limit 2016	Threshold 2016	Actual utilisation (July 2016)
All natural catastrophe risks <sup>1</sup>			
200-year aggregate annual loss	1,827	1,645	1,519

<sup>1</sup> Loss relative to the underwriting result

Net expenditure on major losses in the year under review amounted to EUR 626.6 million (EUR 572.9 million). Our company incurred the following catastrophe losses and major claims in the 2016 financial year:

#### Catastrophe losses and major claims<sup>1</sup> in 2016

M 57

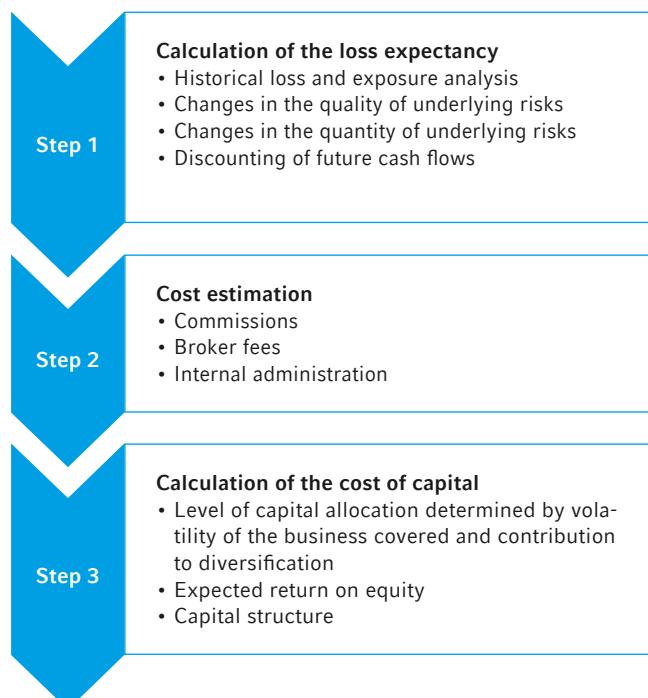
in EUR million	Date	gross	net
Forest fires, Canada	30 April – 5 May 2016	190.8	127.9
4 marine claims		124.6	66.5
4 property claims		116.0	97.3
Hurricane "Matthew", Caribbean, United States	3–8 October 2016	91.3	70.3
Earthquake, New Zealand	13 November 2016	85.2	56.3
Earthquake, Ecuador	16–17 April 2016	59.3	58.3
1 credit claim		35.2	35.2
Earthquake, Japan	14 April 2016	21.7	20.3
Earthquake, Taiwan	6 February 2016	21.6	19.2
Storm "Elvira", Germany, France	27–28 May 2016	18.5	11.9
Storms/hail, Netherlands, Germany	22–23 June 2016	18.2	9.2
Hail, Canada	30 July 2016	15.1	9.1
Severe weather/flooding, China	1 June–31 July 2016	13.2	13.2
1 aviation claim		12.3	11.1
Typhoon "Meranti", Taiwan, China	13–14 September 2016	12.2	12.2
Severe weather/hail, United States	10–16 April 2016	11.4	8.4
<b>Total</b>		<b>846.5</b>	<b>626.6</b>

<sup>1</sup> Natural catastrophes and other major claims in excess of EUR 10 million gross

The price/premium risk lies primarily in the possibility of a random claims realisation that diverges from the claims expectancy on which the premium calculation was based. Regular and independent reviews of the models used for treaty quotation as well as central and local underwriting guidelines are vital management components. We have put in place a multi-step quotation process to ensure the quality of our portfolios:

#### Ensuring the quality of our portfolios

M 58



In addition, Hannover Re's regional and treaty departments prepare regular reports on the progress of their respective renewals. The reporting in this regard makes reference inter alia to significant changes in conditions, risks (such as inadequate premiums) as well as to emerging market opportunities and the strategy pursued in order to accomplish targets. The development of the combined ratio in property and casualty reinsurance in 2016 and prior years is shown in the table below:

Combined and catastrophe loss ratio										M 59
in %	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Combined ratio (property and casualty reinsurance)	93.7	94.4	94.7	94.9	95.8	104.3	98.2	96.6	95.4	99.7
Thereof catastrophe losses <sup>1</sup>	7.8	7.1	6.1	8.4	7.0	16.5	12.3	4.6	10.7	6.3

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

For further information on the run-off of the loss reserves please see our explanatory remarks in the section "Run-off of the net loss reserve in the property and casualty reinsurance segment" on page 199 et seq.

in view of the fact that the contracts are normally taken out for different regions, age groups and individuals. The required risk capital with a confidence level of 99.5% for underwriting risks in life and health reinsurance breaks down as follows:

## Underwriting risks in life and health reinsurance

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

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

## Required risk capital<sup>1</sup> for underwriting risks life and health reinsurance M 60

in EUR million	31.12.2016	30.9.2015
Mortality risk	1,637.4	1,617.4
Longevity risk	1,331.6	1,314.8
Morbidity and disability risk	395.0	371.3
Lapse risk	603.2	646.6
Expense risk <sup>2</sup>	271.7	172.3
Diversification	(2,121.0)	(2,012.8)
<b>Underwriting risk life and health</b>	<b>2,117.9</b>	<b>2,109.6</b>

<sup>1</sup> Required risk capital at a confidence level of 99.5%

<sup>2</sup> Expense risk is now shown separately. Previously, expense risk was included in the total underwriting risk life and health figure, only.

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). 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. The actuarial reports and documentation required by local regulators ensure that regular scrutiny also takes place on the level of the subsidiaries. The interest rate risk, which in the primary sector is important in life business owing to the guarantees that are given, is of only minimal relevance to our company thanks to the design of our reinsurance treaties. We have confidence in the entrepreneurial abilities of our underwriters and grant them the most extensive possible powers. In our decentralised organisation we manage risks where they arise using a consistent Group-wide approach in order to obtain an overall view of the risks in life and health reinsurance. Our global underwriting guidelines provide underwriters with an appropriate framework for this purpose. The risks arising out of life and health reinsurance are reflected in the internal capital model.

## Market risks

Faced with a challenging capital market climate, particularly high importance attaches to preserving the value of assets under own management and the stability of the return. Hannover Re's portfolio is therefore guided by the principles of a balanced risk/return profile and broad diversification. Based on a risk-averse asset mix, the investments reflect both the currencies and durations of our liabilities. Market price risks include equity risks, interest rate risks, foreign exchange risks, real estate risks, default and spread risks. Our portfolio currently consists in large part of fixed-income securities, and hence default and spread risks account for the bulk of the market risk. We minimise interest rate and foreign exchange risks through the greatest possible matching of payments from fixed-income securities with the projected future payment obligations from our insurance contracts. Market risks derive from the investments managed by Hannover Re itself and from investment risks of ceding companies that we 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<sup>1</sup> for market risks

**M61**

in EUR million	31.12.2016	30.9.2015
Default and spread risk	2,827.9	2,777.4
Interest rate risk	1,179.1	761.9
Foreign exchange risk	1,296.5	874.7
Equity risk <sup>2</sup>	1,283.5	1,109.5
Real estate risk	526.3	436.9
Diversification	(2,887.9)	(2,057.3)
<b>Market risk</b>	<b>4,225.4</b>	<b>3,903.1</b>

<sup>1</sup> Required risk capital at a confidence level of 99.5%

<sup>2</sup> 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. These are unambiguously defined in conformity with our risk appetite and trigger specified information and escalation channels if a corresponding fair value development is overstepped.

Interest rate and spread markets, in particular, saw highly volatile movements across the most important investment currencies over the course of the year under review. Despite its conservative posture our investment portfolio benefited substantially from these developments. Even though the very high levels of hidden reserves recorded above all in the third quarter decreased at year-end owing to rising interest rates in our main currency areas, a significant increase in hidden reserves was nevertheless booked over the year as a whole.

At no time were the escalation levels of the trigger system reached in this connection.



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

mapped on the level of individual positions within the multi-factor model; residual risks (e.g. market price risks that are not directly explained by the multi-factor model) can be determined through back-calculation and are incorporated into the overall calculation. The model takes into account interest rate risks, default and spread risks, systematic and specific equity risks, commodity risks and option-specific risks. Against the backdrop of what was still a difficult capital market environment, the volatilities of fixed-income assets, in particular, and hence the market price risks increased in the year under review relative to the previous year. Based on continued broad risk diversification and the orientation of our investment portfolio, our Value at Risk was nevertheless clearly below the Value at Risk upper limit defined in our investment guidelines. It amounted to 1.2% (1.0%) as at the end of the reporting period.

**Value at Risk<sup>1</sup> for the investment portfolio of the Hannover Re Group**  
in %



<sup>1</sup> 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%	-168.7	-168.7
	Share prices -20%	-337.5	-337.5
	Share prices +10%	+168.7	+168.7
	Share prices +20%	+337.5	+337.5
Fixed-income securities	Yield increase +50 basis points	-903.5	-808.3
	Yield increase +100 basis points	-1,760.1	-1,575.0
	Yield decrease -50 basis points	+934.6	+834.5
	Yield decrease -100 basis points	+1,912.3	+1,707.0
Real estate	Real estate market values -10%	-194.4	-73.3
	Real estate market values +10%	+194.4	+43.6

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. 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 176 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. In addition to the holdings acquired in the course of the previous year, we again acted on market opportunities at the start of the year under review to rebuild a broadly diversified equity portfolio. Please see our comments in section 6.1 of the notes entitled “Investments under own management” on page 176 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.

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 184 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 of Germany, Europe as a whole and the United States; each investment is preceded by detailed analyses of the property, manager and market concerned.

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

credit risks associated with the use of such transactions. The remaining exposures are controlled according to the restrictive parameters set out in our investment guidelines. 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<sup>1</sup>

M 65

Rating classes	Government bonds		Securities issued by semi-governmental entities <sup>2</sup>		Corporate bonds		Covered bonds/ asset-backed securities	
	in %	in EUR million	in %	in EUR million	in %	in EUR million	in %	in EUR million
AAA	76.8	8,952.8	65.6	4,711.0	1.0	131.3	67.1	2,460.2
AA	11.5	1,332.5	27.9	2,000.8	13.4	1,732.9	14.1	518.5
A	6.2	725.7	2.3	166.0	35.5	4,606.3	5.4	196.2
BBB	4.1	478.2	1.2	82.5	41.6	5,397.3	9.4	343.0
< BBB	1.4	165.7	3.0	212.6	8.5	1,109.2	4.0	147.9
<b>Total</b>	<b>100.0</b>	<b>11,654.9</b>	<b>100.0</b>	<b>7,173.0</b>	<b>100.0</b>	<b>12,976.9</b>	<b>100.0</b>	<b>3,665.8</b>

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

<sup>2</sup> Including government-guaranteed corporate bonds

The measurement and monitoring mechanisms that have been put in place safeguard a prudent, broadly diversified investment strategy.

On a fair value basis EUR 4,001.9 million of the corporate bonds held by our company were issued by entities in the financial sector. Of this amount, EUR 3,288.9 million was attributable to banks. The vast majority of these bank bonds (72.1%) 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 required risk capital for counterparty defaults with the confidence level of 99.5% amounted to EUR 296.5 million as at 31 December 2016.

Since the business that we accept is not always fully retained, but instead portions are retroceded as necessary, the counterparty default risk is also material for our company in reinsurance transactions. Our retrocession partners are carefully selected and monitored in light of credit considerations in order to keep the risk as small as possible. This is also true of our

broker relationships, which entail a risk *inter alia* through the potential loss of the premium paid by the cedant to the broker. We minimise these risks, among other things, by reviewing all broker relationships once a year with an eye to criteria such as the existence of professional indemnity insurance, payment performance and proper contract implementation. The credit status of retrocessionaires is continuously monitored. On the basis of this ongoing monitoring a Security Committee decides on measures where necessary to secure receivables that appear to be at risk of default. This process is supported by a Web-based risk management application, which specifies cession limits for the individual retrocessionaires participating in protection cover programmes and determines the capacities still available for short-, medium- and long-term business. Depending on the type and expected run-off duration of the reinsured business, the selection of reinsurers takes into account not only the minimum ratings of the rating agencies Standard & Poor’s and A.M. Best but also internal and external expert assessments (e.g. market information from brokers). Overall, retrocessions conserve our capital, stabilise and optimise our results and enable us to act on opportunities across a broader front, e.g. following a major loss event. Regular visits to our retrocessionaires give us a reliable overview of the market and put us in a position to respond quickly to capacity changes. The following table shows how the proportion of assumed risks that we do not retrocede (i.e. that we run in our retention) has changed in recent years:

Gross written premium retained		M 66				
in %		2016	2015	2014	2013	2012
Hannover Re Group		89.3	87.0	87.6	89.0	89.8
Property and casualty reinsurance		88.5	89.3	90.6	89.9	90.2
Life and health reinsurance		90.4	84.2	83.9	87.7	89.3

Alongside traditional retrocessions in property and casualty reinsurance we also transfer risks to the capital market.

Counterparty default risks are also relevant to our investments and in life and health reinsurance, among other things because we prefinance acquisition costs for our ceding companies. Our clients, retrocessionaires and broker relationships as well as our investments are therefore carefully evaluated and limited in light of credit considerations and are constantly monitored and controlled within the scope of our system of limits and thresholds.

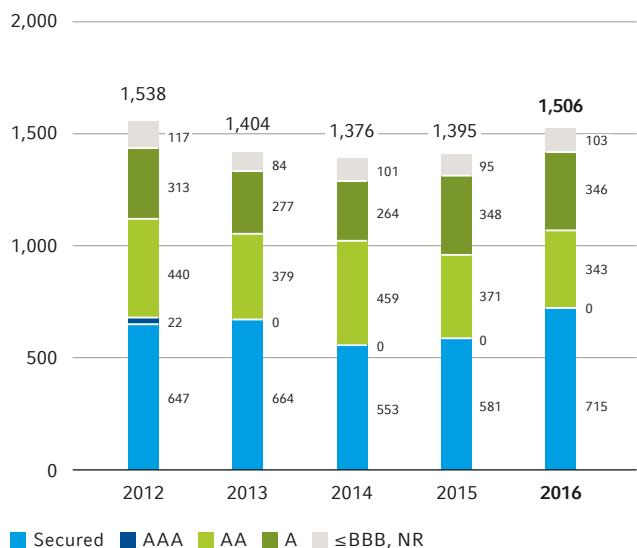
47.5% of our recoverables from reinsurance business are secured by deposits or letters of credit. For the majority of our retrocessionaires we also function as reinsurer, meaning that in most cases recoverables can potentially be set off against our own liabilities. In terms of the Hannover Re Group's major companies, EUR 218.7 million (5.9%) of our accounts receivable from reinsurance business totalling EUR 3,678.0 million were older than 90 days as at the balance sheet date.

The average default rate from retrocessions over the past four years was 0.01%.

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 1,506.3 million (previous year: EUR 1,395.3 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 67 in EUR million



Further remarks on technical and other assets which were unadjusted but considered overdue as at the balance sheet date as well as on significant impairments in the year under review are provided in section 6.4 “Technical assets” on page 192 et seq., section 6.6 “Other assets” on page 195 et seq. and section 7.2 “Investment result” on page 215 et seq.

## Operational risks

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

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

Required risk capital <sup>1</sup> for operational risks	M 68
in EUR million	31.12.2016
Operational risk	503.9

<sup>1</sup> Required risk capital at a confidence level of 99.5%

Within the overall framework of operational risks we consider, in particular, business process risks (including data quality), compliance risks, risks associated with the outsourcing of functions (including our distribution channels), fraud risks, personnel risks, information/IT security risks and business interruption risks.

Business process risks are associated with the risk of deficient or flawed internal processes, which can arise as a consequence of an inadequate process organisation. We have defined criteria to evaluate the maturity level of the material processes, e.g. for the reserving process. This enables us to ensure that process risks are monitored. In cooperation with the process participants, the process owner evaluates the risks of the metaprocess and develops measures for known, existing risks. Data quality is a highly critical success factor in this regard, especially in risk management, because – among other things – the validity of the results delivered by the internal capital model depends primarily on the data provided.

Compliance risks are associated with the risk of breaches of standards and requirements, non-compliance with which may entail lawsuits or official proceedings with not inconsiderable detrimental implications for the business activities of the Hannover Re Group. Regulatory compliance, compliance with the company's Code of Conduct, data privacy and compliance with anti-trust and competition laws have been defined as issues of particular relevance to compliance. The compliance risk also

extends to tax and legal risks. We use sanctions screening software on parts of the Hannover Re Group's portfolio to filter out individuals who are subject to sanctions on account of a criminal or terrorist background. Suitable steps are taken if such individuals are identified. Business partners are also screened in this way. Responsibilities within the compliance organisation are regulated and documented Group-wide and interfaces with risk management have been put in place. The set of tools is rounded off with regular compliance training programmes. For further information on compliance-related topics, including for example lawsuits, contingent liabilities and commitments, please see section 8.6 "Lawsuits" and section 8.7 "Contingent liabilities and commitments" on page 233 et seq.

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

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

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

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

Information and IT security risks arise, inter alia, out of the risk of the inadequate integrity, confidentiality or availability of systems and information. By way of example, losses and damage resulting from the unauthorised passing on of confidential information, the malicious overloading of important IT systems or from computer viruses are material to the Hannover Re Group. Given the broad spectrum of such risks, a diverse range of steering and monitoring measures and organisational standards, including for example the requirement to conclude

confidentiality agreements with service providers, have been put in place. In addition, our employees are made more conscious of such security risks through practically oriented tools provided online in the intranet, by way of training opportunities and through a staff information campaign.

When it comes to reducing business interruption risks, the paramount objective is the quickest possible return to normal operations after a crisis, for example through implementation of existing contingency plans. Guided by internationally accepted standards, we have defined the key framework conditions and – among other measures – we have assembled a crisis team to serve as a temporary body in the event of an emergency. The system is complemented by regular exercises and tests. A leaflet is available setting out the correct behaviour in the event of a business interruption; this condenses in compact form the key information that all employees need to know (such as the information channels in a crisis situation). Regular risk reporting to the Risk Committee and the Executive Board has also been put in place.

## Other risks

Of material importance to our company in the category of other risks are primarily emerging risks, strategic risks, reputational risks and liquidity risks.

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

Strategic risks derive from a possible imbalance between the corporate strategy of the Hannover Re Group and the constantly changing general business environment. Such an imbalance might be caused, for example, by incorrect strategic policy decisions, a failure to consistently implement the defined strategies and business plans or an incorrect allocation of resources. We therefore regularly review our corporate strategy in a multi-step procedure and adjust our processes and the resulting guidelines as and when required. We have defined performance criteria and indicators for operational implementation of the strategic principles and objectives; these are authoritative when it comes to determining fulfilment of the various targets. With the “Strategy Cockpit” the Executive Board and responsible managers have at their disposal a strategy tool that assists them with the planning, elaboration and management of strategic objectives and measures and safeguards their overall perspective on the company and its strategic risks. The process for the management of strategic risks continues to be assessed annually as part of the monitoring of business process risks. Further details on the topic of strategy are provided in the section entitled “Our strategy” on page 14 et seq.

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

The 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 6.3 billion as at the balance sheet date. In addition, we manage the liquidity of the portfolio by checking on each trading day the liquidity of the instruments contained therein. These measures serve to effectively reduce the liquidity risk.

## Opportunity report

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

Key elements in Hannover Re's opportunity management include its various market-specific innovations in the Life & Health and Property & Casualty reinsurance business groups (see the Forecast on page 124 et seq.). What is more, innovative and creative ideas are developed by our employees. Those that can be successfully translated into additional profitable premium volume are financially rewarded. Further elements are the working group on "Emerging Risks and Scientific Affairs" and the "Future Radar" initiative.

Not only that, Hannover Re has set up an organisational unit for "Innovation Management" within the Chief Executive Officer's scope of responsibility. This service unit deals systematically with ideas and potential business possibilities and it concentrates its activities on opening up additional growth opportunities. To this end, promising opportunities are translated into business models with the support of project teams. New solutions that meet with a positive response are subsequently launched on the market in cooperation with primary insurance partners. The goal is to cultivate new business and thereby promote Hannover Re's profitable growth. Several of the more than 115 ideas contributed by the global network since the unit was set up have been realised as innovative insurance solutions and successfully handed over to line responsibility; they are now being sold on the market by primary insurers.

A key project conducted in 2016 went by the name "Journey Re". It forged a connection to students, university graduates and young professionals with a view to developing new business models for primary insurance and reinsurance and translating the creativity that exists outside the industry into new business opportunities. The project activities were focused on locations in Berlin, Dublin, Boston and Johannesburg.

The networking of the innovative minds involved 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 94 et seq. “Other risks”). This working group carries out qualitative assessments of emerging risks. As a result, however, not only are the potential risks explored but also any available business opportunities. In the year under review, for example, issues such as “Political crimes” and “Regulatory environment” were analysed by the working group.

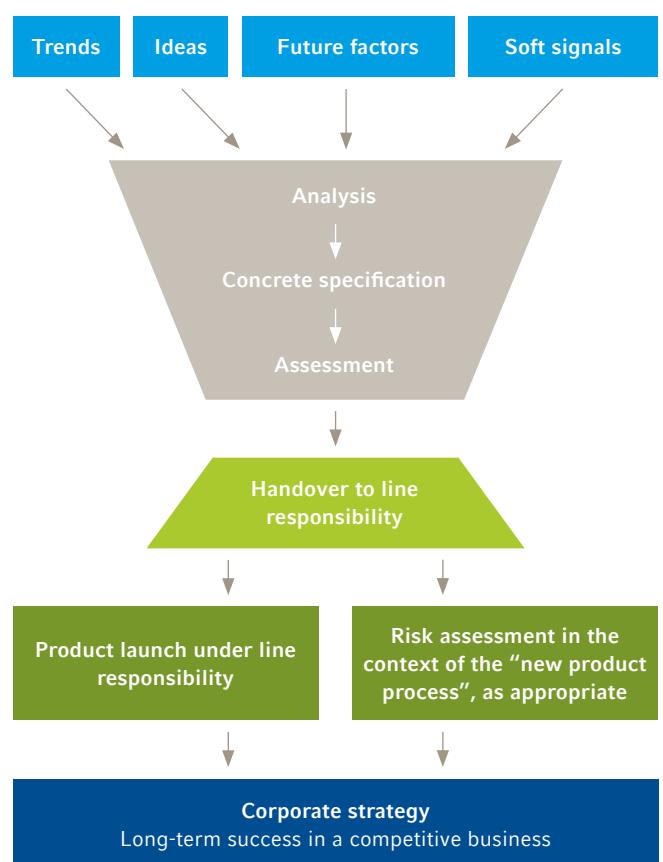
### Cyber risks

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 data stored around the world is 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 risk and opportunity management activities, we are also tackling the question of what new insurance products can be developed in order to protect against the relevant threats. Our presence in this market thus goes as far back as 2007 and we have already developed corresponding products.

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 69



## Overall assessment by the Executive Board

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

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

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

Our own evaluation of the manageability of existing risks is confirmed by various financial indicators and external assessments. Specific monitoring indicators, corresponding notification thresholds and potential escalation steps are defined on a mandatory basis in our central system of limits and thresholds for the material risks of the Hannover Re Group. As a result, the system provides us with a precise overview of potentially undesirable developments in the defined risk tolerances and enables us to react in a timely manner. One testament to our financial stability, for example, is the growth of our shareholders' equity: the total policyholders' surplus (hybrid capital, non-controlling interests and shareholders' equity) stands at 153% of the corresponding figure from 2011. In this context, our necessary equity resources are determined by the requirements of our economic capital model, solvency regulations, the assumptions of rating agencies with respect to our target rating and the expectations of our clients and shareholders. This increase gives us a sufficient capital cushion to be able both to absorb risks and act on business opportunities that may arise. Similarly, our very good ratings (see page 59 et seq.) also testify to our financial stability. The quality of our Enterprise Risk Management (ERM) is evaluated separately by Standard & Poor's. In the year under review Standard & Poor's gave our risk management its highest possible grade of "Very Strong". Most notably, our established risk management culture – one of the rating agency's benchmark criteria – promotes the development of appropriate risk monitoring systems and strategic risk management. The evaluation further encompasses the areas of risk controls, emerging risk management and risk models. 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 60. In addition, the risk trigger mechanism and internal monitoring system are reviewed annually by the independent auditor. The Group-wide risk management system is also a regular part of the audits conducted by the internal audit function. For additional information on the opportunities and risks associated with our business please see the Forecast on page 124 et seq.

# Enterprise management

## Declaration on Corporate Governance pursuant to §§ 289a, 315 Para. 5 Commercial Code (HGB)

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

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

Hannover Rück SE hereby provides insight into its enterprise management practices as part of the Declaration on Corporate Governance pursuant to § 289a Commercial Code (HGB) and pursuant to § 315 Para. 5 Commercial Code (HGB) in conjunction with § 289a Commercial Code (HGB) for the Hannover Re Group:

### Corporate Governance

As an instrument of self-regulation for the business world, the German Corporate Governance Code – the latest version of which dates from 5 May 2015 – sets out recommendations and suggestions that are intended to maintain and foster the trust of investors, customers, employees and the general public in the management and supervision of German companies. Although the Code does not have binding legal force, the enterprises addressed by the Code are nevertheless required by § 161 Stock Corporation Act (AktG) to provide an annual declaration as to whether or not the recommendations of the Code were and are complied with in the reality of the company's business activities. If recommendations were not acted upon, this is to be explained and disclosed as part of the Declaration of Conformity.

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

### Declaration of Conformity pursuant to § 161 Stock Corporation Act (AktG)

The Executive Board and Supervisory Board of Hannover Rück SE declare pursuant to § 161 Stock Corporation Act (AktG) that – with the following divergences – the company was and continues to be in conformity with the recommendations made by the Government Commission on the German Corporate Governance Code published by the Federal Ministry of Justice on 12 June 2015 in the official section of the Federal Gazette:

#### Code Item 4.2.3 Para. 2; Caps on the amount of variable compensation elements in management board contracts

Item 4.2.3 Para. 2 Sentence 6 of the Code recommends that there should be a maximum limit on the amount of variable compensation paid to members of the management board.

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

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

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

#### **Code Item 4.2.3 Para. 4; Caps on severance payments in management board contracts**

Pursuant to Item 4.2.3 Para. 4 of the Code, when management board contracts are concluded care should be taken to ensure that payments made to a member of the management board upon premature termination of his or her contract of service do not exceed a certain amount.

Premature termination of a service contract may only take the form of cancellation by mutual consent. Even if the Supervisory Board insists upon setting a severance cap when concluding or renewing an Executive Board contract, this does not preclude the possibility of negotiations also extending to the severance cap in the event of a member leaving the Executive Board. In addition, the scope for negotiation over a member leaving the Executive Board would be restricted if a severance cap were

agreed, which could be particularly disadvantageous in cases where there is ambiguity surrounding the existence of serious cause for termination. In the opinion of Hannover Rück SE, it is therefore in the interest of the company to diverge from this recommendation.

#### **Code Item 5.2 Para. 2; Chair of the Audit Committee**

Pursuant to Code Item 5.2 Para. 2, the Chair of the Supervisory Board shall not chair the Audit Committee.

The current Chairman of the Supervisory Board of Hannover Rück SE served as the company's Chief Financial Officer in the period from 1994 to 2002. During this time he acquired superb knowledge of the company and he is equipped with extensive professional expertise in the topics that fall within the scope of responsibility of the Finance and Audit Committee. With this in mind, the serving Chairman of the Supervisory Board is optimally suited to chairing the Audit Committee. In the opinion of Hannover Rück SE, it is therefore in the interest of the company to diverge from this recommendation.

#### **Code Item 5.3.2; Independence of the Chair of the Audit Committee**

Item 5.3.2 Sentence 3 of the Code recommends that the Chair of the Audit Committee should be independent.

The current Chairman of the Finance and Audit Committee is at the same time also the Chairman of the Board of Management of the controlling shareholder and hence cannot be considered independent. As already explained in advance in the justification for divergence from Code section 5.2 Para. 2, the current Chairman of the Supervisory Board is, however, optimally suited to chairing the Finance and Audit Committee. This assessment is also not cast into question by the fact that the Committee Chairman cannot therefore be considered independent within the meaning of the German Corporate Governance Code. Furthermore, since his service as Chief Financial Officer of Hannover Rück SE dates back to a period more than ten years ago, it is also the case that the reviews and checks performed by the Finance and Audit Committee no longer relate to any timeframe within which he himself was still a member of the Executive Board or decisions initiated by him as a member of the Executive Board were still being realised. In the opinion of Hannover Rück SE, it is therefore in the interest of the company to diverge from this recommendation.

Hannover, 9 November 2016

Executive Board, Supervisory Board

## **Further enterprise management principles of Hannover Re**

In addition to the Corporate Governance principles, Hannover Rück SE has adopted its own more extensive Code of Conduct ([www.hannover-re.com/50943/code-of-conduct.pdf](http://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 ethical and legal standards that guide our actions worldwide. It is our belief that integrity in dealings with our stakeholders constitutes the foundation of a successful enterprise. In both our strategic planning and our day-to-day business activities, we therefore aspire to consistently apply the highest ethical and legal standards; for our actions and the way in which every single one of us presents and conducts himself or herself are crucial in shaping the image of Hannover Re.

## **Sustainability of enterprise management**

The strategic orientation of Hannover Re towards sustainability constitutes an important element of the enterprise strategy. The aim is to achieve commercial success on the basis of a results-driven business model in accordance with the needs of our staff and the company as well as with an eye to protecting the environment and conserving natural resources. As part of the regular review of our Group Strategy and Sustainability Strategy and based upon a materiality analysis, we adjusted our Sustainability Strategy for the years 2015–2017 to the changing economic framework conditions. The current Sustainability Strategy defines four action fields and specifies concrete goals and measures that are to be implemented in the strategy cycle.

We thus strive to reduce as far as possible the greenhouse gas emissions produced by our day-to-day business activities in order to come closer to reaching our goal of carbon neutrality. Furthermore, we have defined strategic principles for our human resources management, since we consider our employees to be a crucial factor in the success of our company. Along with skills, qualifications and commitment, a high degree of diversity is one of the cornerstones of our successful business operations. The mentoring programme launched in 2012, for example, brings female members of staff together with seasoned senior executives for a purposeful, regular dialogue and is intended to help these female employees to actively shape their future career path. Three of the members of the Supervisory Board of Hannover Rück SE in the year under review were women. In addition, one of the members of the Supervisory Board's Nomination Committee is a woman. Detailed information on the topic of sustainability is provided on our website ([www.hannover-re.com/60729/sustainability](http://www.hannover-re.com/60729/sustainability)).

## **Targets pursuant to §§ 76 Para. 4, 111 Para. 5 Stock Corporation Act**

In accordance with the Act for the Equal Participation of Women and Men in Leadership Positions in the Private Sector and the Public Sector, the Supervisory Board of the company was required by 30 September 2015 to define a target quota for women on the Supervisory Board and Executive Board of the company in the period until 30 June 2017. After extensive deliberations the Supervisory Board decided, in due consideration of the term of office of the Supervisory Board and the current mandates and contracts of service of the members of the Executive Board, to define within the specified period – without prejudice to possible decisions to the contrary that may be taken as warranted when the time comes – a target quota for women on the Supervisory Board of 30% and an anticipated continued quota of zero for the Executive Board. Should events result in the currently unforeseeable appointment of a new member of the Executive Board, the Supervisory Board shall give preference to a potential female candidate in case of equal personal aptitude and professional qualifications. The company's Executive Board defined a target quota of 16.8% with the same deadline for the two levels of senior management below the Executive Board.

## **Working practice of the Executive Board and Supervisory Board**

The Executive Board and Supervisory Board of Hannover Rück SE work together on a trusting basis to manage and monitor the company and the Group as a whole. In accordance with the Rules of Procedure of the Executive Board, matters of fundamental importance require the consent of the Supervisory Board. The Supervisory Board is comprised of nine members. Six members are elected by the shareholders at the Annual General Meeting, three members are appointed by the Employee Council. 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 is set out on pages 6 et seq. and 241 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 Supervisory Board takes account of diversity considerations in the composition of the Executive Board.

The Rules of Procedure of the Supervisory Board provide inter alia that each member of the Supervisory Board must have the knowledge, skills and professional experience required for orderly performance of their tasks and that the Supervisory Board must have a sufficient number of independent members. Currently, four of the six shareholder representatives are independent as defined by Item 5.4.2 of the German Corporate Governance Code. At least one independent member shall have technical expertise in the fields of accounting and the auditing of financial statements. 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 shall be counted as the first term of office in this regard. 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. If a member of the Supervisory Board has only participated in half of the meetings of the Supervisory Board and the committees or less in a financial year, this shall be noted in the Supervisory Board’s report. No more than two former members of the company’s Executive Board may belong to the Supervisory Board.

In 2015 the Supervisory Board carried out an efficiency audit of its work as part of a regular procedure. A comprehensive survey covered a range of topics including, among other things, organisational aspects relating to the Supervisory Board and

the course of its meetings, the cooperation between the Executive Board and the Supervisory Board and the supply of information to the Supervisory Board. The findings were presented and discussed at the first Supervisory Board meeting held in 2016. Various optimisations were made as a result, most notably relating to the provision of information.

## **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 and prepare matters within their scope of competence for discussion and adoption of a resolution by the full Supervisory Board. In addition, the committees are also assigned their own authority to adopt resolutions.

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

The Standing Committee prepares personnel decisions for the Supervisory Board. It bears responsibility for granting loans to the group of persons specified in §§ 89 Para. 1, 115 Stock Corporation Act and those considered equivalent pursuant to § 89 Para. 3 Stock Corporation Act as well as for approving contracts with Supervisory Board members in accordance with § 114 Stock Corporation Act. It exercises the powers arising out of § 112 Stock Corporation Act in lieu of the Supervisory Board and – in cooperation with the Executive Board – ensures that long-term succession planning is in place.

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

For further details of the activities of the Supervisory Board committees please see the explanations provided in the Supervisory Board Report on pages 238 to 240.

## 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. Our compliance structure, which consists of compliance modules precisely tailored to the specific features of our Property & Casualty and Life & Health reinsurance business groups, facilitates optimal application. The compliance committees, which examine questions of risk transfer as well as other compliance aspects associated with the Group's reinsurance treaties, are comprised of members from the respective business groups as well as from the areas of Legal, Finance, Accounting and Investments. The chairs report directly to the Executive Board. This structure safeguards adherence to the standards that have been set.

The compliance report for the 2016 calendar year will be submitted to the Finance and Audit Committee in March 2017. The reporting sets out the structure and diverse range of activities of Hannover Re in this regard. The findings of the separate data privacy reporting for the 2016 calendar year are also included in the compliance report. After in-depth examination of topics such as directors' dealings, ad hoc and other disclosure requirements, the insider register, consulting agreements, data protection, international sanctions and the Group-wide whistleblower system, the report concludes that only a few circumstances have been identified which point to breaches of relevant compliance standards. After detailed exploration of these incidents, the necessary safeguards were put in place to ensure that in the future Hannover Re is in conformity with the internal and external requirements governing its business activities.

## Risk monitoring and steering

The risk management system applicable throughout the entire Hannover Re Group is based on the risk strategy, which in turn is derived from the corporate strategy. A core component is the systematic and comprehensive recording of all risks that from the current standpoint could conceivably jeopardise the company's profitability and continued existence. Further details in this regard may be obtained from the risk report contained in this Annual Report on page 73 et seq.

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

- Remuneration report for the Executive Board and disclosure of the remuneration received by Supervisory Board members pursuant to Items 4.2.5 and 5.4.6 of the German Corporate Governance Code,
- Securities transactions pursuant to Item 6.2 of the German Corporate Governance Code,
- Shareholdings pursuant to Item 6.2 of the German Corporate Governance Code.

Information on share-based payment pursuant to Item 7.1.3 of the German Corporate Governance Code is provided in section 8.3 of the notes "Share-based payment", page 227 et seq., and in the remuneration report with respect to the members of the Executive Board.

In addition to the present Declaration on Corporate Governance, the Corporate Governance Report and the reports of recent years are published on our website pursuant to Item 3.10 of the German Corporate Governance Code ([www.hannover-re.com/200801/declaration-of-conformity](http://www.hannover-re.com/200801/declaration-of-conformity)).

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# Remuneration report

The remuneration report summarises the principles used to determine the remuneration of the Executive Board of Hannover Rück SE and explains the structure, composition and amount of the components of the remuneration received by the Executive Board in the 2016 financial year on the basis of the work performed by the Board members for Hannover Rück SE and companies belonging to the Group.

In addition, the amount of remuneration paid to the Supervisory Board on the basis of its work for Hannover Rück SE and companies belonging to the Group as well as the principles according to which this remuneration is determined are described; we also explain the principles on which the remuneration for senior executives below the level of the Executive Board is based.

The remuneration report is guided by the recommendations of the German Corporate Governance Code and contains information which forms part of the notes to the 2016 consolidated financial statement as required by IAS 24 "Related Party Disclosures". Under German commercial law, too, this information includes data specified as mandatory for the notes (§ 314 HGB) and the management report (§ 315 HGB). These details are discussed as a whole in this remuneration report and presented in summary form in the notes.

The provisions of the Act on the Adequacy of Management Board Remuneration (VorstAG) and of the Insurance Supervision Act (VAG) in conjunction with the Regulation on the Supervisory Law Requirements for Remuneration Schemes in the Insurance Sector (VersVergV) have been observed. In addition, we took into account the more specific provisions of DRS 17 "Reporting on the Remuneration of Members of Governing Bodies".

## Remuneration of the Executive Board

### Responsibility

In order to efficiently perform its tasks the Supervisory Board has formed various committees. The Standing Committee prepares remuneration-related matters of content relating to the Executive Board for discussion and adoption of a resolution by a full meeting of the Supervisory Board.

### Objective, structure and system of Executive Board remuneration

The total remuneration of the Executive Board and its split into fixed and variable components conform to regulatory requirements – especially the provisions of the Act on the Adequacy of Management Board Remuneration (VorstAG) and of Art. 275 Commission Delegated Regulation (EU) 2015/35 and supplemented by those of the Regulation on the Supervisory Law Requirements for Remuneration Schemes in the Insurance Sector (VersVergV). An independent expert's report from July 2016 confirms that the system of remuneration meets the requirements of Art. 275 Commission Delegated Regulation (EU) 2015/35 for a remuneration policy and remuneration practices that are in line with the undertaking's business, strategy and risk profile.

The amount and structure of the remuneration of the Executive Board are geared to the size and activities of the company, its economic and financial position, its success and future prospects as well as the customariness of the remuneration, making reference to the benchmark environment (horizontal) and the remuneration structure otherwise applicable at the company (vertical). The remuneration is also guided by the tasks of the specific member of the Executive Board, his or her individual performance and the performance of the full Executive Board.

With an eye to these objectives, the remuneration system has two components: fixed salary/non-cash compensation and variable remuneration. The variable remuneration is designed to take account of both positive and negative developments. Overall, the remuneration is to be measured in such a way that it reflects the company's sustainable development and is fair and competitive by market standards. In the event of 100% goal attainment the remuneration model provides for a split into roughly 40% fixed remuneration and roughly 60% variable remuneration.

## **Fixed remuneration (approx. 40% of total remuneration upon 100% goal attainment)**

### **Measurement basis and payment procedures for fixed remuneration**

**M 70**

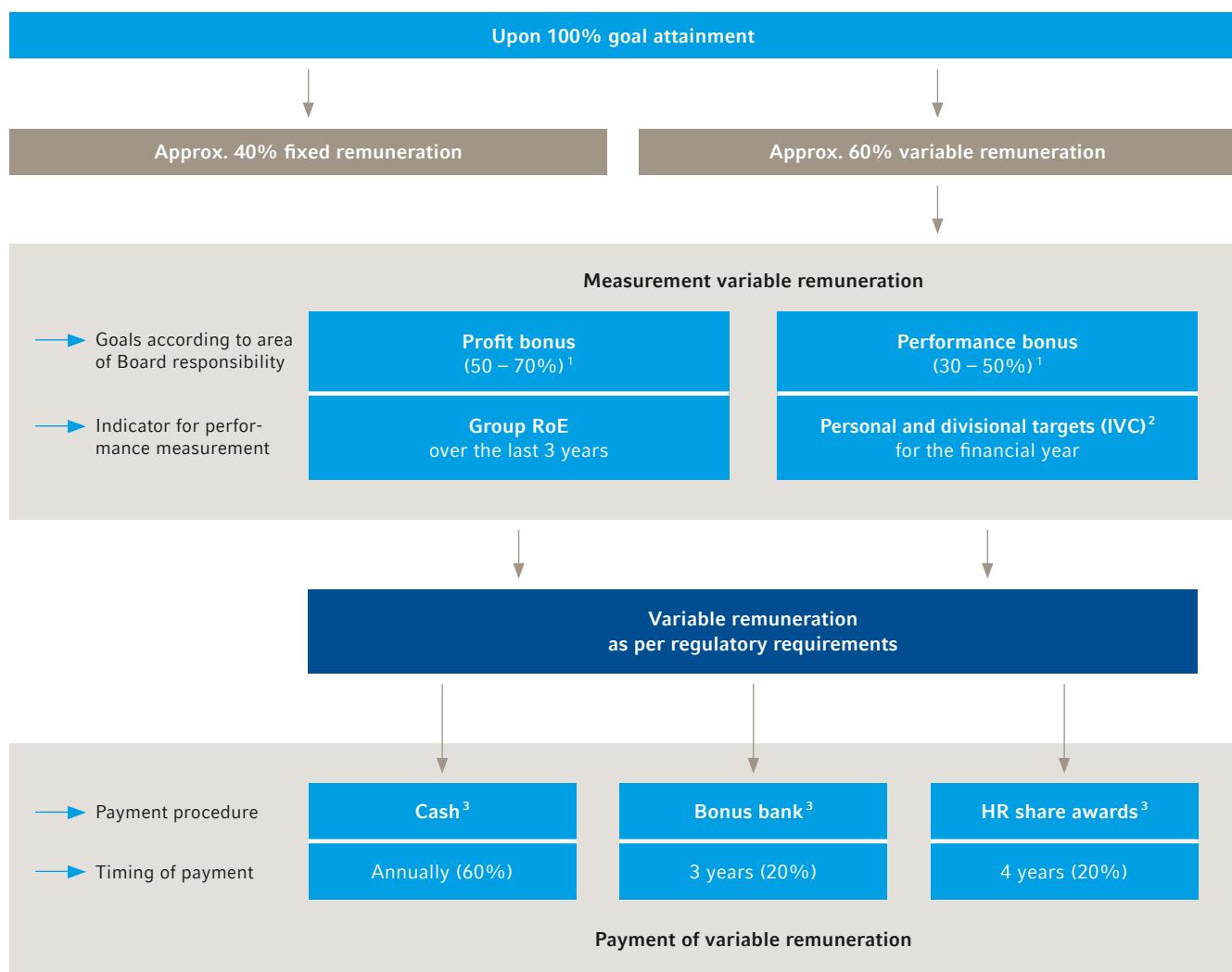
Components	Measurement basis/ parameters	Condition of payment	Paid out
Basic remuneration;	Function, responsibility, length of service on the Executive Board	Contractual stipulations	12 equal monthly instalments
Non-cash compensation, fringe benefits: Accident, liability and luggage insurance, company car for business and – if desired – personal use (tax on the non-cash benefit payable by the Board member), reimbursement of travel expenses and other expenditures incurred in the interest of the company	Remuneration reviewed by the Supervisory Board normally at two-year intervals. Since 2014 gradual conversion of Executive Board contracts: review of annual fixed salary during the contract period no longer applies.		

## **Variable remuneration (approx. 60% of total remuneration upon 100% goal attainment)**

The profit- and performance-based remuneration (variable remuneration) is contingent on certain defined results and the attainment of certain set targets. The set targets vary according to the function of the Board member in question. The variable remuneration consists of a profit bonus and a performance bonus.

The variable remuneration is defined at the Supervisory Board meeting that approves the consolidated financial statement for the financial year just ended.

The following chart summarises the make-up of the variable remuneration components. For details of measurement and payment procedures please see the two tables following the chart.



<sup>1</sup> Chief Executive Officer/Chief Financial Officer 70% profit bonus, 30% performance bonus (personal targets); Board members with divisional responsibility: 50% profit bonus, 50% performance bonus (25% personal targets/25% divisional targets)

<sup>2</sup> An instrument of value-based management used to measure the attainment of long-term goals on the level of the Group, business groups and operational units

<sup>3</sup> Split defined by legal minimum requirements

Component	Measurement basis/parameters	Condition of payment
<b>Profit bonus</b>		
Proportion of variable remuneration: Chief Executive Officer/Chief Financial Officer: 70%; Board member with divisional responsibility: 50%	The profit bonus is dependent on the risk-free interest rate and the average Group return on equity (RoE) of the past three financial years.  An individually determined and contractually defined basic amount is paid for each 0.1 percentage point by which the RoE of the past three financial years exceeds the risk-free interest rate. Goal attainment of 100% corresponds to an RoE of 9.7%. Goal attainment can amount to a maximum of 200% and a minimum of -100%.	Contractual stipulations  Attainment of three-year targets  Decision of the Supervisory Board
	The IFRS Group net income (excluding non-controlling interests) and the arithmetic mean of the IFRS Group shareholders' equity (excluding non-controlling interests) at the beginning and end of the financial year are used to calculate the RoE.  The risk-free interest rate is the average market rate for 10-year German government bonds over the past five years, with the average being calculated on the basis of the respective interest rate at year-end.	In view of the market interest rate the Supervisory Board decided on 9 March 2016 that the risk-free interest rate, which was set at an agreed level of 1.8% for the previous year, will be adjusted annually.
<b>Performance bonus</b>	The performance bonus for the Chief Executive Officer and the Chief Financial Officer is arrived at from individual qualitative and, as appropriate, quantitative targets defined annually by the Supervisory Board that are to be accomplished in the subsequent year. For members of the Executive Board with responsibility for a certain division, the performance bonus consists in equal parts of the divisional bonus and the individual bonus.	

Component	Measurement basis/parameters	Condition of payment
<b>Divisional bonus</b> Proportion of variable remuneration: Board member with divisional responsibility: 25%	<p>The basis for the divisional bonus is the return generated on the capital allocated to the division in the respective 3-year period just ended (= RoCA (Return on Capital Allocated)).</p> <p>An individually determined amount specified in the service contract is calculated for each 0.1 percentage point by which the average 3-year RoCA exceeds the level of 0%.</p> <p>Goal attainment of 100% is achieved in property and casualty reinsurance with a RoCA of 9.1% and in life and health reinsurance with a RoCA of 10.1%. These RoCA values are above the cost of capital and thus generate positive intrinsic value creation (IVC<sup>1</sup>).</p> <p>Goal attainment can amount to a maximum of 200% and a minimum of -100%.</p> <p>The method used to calculate the IVC as a basis for determining the divisional performance is checked by independent experts.</p> <p>The divisional bonus is determined by the Supervisory Board according to its best judgement. The determination also takes into account, in particular, the contribution made by the business under the responsibility of the Board member concerned to the achieved divisional performance and the relative change in the average IVC in the remuneration year. The Supervisory Board may make additions to or deductions from the arithmetically calculated values at any time in the event of over- or underfulfilment of the criteria.</p>	<p>Attainment of three-year targets</p> <p>Contractual agreement</p> <p>Decision of the Supervisory Board according to its best judgement</p>
<b>Individual bonus</b> Proportion of variable remuneration: Chief Executive Officer/Chief Financial Officer: 30%; Board member with divisional responsibility: 25%	<p>Personal qualitative, quantitative targets; individual contribution to the overall result, leadership skills, innovative skills, entrepreneurial skills, specific features of area of responsibility.</p> <p>The individual bonus for goal attainment of 100% is contractually stipulated. Over- and underfulfilment result in additions/deductions.</p> <p>The minimum individual bonus amounts to EUR 0 and the maximum is double the bonus payable upon complete goal attainment.</p>	<p>Attainment of annual targets</p> <p>Decision by the Supervisory Board according to its best judgement.</p>

<sup>1</sup> An instrument of value-based management used to measure the attainment of long-term goals on the level of the Group, business groups and operational units (see also page 24 et seq.).

## Payment procedures for the total variable remuneration

Of the total amount of defined variable remuneration, a partial amount of 60% is paid out in the month following the Supervisory Board meeting that approves the consolidated financial statement. The remaining amount of 40% is initially withheld as explained below with a view to encouraging long-term value creation:

### Payment procedures for the total variable remuneration

M 73

Short-term	Medium-term	Long-term
<b>60% of the variable remuneration with the next monthly salary payment</b> following the Supervisory Board resolution	<b>20% of the variable remuneration in the bonus bank;</b> withheld for three years;  the positive amount contributed three years prior to the payment date is available for payment, provided this does not exceed the balance of the bonus bank in light of credits/debits up to and including those for the financial year just ended;  an impending payment not covered by a positive balance in the bonus bank is omitted;  a positive balance in the bonus bank is carried forward to the following year after deduction of any payment made; a negative balance is not carried forward to the following year;  loss of claims due from the bonus bank in special cases: resignation from office without a compelling reason; contract extension on the same conditions is rejected;  no interest is paid on credit balances.	Automatic granting of <b>virtual Hannover Re share awards (HR-SAs)</b> with a value equivalent to 20% of the variable remuneration;  payment of the value calculated at the payment date after a <b>vesting period of four years</b> ;  value of the share on awarding/payment: unweighted arithmetic mean of the Xetra closing prices five trading days before to five trading days after the meeting of the Supervisory Board that approves the consolidated financial statement;  additional payment of the sum total of all dividends per share paid out during the vesting period;  changes in a cumulative amount of 10% or more in the value of the HR-SAs caused by structural measures trigger an adjustment;  the Board member has no entitlement to the delivery of shares.

**Negative variable total bonus = payment of EUR 0 variable remuneration.**

**Any minus value of the variable total bonus for a financial year is transferred in full to the bonus bank (see "Medium-term" column).**

## **Handling of payment of variable remuneration components in special cases**

In the event of voluntary resignation or termination/dismissal by the company for a compelling reason or if an offered contract extension on the same conditions (exception: the member of the Executive Board has reached the age of 60 and has served as a member of the Executive Board for two terms of office) is declined, all rights to payment of the balances from the bonus bank and from the HR-SAs are forfeited.

If the contractual relationship ends normally prior to the end of the vesting period for the bonus bank or HR-SAs, and if a contract extension is not offered, the member of the Executive Board retains his entitlements to payment from the bonus bank – making reference to a defined forward projection of the bonus bank – and for already awarded HR-SAs.

All claims to the allocation of amounts to the bonus bank and/or awarding of HR-SAs after leaving the company are excluded. In cases where an individual leaves the company because of non-reappointment, retirement or death this shall not apply with respect to claims to variable remuneration acquired (pro rata) in the final year of the Board member's work for the company.

## **Variable remuneration under the old remuneration structure (until 2011)**

The virtual stock option plan with stock appreciation rights existing under the old remuneration structure remains in force for all members of the Executive Board until all stock appreciation rights have been exercised or have lapsed. In the 2016 financial year no further stock appreciation rights were granted to active Board members. Of the stock appreciation rights granted in previous years, active and former Board members exercised amounts totalling EUR 0.7 million (previous year: EUR 2.0 million) in 2016.

As at 31 December 2016 active members of the Executive Board had at their disposal a total of 39,585 (79,464) granted, but not yet exercised stock appreciation rights with a fair value of EUR 0.4 million (EUR 0.7 million).

## **Continued payment in case of disability**

In the event of temporary incapacity for work the fixed annual salary shall continue to be paid in the same amount, at most until termination of the service contract.

If a member of the Executive Board is permanently incapacitated for work during the period of the service contract, the service contract shall terminate at the end of the sixth month after which the permanent incapacity for work is established – although no later than at the end of the service contract.

## **Other information**

The contracts of the Board members do not include a commitment to benefits in the event of a premature termination of employment on the Executive Board owing to a change of control. Only the conditions for the granting of share-based remuneration in the form of stock appreciation rights provide for special exercise options in the event of the merger, spin-off or demerger of Hannover Re into another legal entity.

With regard to Item 4.2.3. Para. 2 “Caps on the amount of variable compensation elements in management board contracts” and Item 4.2.3 Para. 4 “Caps on severance payments in management board contracts” of the German Corporate Governance Code, we would refer the reader to our remarks in the 2016 Declaration of Conformity contained in the section “Statement of enterprise management practices” on page 98 of this Group Annual Report.

If the company insists on a non-competition clause with Mr. Wallin for two years after the termination of his service contract, he shall be compensated in a monthly amount of 50% of his most recent fixed remuneration. Income earned through the application of his working capacity elsewhere shall be counted towards this compensation insofar as such income in combination with the compensation exceeds 100% of the most recently received fixed remuneration. The non-competition clause shall not apply if the contract ends prior to the age of 65 because the company does not extend it or because Mr. Wallin declines an extension offered to him on what are for him inferior terms, or if the premature termination or non-extension is due to a compelling reason for which the company is responsible.

## **Amount of remuneration received by the Executive Board**

The total remuneration received by the Executive Board of Hannover Rück SE on the basis of its work for Hannover Rück SE and the companies belonging to the Group is calculated from the sum of all the components set out in the following table pursuant to DRS 17.

The remuneration (excluding pension payments) received by former members of the Executive Board totalled EUR 0.3 million (EUR 0.7 million).

**Total remuneration of the active members of the Executive Board pursuant to DRS 17**

**M 74**

Name in EUR thousand	Financial year	Non-performance-based remuneration		Performance-based remuneration <sup>1</sup>	
		Basic salary	Non-cash compensation/fringe benefits <sup>2</sup>	Short-term	
				Variable remuneration payable	60% <sup>3</sup>
Ulrich Wallin	2016	596.4	14.2	788.0	
	2015	596.4	14.8	650.4	
Sven Althoff	2016	280.0	15.6	419.0	
	2015	280.0	14.8	334.2	
Claude Chèvre	2016	380.0	13.6	476.8	
	2015	380.0	12.8	440.1	
Jürgen Gräber	2016	445.1	7.1	615.3	
	2015	445.1	18.1	508.1	
Dr. Klaus Miller	2016	356.1	1.2	400.8	
	2015	356.1	3.7	366.5	
Dr. Michael Pickel	2016	356.1	12.6	478.0	
	2015	356.1	12.0	402.1	
Roland Vogel	2016	422.9	17.0	450.6	58.2
	2015	422.9	14.8	372.5	38.6
<b>Total</b>	<b>2016</b>	<b>2,836.6</b>	<b>81.3</b>	<b>3,628.5</b>	<b>58.2</b>
Total	2015	2,836.6	91.0	3,073.9	38.6

<sup>1</sup> As at the balance sheet date no Board resolution was available regarding the performance-based remuneration for 2016.

The variable remuneration is recognised on the basis of estimates and the provisions constituted accordingly.

<sup>2</sup> The non-cash compensation has been carried in the amounts established for tax purposes.

<sup>3</sup> In 2016 EUR 328,400 more in variable remuneration was paid out to Board members for 2015 than had been reserved.

<sup>4</sup> The nominal amount is stated; full or partial repayment in 2020, depending on the development until such time of the balance in the bonus bank.

In 2016 altogether EUR 109,500 more than had been originally reserved was allocated to the bonus bank for 2015.

<sup>5</sup> The nominal amount is stated; virtual Hannover Re share awards are automatically granted in an amount equivalent to 20% of the variable remuneration. The equivalent amount will be paid in 2021 at the prevailing share price of Hannover Re. In 2016 nominal amounts of EUR 109,500 more than had been originally reserved were used as a basis for allocation of the 2015 share awards.

<sup>6</sup> In order to calculate the number of share awards for 2016 reference was made to the Xetra closing price of the Hannover Re share on 30 December 2016 (EUR 102.80). The number to be actually awarded is established from the arithmetic mean of the Xetra closing prices of the Hannover Re share in a period from five trading days before to five trading days after the meeting of the Supervisory Board that approves the consolidated financial statement in March 2017. The applicable market price of the Hannover Re share had decreased from EUR 105.65 (30 December 2015) to EUR 97.64 by the allocation date (17 March 2016) of the share awards for 2015; the share awards actually allocated for 2015 are shown here, not those estimated in the 2015 Annual Report.

in EUR thousand	Performance-based remuneration <sup>1</sup>		<b>Total</b>	Number of share awards <sup>6</sup> 2015 = Actual 2016 = Estimate
	Medium-term	Long-term		
	Bonus bank	Share awards		
	20% (allocation) <sup>4</sup>	20% (allocation) <sup>5</sup>		
262.7	262.7		1,924.0	2,305
216.8	216.8		1,695.2	2,450
139.7	139.7		994.0	1,215
110.8	112.1		851.9	1,238
158.9	158.9		1,188.2	1,492
146.7	146.7		1,126.3	1,584
205.1	205.1		1,477.7	1,733
169.3	169.3		1,309.9	1,826
133.6	133.6		1,025.3	1,254
122.1	122.1		970.5	1,332
159.3	159.3		1,165.3	1,387
134.1	134.1		1,038.4	1,412
150.2	150.2		1,190.9	1,318
124.2	124.2		1,058.6	1,402
<b>1,209.5</b>	<b>1,209.5</b>		<b>8,965.4</b>	<b>10,704</b>
1,024.0	1,025.3		8,050.8	11,244

The following table shows the expense for share-based remuneration of the Executive Board in the financial year.

The table is to be viewed independently of the presentation of the total remuneration received by active members of the Executive Board pursuant to DRS 17.

**Total expense for share-based remuneration of the Executive Board**

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Name in EUR thousand	Year	Stock appreciation rights exercised	Change in reserve in 2016 for stock appreciation rights	Payment of share awards	Change in reserve for share awards from previous years <sup>1</sup>	Expense for share awards allocated in current financial year <sup>2</sup>	Total
<b>Ulrich Wallin</b>	<b>2016</b>	<b>102.6</b>	<b>(82.8)</b>	<b>608.8</b>	<b>(452.8)</b>	<b>60.5</b>	<b>236.3</b>
	2015	380.4	(338.8)	0.0	633.4	79.8	754.8
<b>Sven Althoff<sup>3</sup></b>	<b>2016</b>	<b>44.6</b>	<b>(37.6)</b>	<b>0.0</b>	<b>60.9</b>	<b>24.1</b>	<b>92.0</b>
	2015	63.6	(40.8)	0.0	131.8	41.0	195.6
<b>Claude Chèvre</b>	<b>2016</b>	<b>–</b>	<b>–</b>	<b>56.5</b>	<b>106.6</b>	<b>40.0</b>	<b>146.6</b>
	2015	–	–	0.0	215.0	30.7	245.7
<b>Jürgen Gräber</b>	<b>2016</b>	<b>89.2</b>	<b>(72.0)</b>	<b>427.3</b>	<b>(308.7)</b>	<b>34.3</b>	<b>170.1</b>
	2015	355.2	(319.0)	0.0	470.7	56.6	563.5
<b>Dr. Klaus Miller</b>	<b>2016</b>	<b>14.9</b>	<b>(12.0)</b>	<b>329.3</b>	<b>(171.9)</b>	<b>48.4</b>	<b>208.7</b>
	2015	44.6	(38.6)	0.0	336.7	34.1	376.8
<b>Dr. Michael Pickel</b>	<b>2016</b>	<b>80.3</b>	<b>(64.8)</b>	<b>326.2</b>	<b>(142.3)</b>	<b>71.3</b>	<b>270.7</b>
	2015	319.7	(287.1)	0.0	353.3	40.2	426.1
<b>Roland Vogel</b>	<b>2016</b>	<b>44.6</b>	<b>(36.0)</b>	<b>389.7</b>	<b>(332.6)</b>	<b>26.1</b>	<b>91.8</b>
	2015	164.7	(146.6)	0.0	406.5	54.1	478.7
<b>Total</b>	<b>2016</b>	<b>376.3</b>	<b>(305.2)</b>	<b>2,137.8</b>	<b>(1,240.8)</b>	<b>304.7</b>	<b>1,272.7</b>
Total	2015	1,328.2	(1,170.9)	0.0	2,547.4	336.5	3,041.2

<sup>1</sup> The change in the reserve for share awards from previous years derives from the lower market price of the Hannover Re share, the dividend approved for 2015, the spreading of the expense for share awards across the remaining period of the individual service contracts and the payout of the share awards allocated for 2011.

<sup>2</sup> The expense for share awards is spread across the remaining period of the individual service contracts. This gives rise to a difference relative to the nominal amount shown in the table of total remuneration.

<sup>3</sup> The expenses for stock appreciation rights of Mr. Althoff relate to his work as a senior executive until 2014.



The following two tables show the remuneration of the Executive Board in the 2016 financial year in accordance with the recommendations of the German Corporate Governance Code:

**German Corporate Governance Code, Item 4.2.5 Para. 3 – Table 1  
(target/minimum/maximum remuneration as nominal amounts)**

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Benefits granted in EUR thousand	Ulrich Wallin Chief Executive Officer				Sven Althoff Board member with divisional responsibility			
	2015	2016	2016 (Min)	2016 (Max)	2015	2016	2016 (Min)	2016 (Max)
Fixed remuneration	596.4	596.4	596.4	596.4	280.0	280.0	280.0	280.0
Fringe benefits	14.8	14.2	14.2	14.2	14.8	15.6	15.6	15.6
<b>Total</b>	<b>611.2</b>	<b>610.6</b>	<b>610.6</b>	<b>610.6</b>	<b>294.8</b>	<b>295.6</b>	<b>295.6</b>	<b>295.6</b>
One-year variable remuneration	504.0	504.0	0.0	1,008.0	252.0	252.0	0.0	504.0
Multi-year variable remuneration	398.1	390.8	(533.2)	726.8	181.3	188.7	(148.3)	356.7
Bonusbank 2015 (2019 <sup>1</sup> )/ 2016 (2020 <sup>1</sup> )	168.0	168.0	(588.0)	336.0	84.0	84.0	(169.0)	168.0
Share Awards 2015 (2020 <sup>1</sup> )/ 2016 (2021 <sup>1</sup> ) <sup>2</sup>	168.0	168.0	0.0	336.0	84.0	84.0	0.0	168.0
Dividend on share awards for 2014 <sup>3</sup>	62.1	0.0	0.0	0.0	13.3	0.0	0.0	0.0
Dividend on share awards for 2015	0.0	54.8	54.8	54.8	0.0	20.7	20.7	20.7
<b>Total</b>	<b>1,513.3</b>	<b>1,505.4</b>	<b>77.4</b>	<b>2,345.4</b>	<b>728.1</b>	<b>736.3</b>	<b>147.3</b>	<b>1,156.3</b>
Service cost <sup>4</sup>	167.1	144.2	144.2	144.2	750.6	37.4	37.4	37.4
<b>Total remuneration</b>	<b>1,680.4</b>	<b>1,649.6</b>	<b>221.6</b>	<b>2,489.6</b>	<b>1,478.7</b>	<b>773.7</b>	<b>184.7</b>	<b>1,193.7</b>

Benefits granted in EUR thousand	Dr. Klaus Miller Board member with divisional responsibility				Dr. Michael Pickel Board member with divisional responsibility			
	2015	2016	2016 (Min)	2016 (Max)	2015	2016	2016 (Min)	2016 (Max)
Fixed remuneration	356.1	356.1	356.1	356.1	356.1	356.1	356.1	356.1
Fringe benefits	3.7	1.2	1.2	1.2	12.0	12.6	12.6	12.6
<b>Total</b>	<b>359.8</b>	<b>357.3</b>	<b>357.3</b>	<b>357.3</b>	<b>368.1</b>	<b>368.7</b>	<b>368.7</b>	<b>368.7</b>
One-year variable remuneration	288.0	288.0	0.0	576.0	288.0	288.0	0.0	576.0
Multi-year variable remuneration	226.9	223.1	(328.9)	415.1	227.4	224.2	(327.8)	416.2
Bonusbank 2015 (2019 <sup>1</sup> )/ 2016 (2020 <sup>1</sup> )	96.0	96.0	(360.0)	192.0	96.0	96.0	(360.0)	192.0
Share Awards 2015 (2020 <sup>1</sup> )/ 2016 (2021 <sup>1</sup> ) <sup>2</sup>	96.0	96.0	0.0	192.0	96.0	96.0	0.0	192.0
Dividend on share awards for 2014	34.9	0.0	0.0	0.0	35.4	0.0	0.0	0.0
Dividend on share awards for 2015	0.0	31.1	31.1	31.1	0.0	32.2	32.2	32.2
<b>Total</b>	<b>874.7</b>	<b>868.4</b>	<b>28.4</b>	<b>1,348.4</b>	<b>883.5</b>	<b>880.9</b>	<b>40.9</b>	<b>1,360.9</b>
Service cost <sup>4</sup>	87.3	89.0	89.0	89.0	147.1	123.4	123.4	123.4
<b>Total remuneration</b>	<b>962.0</b>	<b>957.4</b>	<b>117.4</b>	<b>1,437.4</b>	<b>1,030.6</b>	<b>1,004.3</b>	<b>164.3</b>	<b>1,484.3</b>

<sup>1</sup> Year of payment

<sup>2</sup> Maximum value when awarded, amount paid out dependent upon the share price in the year of payment and the dividends paid until such time.

<sup>3</sup> In the case of Mr. Althoff the dividend also refers to share awards from his work as a senior executive at Hannover Re.

<sup>4</sup> For details of the service cost see the table "Pension commitments" on page 119.

**Claude Chèvre**

Board member with divisional responsibility

**Jürgen Gräber**Board member with divisional responsibility  
Coordinator of worldwide property & casualty  
reinsurance

2015	2016	2016 (Min)	2016 (Max)	2015	2016	2016 (Min)	2016 (Max)
380.0	380.0	380.0	380.0	445.1	445.1	445.1	445.1
12.8	13.6	13.6	13.6	18.1	7.1	7.1	7.1
<b>392.8</b>	<b>393.6</b>	<b>393.6</b>	<b>393.6</b>	<b>463.2</b>	<b>452.2</b>	<b>452.2</b>	<b>452.2</b>
342.0	342.0	0.0	684.0	360.0	360.0	0.0	720.0
252.6	260.6	(368.5)	488.6	285.9	281.5	(408.5)	521.5
114.0	114.0	(401.1)	228.0	120.0	120.0	(450.0)	240.0
114.0	114.0	0.0	228.0	120.0	120.0	0.0	240.0
24.6	0.0	0.0	0.0	45.9	0.0	0.0	0.0
0.0	32.6	32.6	32.6	0.0	41.5	41.5	41.5
<b>987.4</b>	<b>996.2</b>	<b>25.1</b>	<b>1,566.2</b>	<b>1,109.1</b>	<b>1,093.7</b>	<b>43.7</b>	<b>1,693.7</b>
150.1	150.1	150.1	150.1	109.2	95.1	95.1	95.1
<b>1,137.5</b>	<b>1,146.3</b>	<b>175.2</b>	<b>1,716.3</b>	<b>1,218.3</b>	<b>1,188.8</b>	<b>138.8</b>	<b>1,788.8</b>

**Roland Vogel**

Chief Financial Officer

2015	2016	2016 (Min)	2016 (Max)
422.9	422.9	422.9	422.9
14.8	17.0	17.0	17.0
<b>437.7</b>	<b>439.9</b>	<b>439.9</b>	<b>439.9</b>
288.0	288.0	0.0	576.0
230.4	224.8	(303.2)	416.8
96.0	96.0	(336.0)	192.0
96.0	96.0	0.0	192.0
38.4	0.0	0.0	0.0
0.0	32.8	32.8	32.8
<b>956.1</b>	<b>952.7</b>	<b>136.7</b>	<b>1,432.7</b>
62.8	53.8	53.8	53.8
<b>1,018.9</b>	<b>1,006.5</b>	<b>190.5</b>	<b>1,486.5</b>

Allocation	Ulrich Wallin Chief Executive Officer	Sven Althoff Board member with divisional responsibility
in EUR thousand	2015	2016
Fixed remuneration	596.4	596.4
Fringe benefits	14.8	14.2
<b>Total</b>	<b>611.2</b>	<b>610.6</b>
One-year variable remuneration <sup>1</sup>	649.2	717.6
Multi-year variable remuneration	613.4	916.2
Bonus bank 2011/2012	233.0	204.8
Share Awards 2011	0.0	608.8
Stock participation rights 2009 (2013–2019 <sup>2</sup> )	72.7	0.0
Stock participation rights 2010 (2015–2020 <sup>3</sup> )	307.7	102.6
Stock participation rights 2011 (2016–2021 <sup>4</sup> )	0.0	0.0
<b>Total</b>	<b>1,873.8</b>	<b>2,244.4</b>
Service cost <sup>5</sup>	167.1	144.2
<b>Total remuneration</b>	<b>2,040.9</b>	<b>2,388.6</b>
<b>Total remuneration</b>	<b>1,308.3</b>	<b>740.0</b>

Allocation	Dr. Klaus Miller Board member with divisional responsibility	Dr. Michael Pickel Board member with divisional responsibility
in EUR thousand	2015	2016
Fixed remuneration	356.1	356.1
Fringe benefits	3.7	1.2
<b>Total</b>	<b>359.8</b>	<b>357.3</b>
One-year variable remuneration <sup>1</sup>	384.0	390.0
Multi-year variable remuneration	170.6	461.5
Bonus bank 2011/2012	126.0	117.3
Share Awards 2011	0.0	329.3
Stock participation rights 2009 (2013–2019 <sup>2</sup> )	0.0	0.0
Stock participation rights 2010 (2015–2020 <sup>3</sup> )	44.6	14.9
Stock participation rights 2011 (2016–2021 <sup>4</sup> )	0.0	0.0
<b>Total</b>	<b>914.4</b>	<b>1,208.8</b>
Service cost <sup>5</sup>	87.3	89.0
<b>Total remuneration</b>	<b>1,001.7</b>	<b>1,297.8</b>
<b>Total remuneration</b>	<b>1,208.5</b>	<b>1,305.9</b>
<b>Total remuneration</b>	<b>1,355.6</b>	<b>1,429.3</b>

<sup>1</sup> This refers in each case to payment of the variable remuneration for the previous year. Remuneration for seats with Group bodies that is counted towards the variable remuneration accrues in the year of occurrence. The company's Supervisory Board only decides on the final amount paid out for the 2016 financial year after the remuneration report has been drawn up.

<sup>2</sup> Stock appreciation rights were awarded in 2009, exercise option at the discretion of the Executive Board until 31 December 2019 in the following tranches: 40% from 2012, 60% from 2013, 80% from 2014, 100% from 2015 onwards.

<sup>3</sup> Stock appreciation rights were awarded in 2010, exercise option at the discretion of the Executive Board until 31 December 2020 in the following tranches: 60% from 2015, 80% from 2016, 100% from 2017 onwards.

<sup>4</sup> Stock appreciation rights were awarded to Mr. Althoff in 2011 as a senior executive, exercise option discretionary until 31 December 2021 in the following tranches: 60% from 2016, 80% from 2017, 100% from 2018 onwards.

<sup>5</sup> For details of the service cost see the table "Pension commitments" on page 119. The service cost for 2015 includes a past service cost of EUR 704,500 for Mr. Althoff.

**Claude Chèvre**

Board member with divisional responsibility

**Jürgen Gräber**Board member with divisional responsibility  
Coordinator of worldwide property & casualty  
reinsurance

2015	2016	2015	2016
380.0	380.0	445.1	445.1
12.8	13.6	18.1	7.1
<b>392.8</b>	<b>393.6</b>	<b>463.2</b>	<b>452.2</b>
399.0	463.8	500.4	534.6
21.6	173.8	518.7	676.0
21.6	117.3	163.5	159.5
0.0	56.5	0.0	427.3
0.0	0.0	87.6	0.0
0.0	0.0	267.6	89.2
0.0	0.0	0.0	0.0
<b>813.4</b>	<b>1,031.2</b>	<b>1,482.3</b>	<b>1,662.8</b>
150.1	150.1	109.2	95.1
<b>963.5</b>	<b>1,181.3</b>	<b>1,591.5</b>	<b>1,757.9</b>

**Roland Vogel**

Chief Financial Officer

2015	2016
422.9	422.9
14.8	17.0
<b>437.7</b>	<b>439.9</b>
379.1	430.1
313.8	560.3
149.1	126.0
0.0	389.7
30.9	0.0
133.8	44.6
0.0	0.0
<b>1,130.6</b>	<b>1,430.3</b>
62.8	53.8
<b>1,193.4</b>	<b>1,484.1</b>

## **Sideline activities of the members of the Executive Board**

The members of the Executive Board require the approval of the Supervisory Board to take on sideline activities. This ensures that neither the remuneration granted nor the time required for this activity can create a conflict with their responsibilities on the Executive Board. If the sideline activities involve seats on supervisory boards or comparable control boards, these are listed and published in the Annual Report of Hannover Rück SE. The remuneration received for such seats at Group companies and other board functions is deducted when calculating the variable bonus and shown separately in the table of total remuneration.

## **Retirement provision**

### **Defined benefit pension commitment**

#### **(appointment before 2009)**

The contracts of members of the Executive Board first appointed prior to 2009 contain commitments to an annual retirement pension calculated as a percentage of the pensionable fixed annual remuneration (defined benefit). The target pension is at most 50% of the monthly fixed salary payable on reaching the age of 65. A non-pensionable fixed remuneration component was introduced in conjunction with the remuneration structure applicable from 2011 onwards.

### **Defined contribution pension commitment**

#### **(appointment from 2009 onwards)**

The commitments given to members of the Executive Board from 2009 onwards are based on a defined contribution scheme.

A Board member who has reached the age of 65 and left the company's employment receives a life-long retirement pension. The amount of the monthly retirement pension is calculated according to the reference date age (year of the reference date less year of birth) and the funding contribution on the reference date. The annual funding contribution for these contracts is paid by the company in the amount of a contractually specified percentage of the pensionable income (fixed annual remuneration as at the contractually specified reference date).

In both contract variants (i.e. defined benefit and defined contribution) other income received while drawing the retirement pension is taken into account pro rata or in its entirety under certain circumstances (e.g. in the event of incapacity for work or termination of the service contract before reaching the age of 65).

### **Provision for surviving dependants**

If the Board member dies during the period of the service contract, the surviving spouse – or alternatively the eligible children – shall be entitled to continued payment of the fixed monthly salary for the month in which the Board member dies and the six months thereafter, at most until termination of the service contract. If the member of the Executive Board dies after pension payments begin, the surviving spouse and alternatively the dependent children shall receive continued payment of the retirement pension for the month of death and the following six months.

The widow's pension amounts to 60% of the retirement pay that the Board member received or would have received if he had been incapacitated for work at the time of his death.

An orphan's pension shall be granted in the amount of 15% – in the case of full orphans 25% (final-salary pension commitment) or 30% (contribution-based pension commitment) – of the retirement pay that the Board member received or would have received on the day of his death if the pensionable event had occurred owing to a permanent incapacity for work.

### **Adjustments**

The following parameters are used for adjustments to retirement, widow's and orphan's benefits: the price index for the cost of living of all private households in Germany (contracts from 2001 onwards) or the price index for the cost of living of four-person households of civil servants and higher-income salaried employees (contracts from 1997 to 2000).

Current pensions based on the commitments given from 2009 onwards (defined contribution commitment) are increased annually by at least 1% of their most recent (gross) amount.

### **Pension payments to former members of the Executive Board**

The pension payments to former members of the Executive Board and their surviving dependants, for whom 16 (16) pension commitments existed, totalled EUR 1.6 million (EUR 1.6 million) in the year under review. The projected benefit obligation of the pension commitments to former members of the Executive Board amounted to altogether EUR 25.3 million (EUR 25.0 million).

Name in EUR thousand	Financial year	Attainable annual pension (age 65)	DBO 31.12.	Personnel expense	Annual funding contribution <sup>1</sup>	Premium
<b>Ulrich Wallin</b>	<b>2016</b>	<b>229.1</b>	<b>5,370.1</b>	<b>144.2</b>	–	–
	2015	229.1	4,532.7	167.1	–	–
<b>Sven Althoff<sup>2,3</sup></b>	<b>2016</b>	<b>92.2</b>	<b>1,185.3</b>	<b>37.4</b>	<b>25%</b>	<b>70.0</b>
	2015	91.9	898.9	750.6	25%	42.1
<b>Claude Chèvre<sup>4</sup></b>	<b>2016</b>	<b>118.4</b>	<b>731.7</b>	–	<b>39.5%</b>	<b>150.1</b>
	2015	118.1	–	–	39.5%	150.1
<b>Jürgen Gräber</b>	<b>2016</b>	<b>182.5</b>	<b>3,731.1</b>	<b>95.1</b>	–	–
	2015	162.8	3,094.8	109.2	–	–
<b>Dr. Klaus Miller<sup>4</sup></b>	<b>2016</b>	<b>53.3</b>	<b>557.8</b>	–	<b>25%</b>	<b>89.0</b>
	2015	53.0	–	–	25%	87.3
<b>Dr. Michael Pickel</b>	<b>2016</b>	<b>135.5</b>	<b>2,509.2</b>	<b>123.4</b>	–	–
	2015	129.0	1,875.6	147.1	–	–
<b>Roland Vogel<sup>2,5</sup></b>	<b>2016</b>	<b>94.3</b>	<b>1,623.5</b>	<b>53.8</b>	<b>25%</b>	<b>105.7</b>
	2015	94.0	1,524.2	62.8	25%	103.7
<b>Total</b>	<b>2016</b>	<b>905.3</b>	<b>15,708.7</b>	<b>453.9</b>		<b>414.8</b>
Total	2015	877.9	11,926.2	1,236.8		383.2

<sup>1</sup> Percentage of pensionable income (fixed annual remuneration as at the contractually specified reference date).

<sup>2</sup> Mr. Althoff and Mr. Vogel were first granted a pension commitment prior to 2001 on the basis of their service to the company prior to their appointment to the Executive Board; the earned portion of the commitment from the Unterstützungs kasse 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. Measurement under IAS 19 consequently uses the defined benefit method. 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.

<sup>3</sup> The personnel expenditure in 2015 includes a past service cost of EUR 704,500. The guaranteed interest rate is 3.25%.

<sup>4</sup> Measured under IAS 19 as a defined benefit commitment for the first time as at 31 December 2016. The guaranteed interest rate is 2.25%.

<sup>5</sup> The guaranteed interest rate is 3.25%.

## Remuneration of the Supervisory Board

The remuneration of the Supervisory Board is determined by the Annual General Meeting of Hannover Rück SE and regulated by the Articles of Association.

In accordance with § 14 of the Articles of Association as amended on 30 May 2016 and the resolution of the Annual General Meeting on 7 May 2013, the members of the Supervisory Board receive fixed annual remuneration of EUR 30,000 per member in addition to reimbursement of their expenses. Furthermore, each member of the Supervisory Board receives variable remuneration measured according to the average earnings per share (EPS) of the company over the past three financial years preceding the Annual General Meeting at which the actions of the Supervisory Board for the last of these three years are ratified. The variable remuneration amounts to EUR 330 for each EUR 0.10 average earnings per share (EPS) of the company. The measurement of this performance-based remuneration component according to the average earnings per

share of the last three financial years ensures that the variable remuneration is geared to sustainable corporate development. The variable remuneration is limited to an annual maximum of EUR 30,000. The Chairman of the Supervisory Board receives twice the aforementioned remuneration amounts and the Deputy Chairman of the Supervisory Board receives one-and-a-half times the said amounts.

In addition, the members of the Finance and Audit Committee formed by the Supervisory Board receive remuneration of EUR 15,000 for their committee work and the members of the Standing Committee formed by the Supervisory Board receive remuneration of EUR 7,500. In this case, too, the Chairman of the Committee receives twice and the Deputy Chairman one-and-a-half times the stated amounts. No remuneration is envisaged for the Nomination Committee.

Members who have only belonged to the Supervisory Board or one of its Committees for part of the financial year receive the remuneration pro rata temporis.

All the members of the Supervisory Board receive an attendance allowance of EUR 1,000 for their participation in each meeting of the Supervisory Board and the Committees in addition to the aforementioned remuneration. If a meeting of the Supervisory Board and one or more committee meetings fall on the same day, the attendance allowance for this day is only paid once in total.

#### Individual remuneration received by the members of the Supervisory Board

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Name in EUR thousand <sup>1</sup>	Function	Type of remuneration	2016	2015
<b>Herbert K. Haas<sup>2</sup></b>	Chairman of the • Supervisory Board • Standing Committee • Finance and Audit Committee • Nomination Committee	Fixed remuneration Variable remuneration Remuneration for committee work Attendance allowances	100.0 92.5 85.0 18.0	100.0 82.7 85.0 13.0
			<b>295.5</b>	<b>280.7</b>
<b>Dr. Klaus Sturany</b>	Deputy Chairman of the Supervisory Board Member of the Standing Committee	Fixed remuneration Variable remuneration Remuneration for committee work Attendance allowances	45.0 44.0 7.5 5.0	45.0 40.1 7.5 6.0
			<b>101.5</b>	<b>98.6</b>
<b>Wolf-Dieter Baumgartl<sup>2</sup></b>	Member of the • Supervisory Board • Standing Committee • Finance and Audit Committee • Nomination Committee	Fixed remuneration Variable remuneration Remuneration for committee work Attendance allowances	50.0 46.2 22.5 14.0	50.0 41.4 22.5 11.0
			<b>132.7</b>	<b>124.9</b>
<b>Frauke Heitmüller<sup>3</sup></b>	Member of the Supervisory Board	Fixed remuneration Variable remuneration Remuneration for committee work Attendance allowances	30.0 29.4 – 4.0	30.0 26.7 – 4.0
			<b>63.4</b>	<b>60.7</b>
<b>Otto Müller<sup>3</sup></b>	Member of the Supervisory Board	Fixed remuneration Variable remuneration Remuneration for committee work Attendance allowances	30.0 29.4 – 4.0	30.0 26.7 – 4.0
			<b>63.4</b>	<b>60.7</b>
<b>Dr. Andrea Pollak</b>	Member of the • Supervisory Board • Nomination Committee	Fixed remuneration Variable remuneration Remuneration for committee work Attendance allowances	30.0 29.4 – 4.0	30.0 26.7 – 4.0
			<b>63.4</b>	<b>60.7</b>
<b>Dr. Immo Querner<sup>2</sup></b>	Member of the Supervisory Board	Fixed remuneration Variable remuneration Remuneration for committee work Attendance allowances	50.0 46.2 10.0 7.0	50.0 41.4 10.0 7.0
			<b>113.2</b>	<b>108.4</b>

<b>Dr. Erhard Schipporeit</b>	Member of the • Supervisory Board • Finance and Audit Committee	Fixed remuneration	30.0	30.0
		Variable remuneration	29.4	26.7
		Remuneration for committee work	15.0	15.0
		Attendance allowances	9.0	7.0
			<b>83.4</b>	<b>78.7</b>
<b>Maike Sielaff<sup>3</sup></b>	Member of the Supervisory Board	Fixed remuneration	30.0	30.0
		Variable remuneration	29.4	26.7
		Remuneration for committee work	–	–
		Attendance allowances	4.0	4.0
			<b>63.4</b>	<b>60.7</b>
<b>Total</b>			<b>979.9</b>	<b>934.1</b>

<sup>1</sup> Amounts excluding reimbursed VAT

<sup>2</sup> Including supervisory board remuneration and remuneration for committee work as well as advisory board remuneration received from entities affiliated with the company

<sup>3</sup> Employee representatives

The individualised presentation of the remuneration shows the expense charged to the financial year in question. Since the remuneration for a financial year becomes due at the end of the Annual General Meeting that ratifies the acts of the Supervisory Board for the financial year, the relevant reserve allocations for the variable remuneration are recognised allowing for any fractional amounts. Value-added tax payable upon the remuneration is reimbursed by the company.

In the year under review no payments or benefits were granted to members of the Supervisory Board in return for services provided individually outside the committee work described above, including for example consulting or mediation services, with the exception of the remuneration paid to employee representatives on the basis of their employment contracts.

## Loans to members of the management boards and contingent liabilities

In order to avoid potential conflicts of interest, Hannover Rück SE or its subsidiaries may only grant loans to members of the Executive Board or Supervisory Board or their dependants with the approval of the Supervisory Board.

In 2016 no loan relationships existed with members of the Executive Board or Supervisory Board of Hannover Rück SE, nor did the company enter into any contingent liabilities for members of the management boards.

## Securities transactions and shareholdings (directors' dealings)

Dealings in shares, options and derivatives of Hannover Rück SE effected by members of the Executive Board or Supervisory Board of Hannover Re or by other persons with managerial functions who regularly have access to insider information concerning the company and who are authorised to take major business decisions – as well as such dealings conducted by certain persons closely related to the aforementioned individuals – in excess of EUR 5,000 are to be reported pursuant to § 15a Securities Trading Act (WpHG). No such reportable transactions took place in the 2016 financial year.

Members of the Supervisory Board and Executive Board of Hannover Rück SE as well as their spouses or registered partners and first-degree relatives hold less than 1.0% of the issued shares. The total holding as at 31 December 2016 amounted to 0.004% (0.004%) of the issued shares, i.e. 4,625 (4,585) shares.

## Remuneration of staff and senior executives

### Structure and system

The remuneration scheme for senior executives below the Executive Board (management levels 2 and 3) and for key function holders in Germany belonging as a matter of principle to the ranks of senior executives consists of a fixed annual salary and a system of variable remuneration. This is comprised of a short-term variable remuneration component, the annual cash bonus, and a long-term share-based remuneration component, the Share Award Plan. This variable remuneration has been uniformly applied worldwide since 1 January 2012 to all Group senior executives (i. e. Managing Directors, Directors and General Managers). As part of the reorientation of the remuneration system for senior executives the Share Award Plan of the Executive Board was consciously extended to include management levels 2 and 3. Given that at the same time the stock appreciation rights plan for senior executives was cancelled with effect from the 2012 allocation year, this means that a uniform share-based remuneration component has been maintained for the Executive Board and senior executives alike.

Members of staff on the levels of Chief Manager, Senior Manager and Manager are also able to participate in a variable remuneration system through the Group Performance Bonus (GPB). The Group Performance Bonus (GPB) is a remuneration model launched in 2004 that is linked to the success of the company. This tool is geared to the minimum return on equity of 750 basis points above the risk-free interest rate and the return on equity actually generated. For those participating in the GPB 14.15 monthly salary payments are guaranteed; a maximum of 16.7 salary payments is attainable. Since its launch the maximum amount of the GPB was paid out in 2006, 2007, 2009, 2010, 2012, 2013, 2014 and 2015.

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 P & C and L & H business groups and individual targets. The weighting of the elements is dependent upon whether responsibility is carried in a treaty/regional department or in a service department. In the treaty/regional departments the measurement of the variable remuneration is based on weightings of 20% for Group net income, 40% for goal attainment in the respective P & C or L & H business group and 40% for individual goal attainment.

In service departments the variable remuneration is based on Group net income and individual targets with a corresponding weighting of 40% and 60%. The degree of goal attainment is defined for both the Group net income and the business groups. Individual targets and the degree of goal attainment are agreed between the senior executive and their supervisor.

The Group net income is measured by the three-year average return on equity (RoE) of the Hannover Re Group above the risk-free interest rate. Goal attainment is calculated as follows: for each individual financial year of the last three financial years it is calculated by how many percentage points the RoE of the Hannover Re Group exceeds the risk-free interest rate. The average of these three differences determines the three-year average RoE above the risk-free interest rate. The risk-free interest rate is the average market interest rate over the past five years for 10-year German government bonds.

If the three-year average RoE above the risk-free interest rate reaches the expected minimum return on equity of 750 basis points, goal attainment stands at 85%. Goal attainment of 100% is recorded at 882 basis points. The maximum possible goal attainment is 200%. A lower limit is placed on goal attainment of -50% (penalty) for management level 2 (Managing Director) and 0% for management level 3 (Director and General Manager).

**Group of participants and total number of eligible participants in variable remuneration systems** M 80

Valid: 31 December 2016

Participants	Variable remuneration system	Number of eligible participants in the variable remuneration system
Managing Director	Management level 2	<b>Hannover Re Group</b> All 158 Group senior executives worldwide receive a cash bonus upon corresponding goal attainment and participate in the Share Award Plan.
Director	Management level 3	
General Manager		
Chief Manager	Group Performance Bonus (GPB)	<b>Head office Hannover</b> 703 staff (excl. seconded employees) out of the altogether 1,349 at Hannover head office (incl. 92 senior executives) are GPB-eligible.
Senior Manager		
Manager		

The measurement of the business group targets – which in the case of the treaty/regional departments accounts for 40% of overall goal attainment – is geared to the actual value created. The Intrinsic Value Creation (IVC) of the division encompassing the relevant area of responsibility was used as a one-year measurement basis for the last time to calculate the variable remuneration for the 2015 financial year. From 2016 onwards this indicator has been replaced with the Excess Return on Capital Allocated (xRoCA) of the business group (Property & Casualty (P & C) and Life & Health (L & H)) encompassing the relevant area of responsibility. The xRoCA describes the IVC in relation to the allocated capital and shows the relative excess return generated above and beyond the weighted cost of capital. Goal attainment of 100% exists if the P & C xRoCA reaches 2% or the L & H xRoCA reaches 3%. Negative performance contributions are excluded; the minimum goal attainment is 0%. The maximum possible goal attainment is 150%.

Individual targets are agreed and measured for a period of one year. The degree of goal attainment is between 0% and 100%.

#### **Amount and payment of variable remuneration for senior executives**

The overall degree of goal attainment determines the amount of variable remuneration including share awards. On management level 2 (Managing Director) 60% of the variable remuneration is paid out annually in cash and 40% is granted in the form of share awards. On management level 3 (Director and General Manager) the variable remuneration is split into 65% cash payment and 35% granted as share awards.

On management level 3 (Director and General Manager) the minimum variable remuneration amounts to EUR 0 on the premise that the degree of attainment for all goals is 0%. For management level 2 (Managing Director) in treaty/regional departments the minimum limit for the variable remuneration is set at -10% if the degree of goal attainment for Group net income is -50% while at the same time goal attainment of 0% is determined for the divisional targets and individual targets. For management level 2 (Managing Director) in service departments -20% of the variable remuneration is possible as the lower limit, if the degree of goal attainment for Group net income is -50% and at the same time goal attainment of 0% is determined for the individual targets.

In view of the fact that outperformance of up to 200% is possible for Group net income and up to 150% for business group targets, a maximum total degree of goal attainment of 140% can be attained in both treaty/regional departments and service departments. Given outperformance of all targets, a maximum of 140% of the variable remuneration can therefore be attained on management levels 2 and 3.

#### **Allocation and payment of share awards to senior executives**

The total number of share awards allocated is determined according to the value per share of Hannover Re. This value is arrived at from the average of the closing prices of the shares in a period extending from 20 trading days before to 10 trading days after the meeting of the Supervisory Board at which the consolidated financial statement is approved. The number of share awards is established by dividing the specified portion of the total bonus (40% or 35%) by the value per share, rounded up to the next full share.

Following expiry of a vesting period of four years the value of one Hannover Re share calculated at the disbursement date is paid out for each share award. The value of the Hannover Re share is again determined from the average of the closing prices of the shares in a period from 20 trading days before to 10 trading days after the meeting of the Supervisory Board that approves the consolidated financial statement. In addition, a sum in the amount of the dividend is paid out for each share award, insofar as dividends were distributed to shareholders. The level of the dividend payment is the sum total of all dividends per share paid out during the period of the share awards multiplied by the number of share awards.

In the case of the allocation and payment of share awards to participants in the Share Award Plan who are located abroad, the rate of exchange used to convert the average share price is the average of the relevant exchange rate in a period from 20 trading days before to 10 trading days after the meeting of the Supervisory Board that approves the consolidated financial statement. For payment of the dividend to participants in the Share Award Plan who are located abroad, the rate of exchange used to convert the dividend per share is the average of the relevant exchange rate in a period from 20 trading days before to 10 trading days after the Annual General Meeting that approves the dividend payment for the financial year just ended.

The cash bonus for the 2015 financial year was paid out in June 2016. The share awards for the 2015 financial year were also allocated in June 2016; they will be paid out in the spring of 2020 including dividends paid for the 2015, 2016, 2017 and 2018 financial years.

# Outlook

## Forecast

- Solid prospects for 2017 in property and casualty reinsurance despite protracted soft market phase
- Further increase in profitability anticipated in life and health reinsurance.
- Return on investment target of 2.7% for assets under own management
- Group net income expected to exceed EUR 1 billion

## Economic developments

### Global economy

Economic experts expect 2017 to bring a modest pickup in cyclical momentum: in its year-end forecast the Kiel Institute for the World Economy anticipates growth of 3.6% for the global economy in 2017, which is 0.5 percentage points stronger than in 2016.

The upturn in developed economies will gain somewhat in momentum, albeit at a tempered pace. Growth will be supported by a continued accommodative monetary policy, fiscal stimuli and a slight strengthening of demand in developing and emerging nations. While China probably will not quite be able to sustain its growth rates, expansion in the other emerging economies will likely continue to accelerate. The recent

rebound in commodity prices should also play a part here. In Russia output is expected to pick up again, whereas in Brazil the economic recovery will still take a while to materialise.

The risks to the economy of recent years remain in play: the US administration has announced numerous changes – giving rise to considerable uncertainties on both the economic and political fronts. Not only that, elections are upcoming in several major European nations that may give rise to fundamental shifts in economic policy. It also remains unclear to date how the United Kingdom will navigate its withdrawal from the European Union. Quite apart from that, monetary policy and low interest rates are now reaching their limits: especially in the financial sector, for example, the negative repercussions of ultra-low interest rates are making themselves felt.

Growth in gross domestic product (GDP)

M 81

in %	2016 (forecast from previous year)	2016 (provisional calculation)	2017 (forecast)
<b>Economic areas</b>			
World economy	3.4	3.5	3.6
Eurozone	1.7	1.7	1.7
<b>Selected countries</b>			
United States	2.8	1.6	2.5
China	6.5	6.6	6.4
India	7.2	7.1	6.8
Japan	1.0	1.0	1.2
Germany	2.2	1.9	1.7

Source: Kiel Institute for the World Economy

### United States

The economic implications of the transition in the White House are hard to evaluate. Although the new President's election manifesto has hitherto remained largely unspecific, clearly expansionary signs can be discerned when it comes to fiscal policy. Substantial tax cuts have been promised and extensive spending programmes announced. Rising prices on US stock markets in the weeks following the election testify to the high expectations

of capital market players for US fiscal policy in 2017. At the same time, it must be assumed that the US administration will take a critical stance on any strengthening of international trade ties. Such a protectionist approach may – in combination with emerging institutional uncertainty – lead to economic constraints in the medium term. For the current 2017 financial year, however, growth is expected to expand by 0.9 percentage points to 2.5%.

## Europe

The Eurozone economy looks set to maintain its moderate course and expand by 1.7%, as in the previous year. France should be able to stabilise its weak growth (+1.2%) and Spain will likely continue its expansion at a slower pace (+2.6%). In Italy the prospects of further reforms to overcome sluggish growth have deteriorated with the rejection of constitutional reform. Growth here will probably remain on a stubbornly low level (+0.8%). Greece is expected to experience a continued recovery (+1.9%), whereas the pace of growth in the United Kingdom will continue to soften (+1.2%). Bearing in mind that parliamentary elections are upcoming this year in four of the five largest EU Member States (Germany, France, Italy, Netherlands), the direction of economic policy is clouded by uncertainties.

Consumer prices are expected to rise by 1.2% in the Eurozone and will hence remain on a low level despite the upward trend. The jobless numbers continue to trend lower: unemployment is forecast to retreat by 0.6 percentage points to 9.5%.

## Germany

The German economy is poised for further growth, which will be driven by domestic stimuli. The experts at the Kiel Institute for the World Economy anticipate a growth rate of 1.7% for the current year with a rising tendency. The business community will step up its capital expenditures because prospects are encouraging – with capital utilisation already above average – and financing conditions remain attractive. Above all, construction investments are likely to grow at a rapid tempo. Private consumption will also continue to rise in view of the favourable state of the labour market and the considerable increases in federal state transfer payments. Overall, though, the pace of expansion will slow somewhat because the purchasing power of private households will shrink as the oil price moves higher. In this environment public budgets will continue to generate surpluses against a backdrop of appreciably higher revenues and expenditures.

Assisted by improved price competitiveness, exports will continue to pick up. Most notably, rising demand is anticipated from the United States – depending on developments affecting trade agreements –, the Eurozone and emerging markets. On the other hand, the lively domestic economy will lead to significant growth rates in imports. Business conditions will deteriorate slightly in this regard.

The upswing on the labour market will probably continue and go hand-in-hand with further wage increases. The Kiel Institute for the World Economy expects the jobless rate to fall by a further 0.2 percentage points in 2017 to 5.9%.

## China, India, Japan

While the Chinese government was initially successful in reviving the economy in 2016 through accommodative monetary and fiscal policy actions, economic expansion is expected to slow over the coming years. This can be attributed to the continued existence of far-reaching structural problems such as inefficient capital allocation and an inadequate capacity for innovation. These can be obscured at most in the short term through state intervention. What is more, the already very high indebtedness of companies and local government will become even more bloated. For 2017 growth of 6.4% is anticipated, while for 2018 the figure is put at 5.9%.

India's economy continues to live up to expectations with its good development and will generate growth of 6.8% in 2017, a figure marginally lower than in the previous year. In Japan economic growth remains weak despite the boost of massive economic stimulus. Growth will probably come in slightly higher than in the previous year at 1.2%, albeit trending lower for the year thereafter.

## Capital markets

In 2017 financial markets are again likely to see promising growth opportunities but also an abundance of volatility. Most significantly, geopolitical risks, protectionism and populism have the potential for adverse repercussions in some areas. Attention will be focused on two main arenas: firstly, Europe, where the Brexit vote has still to be translated into political and economic practice, and secondly, the United States, where the handover of power in the White House is highly anticipated.

The European Central Bank's decision to maintain its low interest rate policy on a historically low level and purchase bonds over an even more extended timeframe is intended to support the Eurozone economy and bring inflation closer to the ECB's 2% target. An increasingly large chorus of voices is, however, warning about the growing risks of this policy for the economy and for markets.

The US Federal Reserve, by contrast, will move further away from an expansionary interest rate policy and press ahead with its cycle of rate hikes. This will likely be reflected in a continued strong US dollar. The Federal Reserve's next steps and communications are awaited with considerable anticipation, as it seeks to walk a fine line between the potential need for additional interest rate moves and the risk of depriving other markets of cash flows through precisely these measures.

International bond markets will again see below-average and increasingly divergent interest rate levels in 2017. In the relevant currency areas for our company we expect yield curves to slope steeply upwards. For the most part, government bonds with higher risk premiums issued by countries of the European Monetary Union that have been the focus of so much attention of late should continue to stabilise. The prevailing credit cycle in the United States, which has proven its durability, and the stabilisation of emerging markets will continue to shape

the economic environment. This may potentially be positively influenced by the ending of the austerity drives undertaken by several industrial nations and by a worldwide upswing in private consumption.

Compared to the soaring valuations of US shares, which already performed exceptionally well in 2016, equities in Europe and emerging markets are lagging somewhat behind the cycle. The extent to which the effects of Donald Trump's election to the office of US President – which had already been factored into valuations – will be reversed by negative geopolitical or trade-restrictive measures remains one of the key questions for 2017, the implications of which will not leave Europe and emerging economies untouched.

All in all, 2017 will be distinguished by a very particular combination of geopolitical and monetary policy uncertainty, which will manifest itself in the form of increased volatility on financial markets. In view of this outlook, broad diversification within the investment portfolio will continue to be of considerable importance in 2017.

## Insurance industry

The insurance industry will still find itself operating in a challenging environment in 2017. Faced with the low interest rate environment and diminished returns, market players are increasingly focusing their attention on efficiency, shoring up profitability and innovation. The Brexit decision in the United Kingdom and the new administration in the United States will bring additional uncertainties. One positive signal coming out of the US is the Federal Reserve's move to turn its back on expansionary monetary policy. In Europe inflation is tracking away from zero into positive territory, which at least in the medium term holds the promise of an improved general environment. Despite the numerous challenges, experts foresee another stable trend in the current year for premiums in the insurance industry.

Responding to tighter solvency requirements, insurers have further optimised their capital and risk management. In conjunction with the increasingly widespread adoption of Enterprise Risk Management (ERM), they and large undertakings are tending to take out their (re)insurance protection on a centralised basis in order to be able to manage their growth and risks in an integrated manner. This, too, will likely add to the pressure for consolidation in the market.

Given the pressure on margins and surplus capacities, reinsurers will increasingly shift the focus of their products towards the quality factor. This also corresponds to the growing need for individualised solutions. In so doing, they will create tailor-made insurance products that at the same time actively support the strategic objectives and growth targets of their business partners.

The current changes on the insurance market present not only risks but also growth opportunities. An increasing need to protect against climate change, elevated political risks and the ever more important category of cyber risks are creating numerous entry points for the industry to launch new offerings. Digitisation will likely prove a particularly significant driver of change going forward. Not only will it open up new avenues for loss prevention, for example, it will also prompt the industry to cooperate more closely in future with partners from the technology sector. Cooperative ventures for the development of special underwriting tools and short-term policies and even extending as far as the cultivation of joint new business segments are possible.

## Property & Casualty reinsurance

### Overview

Overall, there has been little change in the situation in worldwide property and casualty reinsurance compared to the previous year. The significant competition in the markets has been sustained. It remains the case that the supply of reinsurance capacity far outstrips supply. These factors were once again instrumental in shaping the treaty renewals as at 1 January 2017, the date when 64% of our property and casualty reinsurance portfolio (excluding facultative business and structured reinsurance) was renegotiated. We were satisfied with the outcome on the whole, even though the anticipated rate stability has not yet set in across the board. A further contributory factor here was the continued absence of market-changing large losses in the year under review. Nevertheless, 2016 did see increased loss activity compared to the previous year, with positive implications for prices at least on a local level. All in all, though, the state of the international property and casualty reinsurance markets remains challenging.

Based on our excellent ratings, our long-standing customer relationships and our profit-oriented underwriting policy, we are well placed to handle the soft market conditions. Hannover Re continues to practise its systematic cycle management combined with rigorous underwriting discipline and our company trusts in a broadly diversified portfolio of high-quality existing business, complemented by opportunities that may arise in niche and specialty lines. The treaty renewals as at 1 January 2017 presented a range of attractive opportunities to expand the portfolio, above all in North America, in credit and surety business and in the area of cyber covers. We also enjoyed a surge in demand for reinsurance solutions designed to provide solvency relief, hence enabling us to book strong premium growth in Europe as well as in North and Latin America.

Expectations for the development of individual markets and lines of property and casualty reinsurance are described in greater detail below, broken down into the areas of Board responsibility.

## Property & Casualty reinsurance: Forecast development for 2017

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	Volume <sup>1</sup>	Profitability <sup>2</sup>
Target markets		
North America <sup>3</sup>	↗	+
Continental Europe <sup>3</sup>	↘	+/-
Specialty lines worldwide		
Marine	↘	+/-
Aviation	↘	-
Credit, surety and political risks	↗	+/-
UK, Ireland, London market and direct business	↗	+/-
Facultative reinsurance	↘	+
Global reinsurance		
Worldwide treaty reinsurance <sup>3</sup>	↘	+/-
Catastrophe XL (Cat XL)	↗	-
Structured reinsurance and insurance-linked securities	↗	+/-

<sup>1</sup> In EUR

<sup>2</sup> ++ = significantly above the cost of capital

+ = above the cost of capital

+/- = on a par with the cost of capital

- = below the cost of capital

<sup>3</sup> All lines with the exception of those reported separately

## Target markets

### North America

In North America we expect to see further mergers and acquisitions in the current year, both in the insurance and reinsurance market. We do not, however, anticipate any adverse repercussions on our market position. Thanks to our long-standing, close customer relationships and financial strength, we even expect to tap into greater opportunities as a result. It is our expectation that in 2017 we will be able to further profitably enlarge our portfolio. Our focus here will be on existing client accounts.

In view of the heightened sensitivity that now exists in the market towards potential loss events, demand for cyber covers is likely to continue growing.

Although it remains competitive, the North American primary insurance market has proven to be rather stable; for the most part, therefore, we were similarly highly satisfied with the outcome of the treaty renewals as at 1 January 2017. The destructive forest fires of the previous year in Canada led to appreciable rate increases for loss-impacted programmes. Yet even for treaties that had been spared losses it proved possible to push through moderate price increases. The rate level for hurricane-exposed business in the United States was stable or slightly higher.

All in all, we expect to be able to profitably expand our portfolio in North America. In the treaty renewals as at 1 January the premium volume rose by 6.5% on an underwriting-year basis. As things currently stand, we expect to see sustained competition

in this segment in the renewals as at 1 June and 1 July 2017 – the time of year when catastrophe XL covers, in particular, are renegotiated. On the whole, our North American business is nevertheless expected to deliver a slightly higher premium volume in the current financial year.

### Continental Europe

In **Germany**, the largest single market within our Continental Europe segment, we were able to assert our prominent position in the treaty renewals. Yet here, too, competition is fierce. On the whole, though, reinsurance rates remained stable. Although improved conditions were obtained in industrial fire insurance – which had recorded heavy losses –, these are still not adequate. We were therefore selective in our acceptances here. In motor business, our most important single line, we expect to further grow our premium income.

When it comes to covers for cyber risks and natural hazards risks, we expect to see rising demand – not least on account of the increased concentration of these risks, which are also insured against so-called extended natural hazards.

The premium volume for our domestic market is expected to remain broadly unchanged in 2017.

In the **other markets of Continental Europe** the picture was a mixed one: The treaty renewals in the Netherlands and Northern European countries passed off very successfully and we were able to expand our portfolios. Business in Central and Eastern Europe, on the other hand, proved to be highly competitive in the treaty renewals as at 1 January 2017, with rates coming under sustained pressure. Nevertheless, we also obtained higher prices in some markets, including for example in Poland.

For Continental Europe as a whole we expect to book a modestly lower premium volume.

### Specialty lines worldwide

#### Marine

In marine reinsurance we expect the pace of rate reductions to slow in the 2017 financial year; this was already evident in the treaty renewals as at 1 January 2017. Even over the medium term, however, the market environment for our ceding companies is unlikely to change. The losses recorded in recent years have significantly eaten into reinsurers' margins and lent added impetus towards a bottoming out in prices. In view of the fact that our customers have also seen a contraction in premium income, we anticipate a reduced premium volume in 2017.

#### Aviation

Aviation reinsurance is experiencing a considerable excess supply of insurance capacity. Against this backdrop, market rates fell by up to 10 percent in the treaty renewals. While we moved to scale back our proportional acceptances, in particular, non-proportional business – in which the price erosion was more moderate – remained stable. We do not expect any

positive effects for the rate trend to make themselves felt in the 2017 financial year. With this in mind, we shall continue to write our business highly selectively and expect to book a reduced premium volume for our portfolio.

#### Credit, surety and political risks

The slowdown in economic growth and the moderate rise in loss ratios in emerging markets will impact our business. While the risk appetite of primary insurers has increased steadily in recent years, we now expect modestly higher reinsurance cessions on account of the more demanding capital requirements associated with Solvency II. Although conditions will still be under pressure in the current 2017 financial year, it will likely only be slight. For this reason, we anticipate an expanding premium volume and an improved profit contribution.

#### United Kingdom, Ireland, London Market and direct business

In general terms, we are looking at declining reinsurance rates for 2017 – especially in the property lines – on account of sustained competition. In addition, we anticipate a further deterioration in conditions on the primary insurance side. In UK non-proportional motor business, however, we are benefiting from stable rates and growth in the underlying business. We are also expecting to tap into opportunities for new business, especially from the new start-up syndicates at Lloyd's. Further risk selection and increased diversification should serve to boost the portfolio quality of our direct business, which is again expected to deliver stable earnings in 2017. In the treaty renewals as at 1 January 2017 we largely preserved our portfolio thanks to our established customer relationships. For the current year we expect to book a slightly higher premium volume because we have acted on various market opportunities, for example in cyber business.

#### Facultative reinsurance

In facultative reinsurance we have focused even more heavily on our core business. Agency business and primary insurance activities were reallocated within the Hannover Re Group. This realignment enables us to cater even better to our customers' changing facultative reinsurance needs. This also includes a stronger orientation towards regional entities, which enables us to be even more attentive to the requirements of our customers. With this in mind, we anticipate new business potential and continued growth in the coming years. The investments that we have made in recent years in the areas of cyber risks and renewables will also lead to attractive premium growth in the future.

For the current financial year we anticipate a stable premium volume and sustained good results in our specialty lines. In this context we expect to be able to offset declining premium with new business.

#### Global reinsurance

##### Worldwide treaty reinsurance

Insurance markets in the **Asia-Pacific region** look set to stay on their growth track in 2017. Thanks to the establishment of a branch in India and the superb regional positioning of our other locations in Asia and Australia, we should continue to be able to act on opportunities for profitable growth.

Profits and the quality of conditions for reinsurers in **Japanese** business are particularly dependent on the development of natural catastrophe events. We expect our Japanese liability portfolio to show considerable improvement in the current financial year.

As far as the development of our reinsurance business in **China** is concerned, it is our expectation that over the medium term ceding companies will not focus exclusively on their growth targets, but will also pay significantly greater attention to profitability.

This will require improved risk management, actuarial pricing and the expansion of the existing portfolio into new business fields. Hannover Re will focus more heavily on achieving its margins and hence on cyclical underwriting and it will drive forward the diversification of its existing portfolio.

The region of **South and Southeast Asia** should deliver continued growth, albeit at a slightly slower pace than in the previous year. Our branch in Malaysia is pressing ahead with the expansion of its niche business, with the resulting premium expected to more than make up for possible reductions in the existing portfolio.

**Australia and New Zealand** remain challenging markets. By further stepping up our contacts with strategic target customers, we are nevertheless able to position ourselves successfully in the competitive environment and generate further growth opportunities. Our basic premise continues to be adherence to a strictly profit-oriented underwriting policy while at the same time boosting gross premium income.

All in all, we expect to see significant growth in reinsurance treaties that cover specific needs of our customers and are only placed with selected reinsurers such as Hannover Re.

In **South Africa** the risk-based solvency regime SAM (Solvency Assessment and Management) will be adopted for the insurance industry in the course of 2017. We anticipate a stable premium trend for our reinsurance portfolio and specialty business in the current year.

The market and the placement of reinsurance cessions are just as fiercely competitive in **Latin America** as they are in other regions. Based on our exceptionally good market position and

our outstanding financial strength, we expect prices in the main renewals as at 1 July 2017 to come under less pressure in view of natural catastrophe events recorded in 2016 such as the earthquake in Ecuador and Hurricane Matthew. Despite the challenging state of the market, we were able to keep our portfolio stable thanks to our focus on Latin America as a whole. In Argentina – one of the largest markets in Latin America – we expect to see a continued business-friendly policy. A similar tendency is also likely in Brazil. To this extent, we are confident of generating further profitable growth for our portfolio from Latin American markets in the current financial year by pursuing our selective underwriting policy.

Hannover Re expects demand for the coverage of **agricultural risks** to continue rising: the increasing need for agricultural commodities and foodstuffs as well as the growing prevalence of extreme weather events are generating stronger demand for reinsurance covers, particularly in emerging and developing markets. At Hannover Re we engage both in traditional reinsurance and in intensified cooperation with our customers and partners on the development of new original insurance tools. In this regard, we see further growth potential for index-linked products as part of direct and indirect insurance concepts in emerging and developing economies. Owing to the discontinuation of a small number of large treaties, however, we expect premium income to contract in 2017.

Rates in our **retakaful business** are likely to remain stable or decline in the current financial year. New business opportunities should open up in niche areas such as motor insurance riders or in credit and surety business. Overall, the premium volume generated should be on a par with the previous year.

#### Catastrophe XL (Cat XL)

Although the inflow of capacity from capital markets into **natural catastrophe business** has slowed appreciably, the market is still overshadowed by an oversupply of reinsurance capacity. The current soft market phase will only come to an end when the majority of market players reach a level of profitability that is insufficient – whether through high loss expenditures, inadequate reserving levels or influencing effects from the capital market. Price reductions recorded in the 1 January 2017 treaty renewals were offset by increased shares in profitable programmes, with the result that premium growth of 2.9 percent was booked for the renewed portfolio. Premium income is expected to remain stable for the full year.

#### Structured reinsurance and insurance-linked securities

Owing to the implementation of risk-based models for calculating solvency requirements not only within but also outside the European Union, demand for **structured reinsurance** has surged sharply higher. The key driver here continues to be the growing integration of reinsurance into insurers' risk management as a means of offsetting the increasingly exacting capital requirements placed upon them. In addition, the increasing pressure on the profit margins of our customers around the world is creating a greater need for tailor-made reinsurance solutions that can optimise the costs of reinsurance. For the current year we are expecting a substantial increase in premium.

In the area of **insurance-linked securities (ILS)** we expect to see steadily growing demand. Investors are seeking a negative or minimal correlation with other financial investments and hence the diversification that this brings. What is more, the market for insurance risks is perceived by investors as relatively attractive compared to other investments. We are responding to this market situation with a strong emphasis on service, offering individually tailored products – from collateralised reinsurance to catastrophe bonds – for property and life reinsurance risks. Over the coming years we expect our ILS activities to deliver a positive and consistently rising profit contribution.

## Life & Health reinsurance

As an internationally operating reinsurer, we are active in all areas of life and health reinsurance. For the most part we assume far more than the pure underwriting risk for our customers. We are closely involved in the process at an early stage in order to work together on jointly identifying their exact reinsurance needs.

### Life & Health reinsurance: Forecast development for 2017

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	Volume <sup>1</sup>	Profitability <sup>2</sup>
Financial Solutions	↗	++
Risk Solutions		
Longevity	↗	+/-
Mortality	↗	+/-
Morbidity	↗	+/-

<sup>1</sup> In EUR

<sup>2</sup> ++ = significantly above the cost of capital

+ = above the cost of capital

+/- = on a par with the cost of capital

- = below the cost of capital

In Germany the implications of the launch of the new long-term care insurance system for LTC products are awaited with keen anticipation. Starting 1 January 2017, instead of the familiar three care levels there are now five grades of care that facilitate a more detailed assessment of the need for assistance. In the year under review we explored this innovation at length and made preparations to support our customers with (re)insurance solutions tailored to the new long-term care insurance scheme. In addition, the requirements of Solvency II and the establishment of the supplementary reserves needed for life products promising guaranteed returns in excess of an official reference rate (Zinszusatzreserve) will pose further major challenges for German life insurers in the coming year. In the rest of Europe, too, we anticipate rising demand for reinsurance solutions that deliver capital relief and/or solvency optimisation. In the financial year just ended we developed concepts for this purpose in order to implement customised solutions for customers. In the United Kingdom it is our expectation that the market will again prove to be extremely competitive in the year ahead and that the price level will remain under strain owing to considerable international competition. The US financial solutions market is known for its marked innovation potential. As a market leader, we expect to build on the good development to date in the coming financial year. We are confident of our ability to cover the continued growth in demand among US life insurers for reinsurance solutions designed to provide capital and reserve relief.

In the Asian life (re)insurance market we are very optimistic that we can build on the success of the year just ended. Particularly in health reinsurance business, we are a sought-after and capable partner for customers who benefit from our international experience.

Demand in longevity business is expected to remain brisk around the world in 2017. Life expectancy will continue to rise, while at the same time regulatory authorities are imposing more rigorous reporting and capital management requirements. This creates a challenge for the insurance industry. Given that we are equipped with more than 20 years of know-how in this market segment, we are well placed to play a central role in the global development of the longevity (re)insurance market going forward.

The challenges that lie ahead in life and health reinsurance remain diverse in nature and their effects on the market will be complex. Along with the anticipated business-specific developments in the various markets described above, we expect demand for automated, paperless underwriting processes to grow even more vigorously than in 2016. In view of the positive feedback received to date and already existing firm inquiries, we are confident of implementing our automated underwriting system with numerous additional customers in the coming year.

Furthermore, the dynamic advances being made in technology and digitisation, in particular, will in future enable, for example, the transfer of insurance data in real time to the (re) insurer. In this way it will be possible to calculate premiums and risk loadings on a person-specific level and hence make life insurance part of active living. We shall press ahead with our intensive exploration of these developments in order to help shape future innovations that combine lifestyle and wellness with life insurance.

## Investments

With an eye to the outcome of the US presidential election and the stabilising tendencies in Europe, coupled with political and economic uncertainties around the world, the conservative posture of substantial parts of our investment portfolio will be preserved. Nevertheless, irrespective of the sovereign debt issue, the improved economic outlook will also be reflected in appropriate risk-taking. Our emphasis on broad diversification will be retained unchanged. By way of a neutral modified duration we shall ensure that the interest rate risk is tightly managed.

The enlargement of the asset portfolio is expected to have a positive effect on investment income, although the average return will decline owing to persistently low interest rates. The interest rate increases observed since the end of the period under review in our main currency areas could bring some

relief in this respect. In view of the low returns on more secure investments, we shall continue to invest in products offering attractive credit spreads and selectively expand our portfolio in the areas of alternative investments and real estate.

In view of the high capital requirements and possibly increased volatility on equity markets, which are in part liquidity-driven, we are for the time being adopting a more cautious stance on additional new exposures to listed equities given the prevailing valuation levels.

## Outlook for the full 2017 financial year

In the current financial year, despite the challenging environment in reinsurance business and on the capital market, we anticipate a very good overall result for the Hannover Re Group. Bearing in mind developments both in property and casualty and in life and health reinsurance, we expect to post low single-digit percentage growth in gross premium – based on constant exchange rates – for our total portfolio in the current financial year.

In property and casualty reinsurance we expect to modestly increase the premium volume based on unchanged exchange rates. The primary driver here is the strong demand in structured reinsurance business. Yet opportunities to expand the portfolio also opened up in North America and in credit and surety business in the context of the treaty renewals as at 1 January 2017. We shall nevertheless stand by our selective underwriting policy, under which in large part we write only business that satisfies our margin requirements. Thanks to our good ratings and long-standing stable customer relationships, we expect another solid outcome from the treaty renewals during the year.

Even though market conditions in property and casualty reinsurance will likely remain soft, we anticipate a good underwriting result. This is conditional upon major loss expenditure coming in within the bounds of our expectations. In terms of our targeted combined ratio, we continue to aim for a figure under 96%. The EBIT margin for property and casualty reinsurance should amount to at least 10%.

In our worldwide life and health reinsurance business we expect to book moderate organic gross premium growth for the current year after adjustment for exchange rate effects. The forecast EBIT margins for the individual reporting categories remain unchanged at the following target levels: for financial solutions and longevity business an EBIT margin of at least 2% is expected. The planning for mortality and morbidity business envisages an unchanged EBIT margin of at least 6%. We also continue to aim for a Value of New Business in excess of EUR 220 million.

With regard to the IVC targets that we use to map economic value creation, we anticipate a minimum 2% xRoCA for property and casualty reinsurance and at least 3% xRoCA for life and health reinsurance.

In view of the expected positive cash flow that we generate from the technical account and our investments, our asset portfolios should – based on stable exchange rates – continue to grow. We are looking to deliver a return on investment of 2.7%.

For 2017 we anticipate Group net income of more than EUR 1 billion. This is subject to the proviso that the burden of major losses does not significantly exceed the budgeted level of EUR 825 million and that there are no exceptional distortions on capital markets.

## Events after the reporting date

Matters of special significance occurring after the closing date for the consolidated financial statements are described in section 8.10 of the notes “Events after the balance sheet date” on page 235.

