

*somewhat  
different*

Hannover Rück SE

2016

# Solvency and Financial Condition Report

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# Contents

Executive Summary .....	5
A. Business and Performance .....	9
A.1 Business .....	9
A.1.1 Business Model.....	9
A.1.2 Income and key transactions.....	10
A.1.3 Headquarters, supervisors and auditors.....	10
A.1.4 Group structure .....	11
A.1.5 Material related undertakings .....	12
A.2 Underwriting Performance.....	13
A.3 Investment Performance .....	15
A.4 Performance of other activities .....	18
A.4.1 Other income and expenses.....	18
A.4.2 Significant leasing agreements.....	19
A.5 Any other information .....	19
B. System of Governance .....	20
B.1 General information on the System of Governance .....	20
B.1.1 Governance structure.....	20
B.1.2 Remuneration policy .....	24
B.1.3 Related party transactions.....	25
B.2 Fit and proper requirements .....	26
B.2.1 Requirements.....	26
B.2.2 Description of requirements.....	26
B.2.3 Evaluation process.....	27
B.3 Risk Management System including the Own Risk and Solvency Assessment .....	29
B.3.1 Risk management system including risk management function .....	29
B.3.2 Own Risk and Solvency Assessment (ORSA).....	33
B.4 Internal Control System.....	34
B.4.1 Elements of the internal control system.....	34
B.4.2 Compliance function.....	34
B.5 Internal Audit Function .....	37
B.6 Actuarial Function .....	38
B.7 Outsourcing.....	40

B.8	Any other information .....	40
B.8.1	Evaluating the appropriateness of the system of governance .....	40
B.8.2	Other information .....	40
C.	Risk Profile .....	41
C.1	Underwriting risk .....	42
C.1.1	Underwriting risk Property and Casualty .....	42
C.1.2	Reserve risk .....	44
C.1.3	Risk mitigation techniques Property & Casualty .....	44
C.1.4	Underwriting risk Life and Health .....	46
C.2	Market risk .....	49
C.3	Credit risk .....	52
C.4	Liquidity risk .....	53
C.5	Operational risk .....	54
C.6	Other material risks .....	56
C.6.1	Emerging risks .....	56
C.6.2	Strategic risks .....	56
C.6.3	Reputational risks .....	56
D.	Valuation for Solvency Purposes .....	58
D.1	Assets .....	62
D.1.1	Intangible assets R0030 .....	62
D.1.2	Deferred tax assets R0040 .....	62
D.1.3	Property, plant & equipment held for own use R0060 .....	63
D.1.4	Property (other than for own use) R0080 .....	63
D.1.5	Participations and related undertakings R0090 .....	64
D.1.6	Equities R0100 .....	64
D.1.7	Bonds R0130 .....	65
D.1.8	Collective Investments Undertakings R0180 .....	68
D.1.9	Derivatives R0190 .....	69
D.1.10	Deposits other than cash equivalents R0200 .....	70
D.1.11	Other investments R0210 .....	70
D.1.12	Reinsurance recoverables R0270 .....	71
D.1.13	Deposits to cedants R0350 .....	71
D.1.14	Insurance and intermediaries receivables R0360 .....	72
D.1.15	Reinsurance receivables R0370 .....	72

D.1.16	Receivables (trade, not insurance) R0380.....	73
D.1.17	Cash and cash equivalents R0410.....	73
D.1.18	Any other assets, not elsewhere shown R0420.....	73
D.2	Technical Provisions .....	75
D.2.1	Technical Provisions Property & Casualty.....	77
D.2.2	Technical Provisions Life & Health .....	82
D.3	Other Liabilities .....	87
D.3.1	Provisions other than technical provisions R0750 .....	87
D.3.2	Pension benefit obligations R0760 .....	87
D.3.3	Deposits from reinsurers R0770 .....	88
D.3.4	Deferred tax liabilities R0780.....	88
D.3.5	Derivatives R0790.....	89
D.3.6	Financial liabilities other than debts owed to credit institutions R0810.....	89
D.3.7	Insurance & intermediaries payable R0820 .....	90
D.3.8	Reinsurance payables R0830 .....	90
D.3.9	Payables (trade, not insurance) R0840 .....	91
D.3.10	Subordinated liabilities in BOF R0870 .....	91
D.3.11	Any other liabilities, not elsewhere shown R0880.....	92
D.4	Alternative methods for valuation .....	93
D.4.1	Gross Rental Method .....	93
D.4.2	Projected Unit Credit Method .....	93
D.4.3	Market value determination for assets which are not listed on a stock exchange .....	93
D.5	Any other information .....	95
E.	Capital Management .....	96
E.1	Own Funds.....	96
E.1.1	Management of own funds .....	96
E.1.2	Tiering.....	96
E.1.3	Basic own funds .....	96
E.1.4	Transferability .....	99
E.2	Solvency Capital Requirement and Minimum Capital Requirement .....	100
E.2.1	Solvency Capital Requirement .....	100
E.2.2	Minimum Capital Requirement .....	101
E.3	Use of the duration-based equity risk sub-module in the calculation of the Solvency Capital Requirement .....	101

E.4	Differences between the standard formula and any internal model used .....	102
E.4.1	The internal model .....	102
E.4.2	Calculation techniques for the purposes of integrating results into the standard formula.....	104
E.4.3	Comparison between the internal model and the standard formula .....	105
E.5	Non-compliance with the Minimum Capital Requirement and non-compliance with the Solvency Capital Requirement.....	106
E.6	Any other information .....	106
	Abbreviations and glossary .....	107
	Quantitative Reporting Templates .....	109

# Executive Summary

## Key figures

in TEUR	2016
<b>Solvency II Balance Sheet</b>	
Assets	40,342,621
Technical Provisions	22,563,480
Other Liabilities	6,208,935
Excess of Assets over Liabilities	11,570,206
<b>Eligible Own Funds</b>	
Tier 1 Basic Own Funds (unrestricted)	10,967,220
Tier 1 Basic Own Funds (restricted)	543,095
Tier 2 Basic Own Funds	1,153,380
Eligible Own Funds (SCR)	12,663,694
<b>Capital requirements</b>	
Solvency Capital Requirement	5,229,274
Minimum Capital Requirement	2,353,173
<b>Coverage Ratio</b>	
Ratio of Eligible Own Funds to SCR (Solvency Ratio)	242%
Ratio of Eligible Own Funds to MCR	509%

Hannover Rück SE (hereinafter referred to as “Hannover Rück” or “the company”) fulfils the minimum and solvency capital requirements (hereinafter referred to as MCR and SCR) stipulated by the supervisory authorities as at the reporting date of 31 December 2016 and in the financial year 2016. The solvency ratio was above 200% during the entire financial year.

The principles used to determine the solvency ratio are explained in this document. Chapter D describes the valuation principles used to determine the eligible own funds, and Chapter E those used to determine the SCR, in particular with regard to the use of the partial internal capital model.

According to legal requirements, the Solvency II balance sheet was audited by KPMG AG Wirtschaftsprüfungsgesellschaft.

This report constitutes a mandatory publication pursuant to Section 40 of the Insurance Supervision Act (VAG). Please note that, for the most part, the information contained herein is already included in the Hannover Re-Group Annual Report and in the Hannover Rück Individual Annual Report.

## A. Business and Performance

Hannover Rück transacts all lines of Property & Casualty and Life & Health reinsurance. Its global presence and activities across all lines of reinsurance business allows the company to achieve an efficient 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. (hereinafter “E+S Rück”).

The 2016 financial year passed off highly satisfactorily for Hannover Rück. With an overall decline in claims burdens, a positive underwriting income (HGB) of TEUR 336,799 was made possible. The largest contributions to this income came from the marine, aviation and transport insurance divisions with TEUR 145,035, and fire and other property insurance with TEUR 138,402.

We are extremely pleased with the development of our investments during the reporting period. There was a healthy development in ordinary investment income. Although it was lower than the previous year’s level, our expectations were met in full. This was increasingly a reflection of the difficult interest rate environment. Nonetheless, as a result of the constantly low interest rate level, we were able to partially offset the reduced opportunities for returns with increased income from dividends.

Details on the Business and Performance and be found in chapter A.

## B. System of Governance

Hannover Rück has an effective system of governance, which provides for sound and prudent management. Written guidelines are in place for all significant business events. The key functions pursuant to Section 26 and Sections 29-31 of the Insurance Supervision Act (VAG) have been set up, entrusted with the tasks described and equipped with appropriate resources.

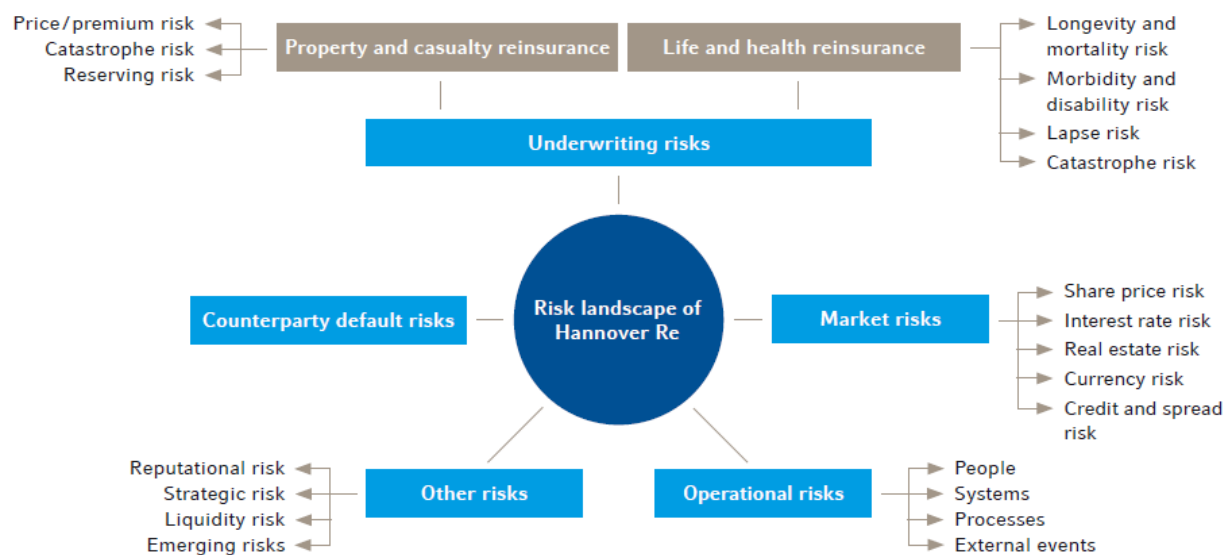
The Executive Board has established committee, which supports the assessment of the system of governance. Based on the assessment conducted by the committee, the Executive Board has reached the conclusion that the system of governance of Hannover Rück is, in terms of its type, scope and complexity, appropriate for the inherent risks of its business activities.

The individual elements of the System of Governance at Hannover Rück are explained in Section B.

## C. Risk Profil

In the context of its business operations Hannover Rück enters into a broad variety of risks. These risks are deliberately accepted, steered and monitored. They specifically concern underwriting risks pertaining to Property & Casualty, Life & Health, as well as capital market risks, liquidity risks and counterparty default risks. Operational, strategic and reputational risks also arise in the course of business operations. We describe the cause of these risks and how we deal with them in Section C. We also explain how we handle potential future risks (emerging risks).

**Risk landscape of Hannover Rück**



Hannover Rück quantifies risks with the aid of the internal capital model. For the purposes of calculating the Solvency Capital Requirements, Hannover Rück is authorised to use a partial internal model, which comprises all risks apart from operational risks. The Solvency Capital Requirements at the reporting date of 31 December 2016 are illustrated in the following table.

**Solvency Capital Requirement (SCR) – Risk categories**  
in TEUR

Solvency Capital Requirement	<b>2016</b>
Underwriting risk - Property & Casualty	3,342,705
Underwriting risk - Life & Health	2,116,551
Market risk	3,989,154
Counterparty default risk	295,362
<b>Diversification</b>	<b>3,264,174</b>
<b>Basic SCR</b>	<b>6,479,598</b>
Operational risk (Solvency II standard formula)	541,684
<b>Total risk (pre-tax)</b>	<b>7,021,282</b>
Deferred tax	1,792,008
<b>Total risk (post-tax)</b>	<b>5,229,274</b>

At present, our most significant risks are credit and spread risks within market risks, reserve and catastrophe risks within underwriting risks Property & Casualty as well as mortality risks within the underwriting risks Life & Health. With regard to mortality risks, pension portfolios are also affected in principle by improvements in mortality rates, and mortality portfolios by deteriorations in mortality rates.



## D. Valuation for Solvency Purposes

For the purposes of calculating the eligible own funds, Hannover Rück values the assets and liabilities pursuant to the provisions of Sections 74 et seq. of the Insurance Supervision Act (VAG).

The valuation for Solvency purposes is set in principle at the fair value (market value). Insofar as IFRS values appropriately reflect the fair value, they shall be applied.

Technical provisions pursuant to Solvency II differentiate significantly from the definition of provisions pursuant to the German Commercial Code (HGB), both in terms of structure and in relation to the calculations. Chapter “D.2 Technical Provisions” contains a comparison of German Commercial Code (HGB) and Solvency II.

Hannover Rück does not currently use any adjustments to the interest yield curves prescribed by the EIOPA, and no transitional measures pursuant to Sections 80, 82, 351 and 352 of the Insurance Supervision Act (VAG).

## E. Capital Management

Hannover Rück endeavours at all times to maintain a Solvency Ratio of at least 180%, and thus exceeds the requirements of 100% stipulated by the supervisory authority. In addition, a threshold value of 200% has been defined. If the Solvency Ratio falls below this threshold value Hannover Rück will adopt capital measures aimed at either strengthening the company's equity or reducing the risk capital, or both.

The Solvency Ratio is continuously monitored. Any changes are taken into account as part of planning, and potential changes in the Solvency Ratio, which can be caused by larger transactions, are examined in advance. During the financial year 2016, there was no breach of the threshold value of 200%. Further information on the calculation of the Solvency Ratio can be found in Section E.

Own funds in the Solvency II balance sheet consist of basic own funds, which comprise the excess of assets over liabilities and subordinated loans. Ancillary own funds were not in use by Hannover Rück as at 31 December 2016.

Over 90 per cent of all available capital is assigned to the highest quality level (tier 1). This equity class continued to grow as a result of ordinary business activities.

Hannover Rück uses an approved partial internal model for the purposes of calculating the Solvency Capital Requirement (SCR). The individual risk categories are aligned with the risk modules of the standard formula. Only the module for operational risk is calculated using the Solvency II standard formula. The partial internal model is applied in a broad range of company management and decision-making processes. The future development of Solvency- and Minimum Capital Requirements are forecast at regular intervals as part of the planning process.

## A. Business and Performance

### A.1 Business

#### A.1.1 Business Model

With a gross premium volume of TEUR 16,353,622, 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.

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.

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.

### A.1.2 Income and key transactions

In this section and in subsequent sections of Chapter A, particulars are furnished in accordance with the provisions of the German Commercial Code (Handelsgesetzbuch, HGB).

The underwriting result (before adjustments in the equalisation reserve) for the business as a whole increased in the year under review to TEUR 336,799. TEUR 8,724 was withdrawn from the equalisation reserve and similar provisions.

The 2016 financial year passed off highly satisfactorily for Hannover Rück, even if the gross premiums for the company fell by 15.7% to TEUR 11,917,076 overall. The level of retained premium fell slightly to 72.4%. Net premium earned for own account fell by 16.1% to TEUR 8,534,768.

Catastrophe losses in the reporting year were characterised by a number of major earthquakes, but also storms. Added to this were man-made losses. Overall, catastrophe losses for Hannover Rück were in line with expectations. The largest single loss for our account was the earthquake in Ecuador with a net burden of TEUR 46,256. Furthermore, with Hurricane Matthew coming after years of moderate storm seasons in the USA and the Caribbean, a destructive event was registered once again. The resulting burden for our company amounted to TEUR 39,804. The overall net burden to Hannover Rück from major losses amounted to TEUR 340,154.

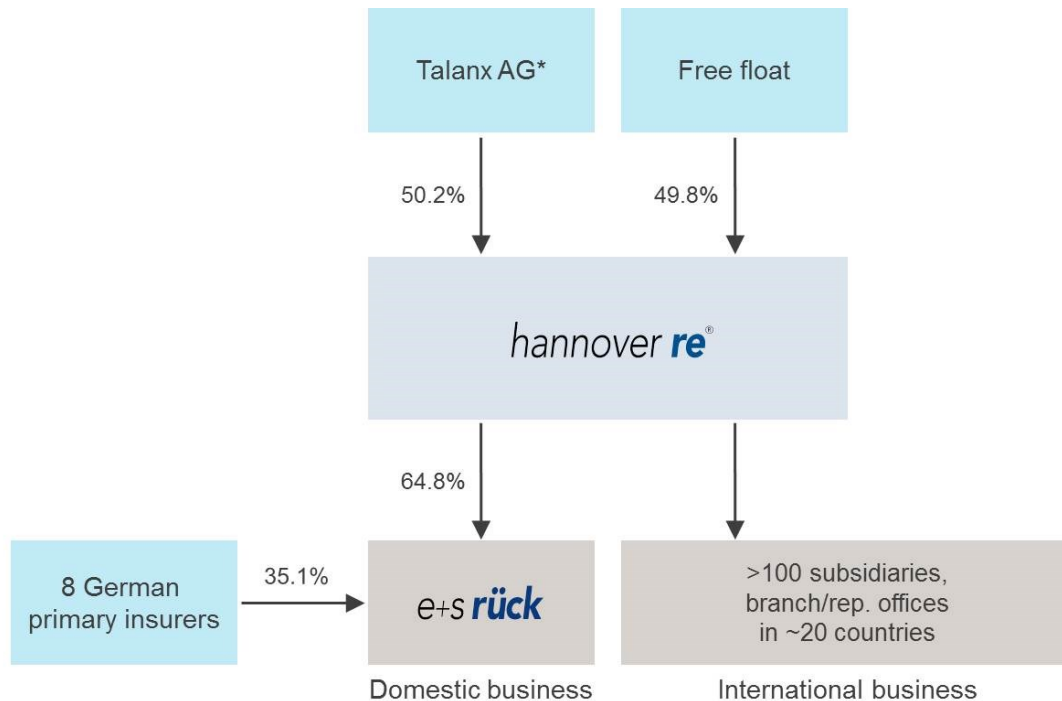
At TEUR 1,197,898, the figure for ordinary investment income including deposit interest received was well below the previous year's level, which can largely be attributed to last year's one-off effect of special dividends from our investment holding companies, as well as reduced income from funds withheld and contract deposits due to expiring contracts at our China branch. This decline is compensated by the accompanying elimination of interest expenses on funds from these very same contracts, which is reflected in other income and charges. Net gains from the disposal of capital investments were realised to the tune of TEUR 132,927. Write-downs of just TEUR 34,942 were made on capital investments. These were mainly attributable to bearer bonds from current assets. These write-downs stood in contrast to increased write-ups on capital investments written down in previous periods, which amounted to TEUR 25,875. Overall, we achieved net investment income of TEUR 1,286,952.

Income from ordinary business activities rose to TEUR 1,241,772. The year under review closed with an annual net profit of TEUR 949,232.

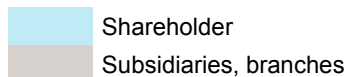
### A.1.3 Headquarters, supervisors and auditors

Hannover Rück is a European stock corporation, Societas Europaea (SE), with its headquarters located in Karl-Wiechert-Allee 50, 30625 Hannover, Germany and has been entered in the Commercial Register of the District Court of Hannover under the number HR Hannover B 6778. A rounded 50.2% of Hannover Rück shares are held by Talanx AG, Hannover, which in turn is majority-owned – with an interest of 79% – by HDI Haftpflichtverband der Deutschen Industrie V.a.G. (HDI), Hannover.

**Hannover Rück as a sub-group of the Talanx Group**



\* Majority shareholder HDI V.a.G.



Hannover Rück as well as Talanx and HDI are subject to the Federal Financial Supervisory Authority (BaFin), located in Graurheindorfer Straße 108, 53117 Bonn, Germany, postbox 1253, 53002 Bonn, Germany, phone +049 22 8/41 08-0, fax +049 22 8/41 08-15 50, e-mail [poststelle@bafin.de](mailto:poststelle@bafin.de), De-Mail [poststelle@bafin.de-mail.de](mailto:poststelle@bafin.de-mail.de). Talanx AG is located in Riethorst 2, 30659 Hannover, Germany.

The Group auditor appointed for Hannover Rück within the meaning of Section 318 of the German Commercial Code (HGB) is KPMG AG Wirtschaftsprüfungsgesellschaft (KPMG AG), located in Osterstraße 40, 30159 Hannover, Germany.

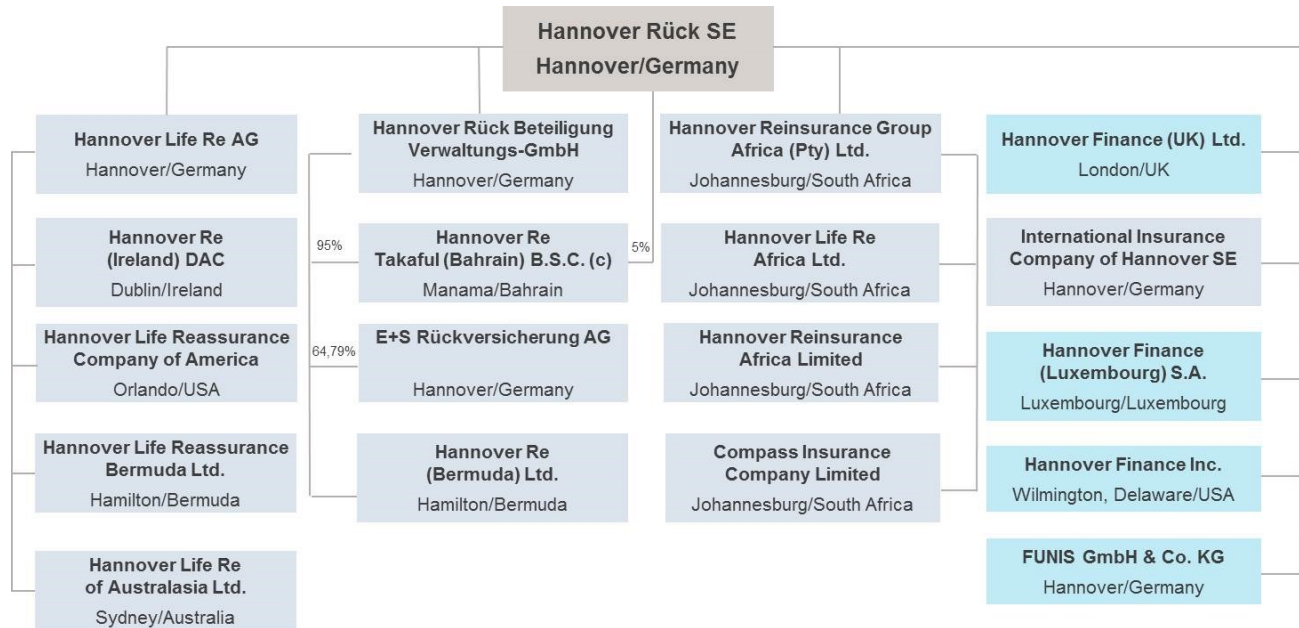
**A.1.4 Group structure**

This report refers to Hannover Rück SE on a stand alone basis. As Hannover Rück SE also operates as the parent company of a group, we also provide information in this section about the group structure.

Hannover Rück and its subsidiaries (collectively referred to as the “Hannover Re Group” or “Hannover Re”) transact all lines of Property & Casualty and Life & Health reinsurance. We are present on all continents.

The company's network consists of more than 100 subsidiaries, affiliates, branches and representative offices worldwide with a total workforce of 2,893. The Group's German business is conducted by the subsidiary E+S Rückversicherung AG.

**Subsidiaries of Hannover Rück**



Unless otherwise stated, the shareholding is 100 %.

- Insurance companies
- Non-insurance companies

**A.1.5 Material related undertakings**

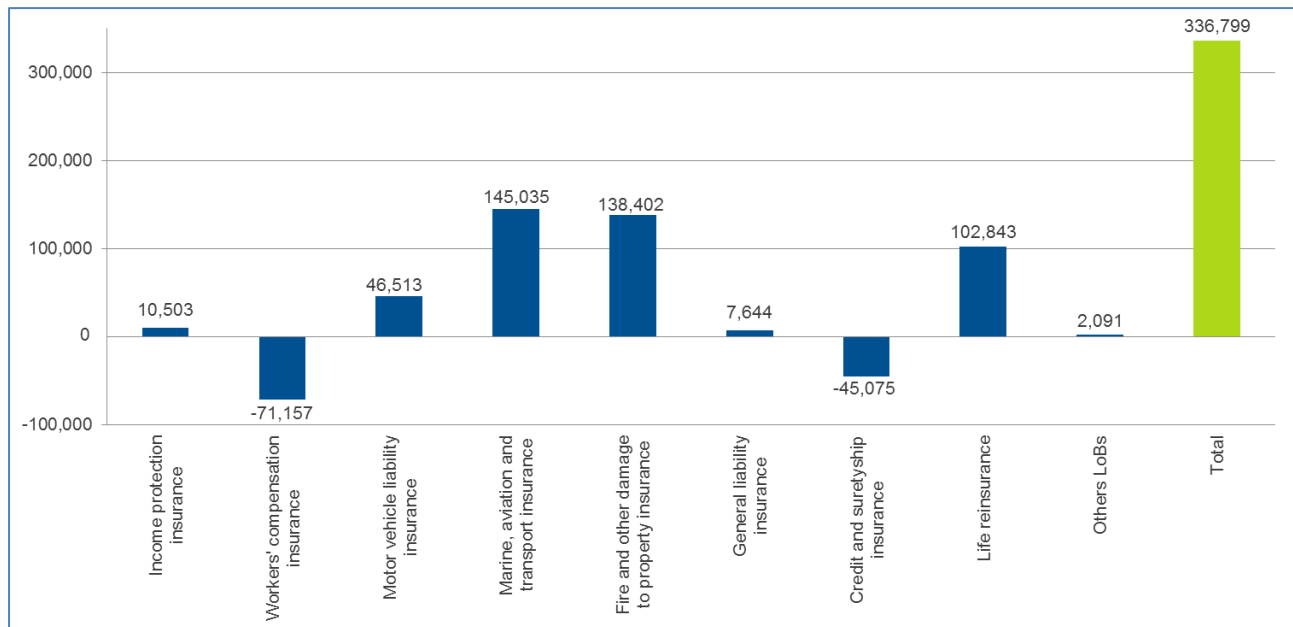
For informationen regarding material related undertakings of Hannover Rück please refer to the section „Shares in affiliated companies and participations“ in our (individual) Annual Report beginning at page 18. You can receive the Annual Report at Hannover Rück SE, Karl-Wiechert-Allee 50, 30625 Hannover, Germany or via download from our homepage (<https://www.hannover-re.com/1078850/individual-annual-report-2016.pdf>).

## A.2 Underwriting Performance

In the financial year 2016, Hannover Rück realized an underwriting result of TEUR 336,799, with net earned premiums in the amount of TEUR 8,772,039 against net claims incurred and net operating expenses of TEUR 8,435,240.

A split according to lines of business as defined in annex 1 of the delegated regulation generates the following distribution of the underwriting result (net) as at 31 December 2016:

### Underwriting result (net) - distribution according to lines of business in TEUR in TEUR



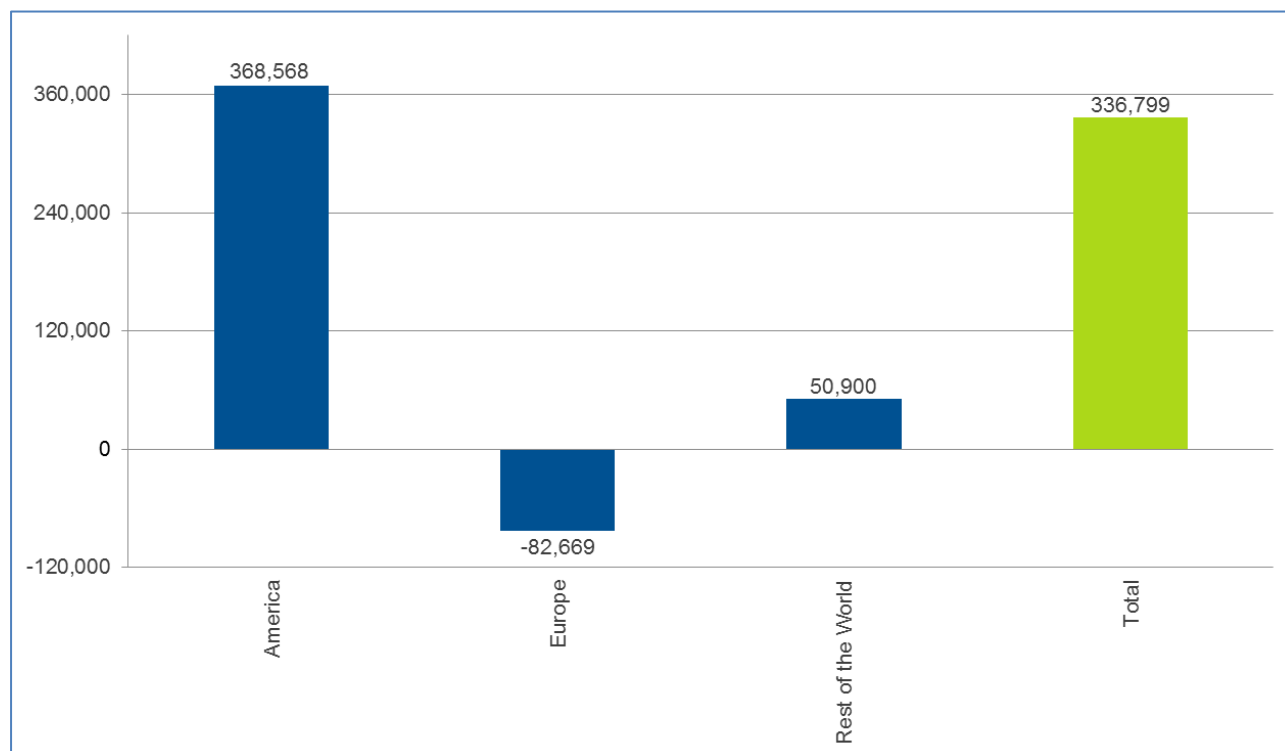
The lines of business marine, aviation and transport insurance (TEUR 145,035), the fire and other damage to property insurance (TEUR 138,402), the life reinsurance (TEUR 102,843) and workers' compensation insurance (TEUR -71,157) provided the largest contribution to the underwriting result.

Together with the motor vehicle liability insurance (TEUR 46,513), the credit and surety insurance (TEUR -45,075), income protections insurance (TEUR 10,503) as well as general liability insurance (TEUR 7,644) lines of business, 99.38% of the overall underwriting result was achieved.

The category „other lines of business“ contains medical expense, assistance insurance, miscellaneous financial loss and health reinsurance.

Grouped by geographical areas, the net underwriting result is as follows:

**Underwriting result (net) - distribution according to geographical areas**  
in TEUR



Measured against the overall underwriting results during the financial year of 2016, the regions of North, Central and Latin America made the most significant value contributions for Hannover Rück. The underwriting result in Europe (TEUR -82,669) is to be traced to the specialty of internal retrocession with the E+S Rück. While doing so, a part of Hannover Rück's worldwide reinsurance portfolio is retroceded towards E+S Rück by quota share, whereas Hannover Rück underwrites only a small volume of German business due to the separation of the market in respect of E+S Rück being the trademark there.

### A.3 Investment Performance

As an insurance company, we naturally focus primarily on value retention when managing our capital investments and attach great importance to the stability of the resulting returns. For this reason, we align our investment portfolio with the principles of a balanced risk/return ratio and a broad level of diversification. With a low-risk mix overall, our capital investments reflect both the currency composition and maturity structure of our liabilities. Our current portfolio contains a high level of fixed-income securities, so that credit and spread risks represent the main contribution to market risk.

We are extremely pleased with the development of our investments during the reporting period. Although, in light of continued low interest rates and global economic development characterised by diverse uncertainty and risks, the year under review was once again a challenging one, we were spared from any defaults in our fixed-income portfolio. And, after the unexpected outcome of the Brexit vote in the middle of the year, only moderate, temporary value reductions were observed in our share portfolio. Moreover, these losses were largely recuperated through the development of stock markets over the remainder of the year. Our commitments in the areas of Credit Risk, Emerging Markets and Private Equity were rewarded by strong performance in these markets. This also applied to the real estate sector. There was a healthy development in ordinary investment income. Although it was lower than the previous year's level - which was increasingly a reflection of the difficult interest rate environment - our expectations were met in full. Nonetheless, in answer to the constantly low interest rate level, we were able to partially offset the reduced opportunities for returns with increased income from dividends.

Income from the disposal of investments is predominantly attributable to restructuring efforts as part of regular portfolio maintenance, the adjustment of our private equity portfolio through the sale of older commitments and group-internal capitalisation and financing measures. Realisations also arose through the adjustment of the rating structure of our fixed-income portfolio. In this connection, and in response to the challenging interest rate environment, we adjusted the allocation of our investments to the individual security classes within the reporting period, to the extent that we added to our holdings of fixed-income securities with a BBB rating or lower, while at the same time increasing the amount of government bonds in our portfolio. In doing so, we are able to achieve greater portfolio liquidity while maintaining an almost unvarying overall risk level of our fixed-income portfolio, thus ensuring the continued achievement of stable returns. We have also increased the proportion of investments in emerging markets within our portfolio. In addition, we have added further weight to our portfolio of listed equities in light of the favourable entry prices. We have also slightly increased our level of real estate holdings in the course of the strategic development of this investment category. For all other investment classes, only marginal changes were recorded within the scope of regular portfolio maintenance.



The following overview displays how the investment result achieved by Hannover Rück pursuant to the German Commercial Code (HGB) is broken down into its individual asset classes according to Solvency II, and which part contains income and expenses respectively.

## Investment income

in TEUR	Ordinary income	Realised gains	Write-ups
Property, plant & equipment held for own use	3,213	0	360
Property (other than for own use)	135	0	0
Holdings in related undertakings, including participations	455,355	12,602	0
Equities - listed	13,566	1,961	167
Equities - unlisted	0	0	0
Government Bonds	142,752	49,621	3,796
Corporate Bonds	259,289	63,743	21,468
Structured notes	2,570	0	0
Collateralised securities	13,455	23,715	0
Collective Investments Undertakings	43,305	9,587	85
Derivatives	3,041	0	0
Deposits other than cash equivalents	7,391	0	0
Deposits to cedants	253,780	0	0
Cash and cash equivalents	46	0	0
<b>Total</b>	<b>1,197,898</b>	<b>161,229</b>	<b>25,876</b>

## Investment expenses

in TEUR	Write-downs	Realised losses	Other expenses
Property, plant & equipment held for own use	-965	0	-1,503
Property (other than for own use)	-63	0	-75
Holdings in related undertakings, including participations	-231	0	-14,958
Equities - listed	-2,747	-6,036	-446
Equities - unlisted	0	0	0
Government Bonds	-11,441	-6,261	-4,689
Corporate Bonds	-18,211	-11,241	-8,517
Structured notes	0	0	-85
Collateralised securities	0	-600	-442
Collective Investments Undertakings	-1,285	-4,163	-1,423
Derivatives	0	0	-2,225
Deposits other than cash equivalents	0	0	-373
Deposits to cedants	0	0	0
Cash and cash equivalents	0	0	-71
<b>Total</b>	<b>-34,943</b>	<b>-28,301</b>	<b>-34,807</b>

Other expenses includes the fees for capital investment management as well as bank and custody fees. Insofar as these are not charged separately for the individual asset classes, they are distributed in the table across the individual items in accordance with their share in ordinary income.

**Investment performance**

in TEUR	Total investment income	Total investment expenses	Investment performance
Property, plant & equipment held for own use	3,573	-2,468	1,105
Property (other than for own use)	135	-138	-3
Holdings in related undertakings, including participations	467,957	-15,189	452,768
Equities - listed	15,694	-9,229	6,465
Equities - unlisted	0	0	0
Government Bonds	196,169	-22,391	173,778
Corporate Bonds	344,500	-37,969	306,531
Structured notes	2,570	-85	2,485
Collateralised securities	37,170	-1,042	36,128
Collective Investments Undertakings	52,977	-6,871	46,106
Derivatives	3,041	-2,225	816
Deposits other than cash equivalents	7,391	-373	7,018
Deposits to cedants	253,780	0	253,780
Cash and cash equivalents	46	-71	-24
<b>Total</b>	<b>1,385,003</b>	<b>-98,051</b>	<b>1,286,952</b>

Hannover Rück does not record any profits or losses directly in shareholders' equity in accordance with the German Commercial Code (HGB).

In the item "Collateralised securities" in the Solvency II balance sheet of Hannover Rück securitisations are recorded in the form of Collateralized Debt Obligations (CDO). The resulting income and expenses along with their composition can be taken from the above table. CDOs are assets-backed financial instruments which consist of a portfolio of fixed income securities divided into several tranches. In principle, high rates of interest are to be viewed as the compensation for increasing probabilities of default, according to which the individual tranches are differentiated from one another. When investing in CDOs, every effort is made within a multilevel risk management system to ensure a sufficient level of investment diversification. In this regard, the capital investment guidelines established by Hannover Rück stipulate percentile maximum volumes for investments in CDOs and, in addition, lower maximum thresholds for the sub-category "CDO Equity Tranches".

The volume of CDO positions held by Hannover Rück as of the balance sheet date can be found in the following table.

**Collateralized Debt Obligations**

in TEUR	Market value
Collateralized Debt Obligations	428,098
<b>Total</b>	<b>428,098</b>

## A.4 Performance of other activities

### A.4.1 Other income and expenses

The following table displays other income and expenses, disclosed as statutory account values (HGB, Commercial Code).

#### Other income

in TEUR	2016
Exchange rate gains	84,893
Profit from services	24,546
Release of non-technical provisions	14,446
Separate value adjustments on accounts receivable and retrocessions	14,148
Income from reinsurance contracts	10,851
Allocated investment return	3,251
Profit from clearing transactions	3,250
Income from tax refunds	3,161
Reimbursement of expenses	2,569
Interest pursuant to § 233 a AO (Fiscal Code)	1,272
Amounts realised	47
Income from discounting pursuant to § 277 (5) HGB (Commercial Code)	14
Other income	9,019
<b>Total</b>	<b>171,464</b>

#### Other expenses

in TEUR	2016
Deposit interest	81,380
Financing interest	72,294
Exchange rate losses	63,397
Expenses for the company as a whole	47,357
Expenses from services	25,082
Separate value adjustments on accounts receivable and retrocessions	19,695
Expenses from reinsurance contracts	6,048
Interest charges on old-age pension scheme	3,319
Expenses for letters of credit	2,978
Write-downs on accounts receivable	1,258
Interest charges from reinsurance transactions	326
Compounding of interest on provisions / expense from compounding pursuant to § 277 (5) HGB (Commercial Code)	85
Interest pursuant to § 233 a AO (Fiscal Code)	57
Other interest and expenses	1,620
	<b>324,896</b>
Less: Technical interest	40,192
<b>Total</b>	<b>284,704</b>

Group expenses are allocated and reported using an internal distribution key under the item “Expenses for the company as a whole”. Within this item, administrative expenses, year-end expenses and project costs are mainly incorporated under an internal distribution key.

#### **A.4.2 Significant leasing agreements**

There are no significant operating or financing-leasing agreements.

#### **A.5 Any other information**

There is no other information to be reported.

## B. System of Governance

### B.1 General information on the System of Governance

Hannover Rück has an effective system of governance in place which provides for sound and prudent management. The elements of the System of Governance are described in the following sections.

#### B.1.1 Governance structure

##### B.1.1.1 Our Administrative, Management or Supervisory Body

Our administrative, management or supervisory body consists of the Executive Board and the Supervisory Board.

##### Executive Board

The Executive Board consists of no less than two persons. Furthermore it is up to the Supervisory Board to determine the number of members of the Executive Board.

The members of the Executive Board are appointed by the Supervisory Board for a term of five years. Re-appointments for five years maximum are permissible.

The following overview shows the allocation of key functions to the members of the Executive Board.

##### Members of the Executive Board

Chairman	Chief Financial Officer	Property & Casualty Reinsurance			Life & Health Reinsurance	
Ulrich Wallin	Roland Vogel	Dr. Michael Pickel	Sven Althoff	Jürgen Gräber	Claude Chèvre	Dr. Klaus Miller
Innovation Management	Finance and Accounting	Group Legal Services	Specialty Lines Worldwide: Marine, Aviation, Credit, Surety and Political Risks, UK, Ireland, London Market and Direct Business	Coordination of Property & Casualty Business Group	Life & Health Reinsurance: Africa, Asia, Australia/New Zealand, Latin America, Western and Southern Europe,	Life & Health Reinsurance: UK, Ireland, North America, Northern, Eastern and Central Europe
Compliance	Information Technology	Run-Off Solutions		Global Reinsurance: Worldwide Treaty Reinsurance, Catastrophe XL, Structured Reinsurance and Insurance-Linked Securities	Longevity Solutions	
Controlling	Investment and Collateral Management	Target Markets in Property & Casualty Reinsurance: North America, Continental Europe	Facultative Reinsurance	Quotations		
Human Resources Management	Facility Management			Retrocessions		
Internal Auditing						
Risk Management						
Corporate Development						
Corporate Communications						

For further information on key functions please refer to chapters B.3-B.6.

## Supervisory Board

The Supervisory Board consists of nine members appointed by the General Meeting. Of these nine members, three shall be appointed on recommendation by the employees. The General Meeting is bound by these recommendations for the appointment of the employees' representatives. Other than that, the General Meeting is not bound to proposed candidates. In the event that legal provisions concerning involvement of employees in a European Association (SE Beteiligungsgesetz – SEBG Employees Involvement Act) provide for a different appointment procedure for representatives of the employees to the Supervisory Board, the employees' representatives are appointed according to the agreed appointment procedure.

Every member of the Supervisory Board can resign from his membership by adhering to a notice period of one month even without an important reason by written notice to the Company, represented by the Management Board and the Chairman of the Supervisory Board (if notice is given by the Chairman himself, to his deputy). The Chairman of the Supervisory Board may choose to forgo adherence to this notice period.

Appointment for a successor of a member who has resigned prior to termination of his term is for the remaining period of the term of the resigned member.

As of 31 December the Supervisory Board consists of the following members:

### Members of the Supervisory Board and membership in committees

Members of the Supervisory Board	Standing Committee	Finance and Audit Committee (AC)	Independent financial expert on the AC	Nomination Committee	Staff representative
Herbert K. Haas, Chairman	X	X		X	
Dr. Klaus Sturany, Deputy Chairman	X				
Wolf-Dieter Baumgartl	X	X		X	
Frauke Heitmüller					X
Otto Müller					X
Dr. Andrea Pollak				X	
Dr. Immo Querner					
Dr. Erhard Schipporeit		X	X		
Maike Sielaff					X

The Supervisory Board may form committees from among its members and authorise them to pass resolutions, as far as permitted by law.

The Supervisory Board considered at length during the 2016 financial year the position and development of the company and its major subsidiaries. It advised the Executive Board on the direction of the company and monitored the management of business on the basis of written and

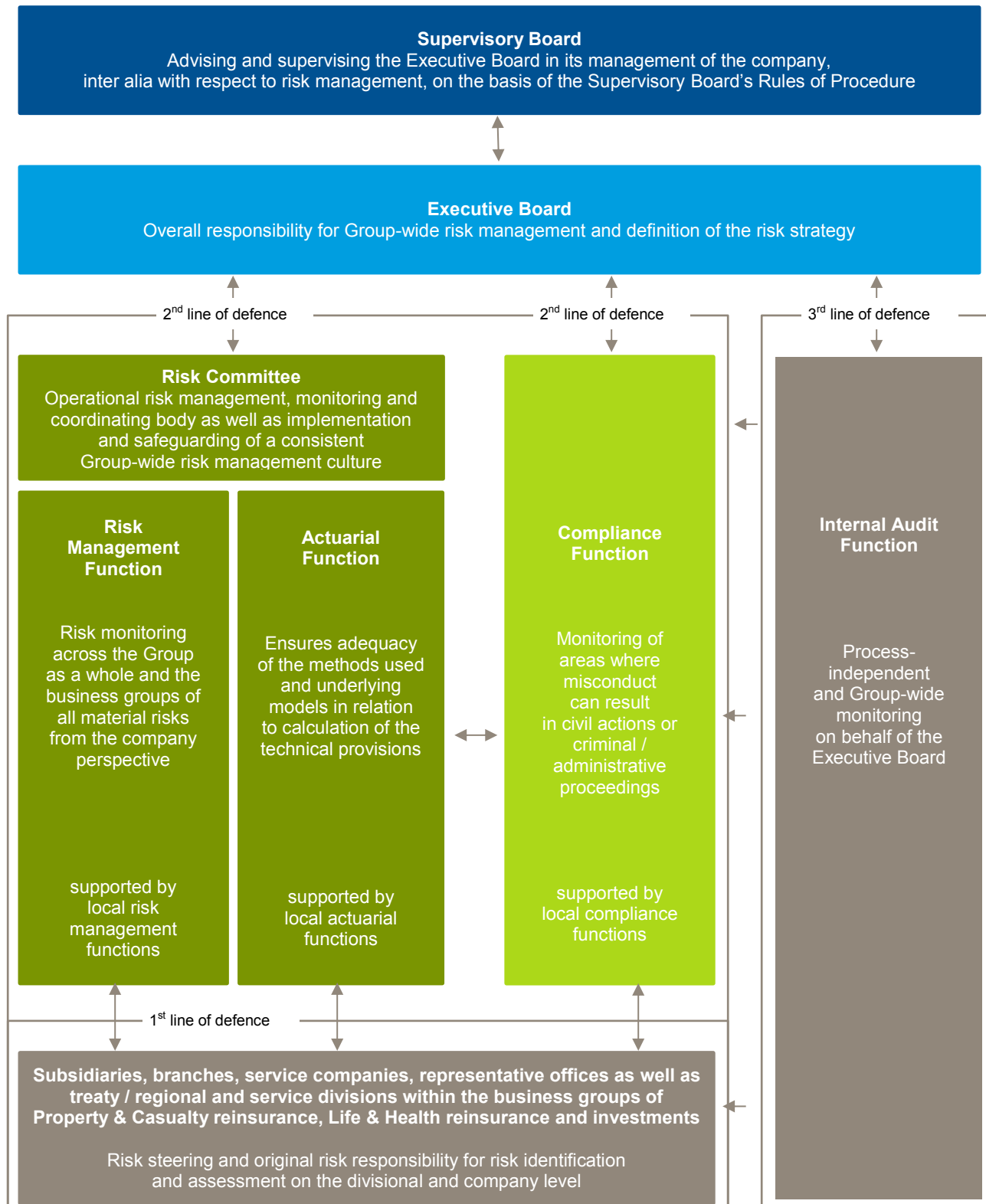
verbal reports from the Executive Board. The Supervisory Board of Hannover Rück SE held four regular meetings in order to adopt the necessary resolutions after appropriate discussion. With the exception of two meetings that one member of the Supervisory Board did not attend, all nine Supervisory Board members took part in each of the Supervisory Board meetings held in 2016. Two representatives of the Federal Financial Supervisory Authority participated in one meeting on a routine basis. In addition, the Supervisory Board was informed by the Executive Board in writing and orally about the course of business and the position of the company and the Group on the basis of the quarterly financial statements. The quarterly reports with the quarterly financial statements and key figures for the Hannover Re Group constituted an important source of information for the Supervisory Board.

As in every year, the Supervisory Board was regularly updated on the work of the Supervisory Board committees and given a description of the major pending legal proceedings.

Of the committees formed by the Supervisory Board within the meaning of § 107 Para. 3 German Stock Corporation Act, the Finance and Audit Committee met on four occasions and the Standing Committee met three times. The Chairman of the Supervisory Board updated the full Supervisory Board on the major deliberations of the committee meetings at its next meeting and provided an opportunity for further questions.

### B.1.1.2 Key functions

The following graph gives an overview of the main tasks and the interaction of the main elements of the System of Governance including the key functions:





The organisation and collective effort of individual functions are decisive for our internal risk management and control system. In our system the central functions are closely interlinked with one another and the roles, tasks and reporting lines are both clearly defined and documented in the context of the so-called three lines of defence. The first line of defence consists of risk control and the original responsibility for risk at divisional and/or company level. The risk management function ensures the second line of defence - risk monitoring. It also receives support from the actuarial function and the compliance function. The third line of defence consists of process-independent monitoring executed by the internal audit function.

All key functions are equipped with appropriate resources and skills. The reporting lines to one another and to the Board Member responsible for the division respectively to the Executive Board have been clearly defined.

### Changes over the reporting period

The Chief Risk Officer headed, until 19 June 2016, both the risk management function and the actuarial function. Since 20 June 2016, a separate key function holder for the actuarial function is in place.

## B.1.2 Remuneration policy

### B.1.2.1 Remuneration of the Executive Board

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.

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 total remuneration received by the Executive Board of Hannover Rück SE amounts to TEUR 7,330.

### **B.1.2.2 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 Statute.

The total remuneration received by the Supervisory Board of Hannover Rück amounts to TEUR 772.

### **B.1.2.3 Remuneration of staff and senior executives**

The remuneration scheme for senior executives below the Executive Board (management levels 2 and 3) 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.

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 that is linked to the success of the company.

### **B.1.2.4 Note**

For further information regarding the Hannover Rück remuneration policy please refer to the remuneration report in our Annual Report of Hannover Re Group beginning at page 103. You can receive the Annual Report at Hannover Rück SE, Karl-Wiechert-Allee 50, 30625 Hannover, Germany or via download from our homepage (<https://www.hannover-re.com/1078842/annual-report-2016.pdf>).

## **B.1.3 Related party transactions**

For information regarding the transactions with related parties please refer to the section “Related party disclosures” in our Annual Report of Hannover Re Group beginning at page 225. You can receive the Annual Report at Hannover Rück SE, Karl-Wiechert-Allee 50, 30625 Hannover or via download from our homepage (<https://www.hannover-re.com/1078842/annual-report-2016.pdf>).

The members of the governing bodies did not receive any advances or loans in the year under review. Nor were there any other material reportable circumstances or contractual relationships as defined by IAS 24 between companies of the Hannover Re Group and the members of the governing bodies or their related parties in the year under review.

## B.2 Fit and proper requirements

### B.2.1 Requirements

With a decision dated 17 November 2014, the Executive Board of Hannover Rück followed the specifications stipulated by the framework directive of the HDI V.a.G. pertaining to the fulfilment of the Fit & Proper requirements, on the proviso of their continued implementation in the affected group companies and business units, and with the further condition that the framework directive is only applicable to the extent that it is relevant for Hannover Rück as a reinsurance company. On 16 October 2015, the framework directive of Hannover Rück pertaining to the fulfilment of the Fit & Proper requirements in the Hannover Re Group was decreed by the Executive Board.

### B.2.2 Description of requirements

The professional qualification (fitness) of individuals with key functions refers to a professional qualification suitable for the respective position as well as skills and experience, which are necessary for a robust and cautious management approach, and for the fulfilment of the position. The appropriateness is assessed according to the principle of proportionality, and takes into account the company-individual risks along with the type and scope of business operations. Specialist “fitness” requirements stemming from established supervisory practices are to be complied with by those individuals who actually head up the company, and the members of the Supervisory Board. Collective “fitness” requirements have been established for mutual controlling and monitoring. The requirements placed on the professional qualification of those holding key functions are closely linked with the special features of the respective governance tasks.

Individuals with key functions must, as part of personal reliability (propriety), act responsibly and with integrity, and carry out activities both dutifully and with the necessary level of care. Conflicts of interest must be avoided and the individual must not have demonstrated a lack of responsibility in the form of criminal actions prior to their nomination/appointment. There is no requirement for personal reliability to be positively established. It will be assumed, whenever there are no observable facts indicating the contrary. Unreliability is only to be assumed if personal circumstances according to general life experience give reason to believe that this could undermine the thorough and proper exercising of the function.

For Hannover Rück, the circle of individuals entrusted with key tasks consists of persons who

- actually head up the company (Executive Board members) including the authorised representatives of an EU/EEA branch,
- hold other key functions (members of the Supervisory Board, owners of one of the key functions including compliance, internal audit, risk management, actuarial mathematics).

With regard to their various roles, these individuals are required to provide evidence of their professional qualifications in different areas as follows:

- Educational background
- Practical knowledge
- Management experience
- Language skills
- Required specialist knowledge in relation to the relevant key function
- Collective requirements

In the event that key functions are outsourced, general requirements for this are defined within a Group Policy. The onus remains on the side of the outsourcing company to ensure that the individuals deployed by the service provider who are responsible for the key function have suitable professional qualifications and are personally reliable. In accordance with supervisory regulations, the outsourcing company has to appoint an outsourcing officer for this purpose, who, where appropriate, is subject to registration with the regulatory body accordingly as the person responsible for the relevant key function within the company. The overseeing outsourcing official is hereby responsible for the proper fulfilment of the duties associated with the outsourcing of the key function.

No key functions were outsourced in 2016.

### B.2.3 Evaluation process

The requirements and reporting processes with respect to the supervisory authority correspond to the current standard processes based on the BaFin information sheets on professional competence and reliability.

Pursuant to the framework directive on the fulfilment of the Fit & Proper requirements, at the preliminary stage of recruiting new members of staff who will actually head up the company or hold other key roles, a detailed curriculum vitae will be submitted and a requirements profile set, which detail and describe the necessary qualifications. The framework directive pertaining to the fulfilment of Fit & Proper requirements contains a checklist in the attachment, which is to be used in the assessment of the Fit & Proper requirements of these individuals. The requirements profile contains evidence of the following minimum requirements:

Description of the position with key functions:

- Performance catalogue (job description)
- Authority to make decisions
- Level of staff responsibility

Professional qualification (general):

- Level of education (commercial or vocational training)
- University degree or professional standard (such as, for example, for auditors or actuaries)
- Knowledge and understanding of business strategy
- Knowledge of the system of governance
- Foreign language skills, minimum of English language and other foreign languages where possible

Professional qualification (depending on the particular position):

- Industry experience
- Knowledge and understanding of the business model
- Ability to interpret accounting and actuarial data
- Knowledge and understanding of the regulatory frameworks affecting the company

- Expertise in personnel management, staff selection, succession planning

The procedure for assessing the transfer of tasks stipulates that, at the preliminary stage of recruiting new members of staff, a detailed curriculum vitae must be submitted and a requirements profile must be set, which contains the verification of predefined minimum requirements. The continual safeguarding of compliance with the relevant requirements is undertaken every five years in the form of an assessment of the requirements profile, undertaken by the responsible organisational unit.

As part of the event-driven assessment, any significant changes in the underlying parameters trigger an assessment of the compliance with the catalogue of requirements. This involves a differentiation of the characteristics deemed necessary in the person and in the position.

The assessment and control procedures are summarised in an overview, which contains the assessment cycle of the requirements profile and the responsibility for the assessment and duty to inform held by those individuals who actually head up the company, and those individuals who have other key functions.

## B.3 Risk Management System including the Own Risk and Solvency Assessment

### B.3.1 Risk management system including risk management function

#### B.3.1.1 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. The following principles of the corporate strategy constitute the key strategic points of departure for our Group-wide risk management:

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

Our risk strategy is derived from the corporate strategy.

The risk strategy, the risk register and the central system of limits and thresholds 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 Group net income with a probability of 90% p. a. and the likelihood of the complete loss of our economic capital and shareholders' equity 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, solvency regulations, 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.

#### B.3.1.2 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 Rück 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 minimum 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.

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 Rück 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 Rück's risk management as "Very Strong", the best possible rating. Hannover Rück's internal capital model was also subjected to expert appraisal (by Standard & Poor's). Based on 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.

### **B.3.1.3 Organisation of risk management and the tasks of the risk management function**

For the fundamental organisational structure please refer to Section B.1.1.2.

The risk management function consists of three primary components: the risk committee, the Chief Risk Officer and the risk monitoring function.

#### **Risk committee**

The tasks of the risk committee - the body charged with the monitoring and coordination of risk management - are derived from the rules of procedure regarding the risk committee. The scope of decision-making for the risk committee lies within the boundaries of risk appetite set by the Executive Board. Changes, and any instances of increase in risk appetite, require the approval of the Executive Board. Further tasks include quality assurance of the ORSA process and monitoring of the implementation of risk-related measures.

#### **Chief Risk Officer**

The Chief Risk Officer is also the head of the risk monitoring function and member of the Risk committee. The Chief Risk Officer coordinates the ORSA process and ensures the framework conditions of an effective risk management system.

#### **Risk monitoring function**

The risk monitoring function coordinates and bears responsibility for comprehensive monitoring (systematic identification, evaluation, monitoring and reporting) of all significant asset-and liability-related risks and the regular execution of the ORSA process. Furthermore, the risk monitoring function develops methods, standards and processes for the assessment and monitoring of risk.

The risk monitoring function fulfils its tasks objectively and independently for Hannover Rück.

### **B.3.1.4 Key elements of our risk management system**

Our risk strategy, the Risk and Capital Management Guideline and the system of limits and thresholds for material risks of the Hannover Re Group describe the central elements of our risk management system. The risk management system 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.

The Risk and Capital Management 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.

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 central anchor point for strategic considerations in relation to risk communication.

### 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 using the results of the risk model.

### Risk identification

A key source of information for monitoring risks is the risk identification carried out on a rotating basis. All identified risks are documented in the central register containing all material risks. Risk identification takes the form of, for example, 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 or reputational risks). Qualitative assessment takes the form of inter alia expert evaluations. Quantitative assessment of material risks and the overall risk position is performed by Group Risk Management using the Hannover Rück risk model. The model makes allowance as far as possible for risk accumulations and concentrations.

### 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 and the required capital are factored into the division's decision. Risk steering is assisted by, among other things, 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 utilization of natural catastrophe scenarios. Complementary to the regular risk reporting, immediate internal reporting on material risks that emerge at short notice takes place as necessary.

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

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

### B.3.1.5 Risk landscape

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. 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 Rück encompasses:

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

At the present time our most significant risks are the credit 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.

### **B.3.2 Own Risk and Solvency Assessment (ORSA)**

The ORSA report, which is generated annually in the first half of the year after the completion of the financial year in question, primarily consists of an analysis of current and future risks, which could threaten the continued existence of Hannover Rück. Here, the partial internal model is used and its results are displayed. Capital resources are presented, stress tests are executed and a risk and profit forecast is generated - including scenario analysis. The interplay between risk and capital management is highlighted here. Finally, it explains the inclusion of the Executive Board into the ORSA process and its use as one of the controlling instruments at the company's disposal.

The ORSA report is coordinated by the risk management company division and is subject to both assessment and approval by the Executive Board.

In the event of a necessary ad-hoc ORSA, e.g. in the case of a change in our risk profile, Hannover Rück has defined specific procedural plans and responsibilities governing the extent to which reporting lines are to be fulfilled and the Executive Board and panels in charge are to be informed, in order that measures can be initiated.

## B.4 Internal Control System

### B.4.1 Elements of the 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 Rück's ICS are documented in a Framework 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 Framework 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 Rück. 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.

### B.4.2 Compliance function

#### Implementation of the Compliance function

Hannover Rück has opted for a decentralised approach towards the implementation of the Compliance function, i.e. the tasks of the Compliance function will not only be fulfilled by the legal department, but by various departments. The Compliance function is therefore located in several departments.

The head of the legal department is the holder of the key Compliance function at the same time.

The Executive Board of Hannover Rück has established the Compliance division within the Legal department for the fulfilment of some of the tasks of the Compliance function. The Chief Compliance Officer is authorised to task further members of staff from the Legal department for the purpose of fulfilling Compliance functions, which are executed by the Compliance function.

Hannover Rück has specified its compliance policy in writing in a manual bearing the title "Corporate Compliance of Hannover Rück and E+S Rück". This manual is regularly assessed for its

topicality and, if necessary, updated - at least once a year - and on an event-driven basis by the members of staff within the Compliance function when new developments occur.

There were no significant changes to the Compliance policy during the reporting period.

Hannover Rück has deemed the following topics to be of particular relevance for Compliance, and has determined these to be key areas of Compliance:

- Fulfilment of statutory requirements
- Compliance with foreign trade legislation and sanction provisions
- Compliance with company law (including the German Corporate Governance Code)
- Compliance with capital market legal provisions (in particular with obligations pursuant to the Market Abuse Directive [Marktmissbrauchsverordnung], the German Securities Trading Act [WpHG] and the German Securities Acquisition and Takeover Act [WpÜG]), laws relating to insider-trading, director dealings and ad hoc reporting
- Compliance with antitrust and competition provisions
- Compliance with the code of conduct
- Combating corruption/embezzlement/fraud
- Compliance with data protection norms
- Compliance with the regulations stipulated by employment law
- Compliance with tax laws
- Execution of orderly financial reporting

The fulfilment of all statutory reporting requirements is ensured by assigning them to the responsible organisational units.

### Tasks

The Compliance function ensures compliance with the relevant external provisions by Hannover Rück.

These key areas of Compliance as mentioned above are monitored by the Compliance function at Hannover Rück. Therefore, different departments work together. E. g. Employment law remains the responsibility of the Human Resources department, tax law falls under the jurisdiction of the Tax department of Hannover Rück. The departments tasked with handling particularly Compliance-relevant topics together form the compliance function.

The handling of particularly Compliance-relevant topics by the departments, who collectively form the Compliance function, comprises at the least the following activities:

- Identification and evaluation of risks, which are associated with the non-compliance of statutory requirements (risk control)
- Evaluation of the possible consequences for the company's activity as a result of changes in legal operating conditions (risk relating to changes in the law/early warning)
- Consultation with regard to compliance with the legal provisions which apply to company activity
- Assessment of the appropriateness of implemented measures in relation to compliance with statutory requirements (monitoring function)

The Compliance function has a regular risk review (at least once a year) carried out by the other departments dealing with particularly compliance-relevant issues, outlining which non-compliance

risks have been identified and what measures are being deployed in these departments to minimise these risks. This ensures that all issues being handled within the Compliance function are monitored and dealt with.

The appointed Chief Compliance Officer for Hannover Rück bears particular responsibility for the following tasks:

The Chief Compliance Officer monitors changes made to legal provisions and standards made by legislators, as well as case law. He assesses the new developments for their relevance and communicates pertinent innovations and changes to the respective departments and the Executive Board. The members of staff within the Compliance function also hold regular training sessions for members of staff, in particular with regard to legislative reforms, announcements by the insurance supervisory authority or other changes.

By way of continuous monitoring the Chief Compliance Officer and the members of staff of the Compliance function contribute to ensuring compliance by the executive bodies (Executive Board and Supervisory Board) and the members of staff of Hannover Rück with legal and regulatory operating conditions.

The Chief Compliance Officer advises members of the Executive Board and members of staff of Hannover Rück upon request regarding Compliance topics.

Every year, the Chief Compliance Officer generates a Compliance plan for the following year. The Compliance Officer also created a Compliance plan together with the members of staff of the Compliance function for the year 2017. This plan determines where the key areas of Compliance activity should be in the subsequent year.

The Chief Compliance Officer and the members of staff of the Compliance function assess Compliance reports submitted by the company branches, and generate the Hannover Rück Compliance Report for the previous calendar year. The report contains information on Compliance-relevant topics such as, for example, specific details regarding significant breaches of Compliance which have surfaced, as well as proposed and implemented measures relating to their elimination, current assessments pertaining to Compliance risks, proposed measures aimed at limiting Compliance risks etc.

### Reporting lines

As the holder of the key Compliance function, the Chief Compliance Officer reports directly to the members of the Executive Board responsible for the Legal and Compliance Department.

Reports are provided on relevant Compliance incidents and are completed in written, verbal or electronic form, although verbal reports are, as a rule, subsequently backed up in writing.

Depending on the seriousness of the incident, the reporting can be performed within a regular annual report or on an ad hoc basis.

## B.5 Internal Audit Function

### Implementation of the Internal Audit Function

The company's internal audit function is executed by the department of Group Auditing (GA). GA renders independent, objective auditing services including evaluations and recommendations, which play a key role in safeguarding the external and internal compliance of processes, the internal control system and other areas of the company, as well as identifying potential areas for improvement and thus generating added value. In addition to its auditing role, GA operates as an internal advisor generating valuable impetus as part of network collaboration with other units and functions within the company.

The Executive Board ensures that GA is not subject to instruction regarding audit planning, execution, reporting and the assessment of audit results. For the purposes of safeguarding autonomy, the Head of GA, who is simultaneously the key function holder for the company's internal audit function pursuant to Sections 30 and 47 No. 1 of the Act on the Supervision of Insurance Undertakings (VAG), reports directly to the Chairman of the Executive Board in all professional and disciplinary matters. Members of the internal audit staff are exclusively employed in GA and only execute tasks which are in line with the GA Internal Audit Policy.

### Tasks

GA supports the Executive Board in the attainment of company targets by assessing all business areas, processes and systems within the company in a targeted, independent and objective way, through the use of a systematic, risk-oriented approach as part of audit planning and execution, while also contributing to the company's further development. Auditing results are reported directly to the Executive Board. The assessment of individual findings and the overall assessment of the audit results is undertaken exclusively by GA. The underlying classification scheme defined by GA ensures an objectification of the estimations made.

### Reporting lines

The internal audit function reports its auditing results and recommendations to the Executive Board continuously in the form of written audit reports, and/or immediately in the event of serious deficiencies, as well as once a year in the form of the GA annual report. The implementation of recommendations/measures agreed in the audits is monitored by GA up until the determined deadlines.

## B.6 Actuarial Function

### Implementation of the Actuarial Function

The tasks of the Actuarial Function (AF) are organized decentrally. This ensures adequate actuarial knowledge in all relevant processes. The owner of the AF is assigned to the risk management department of the company, but operates objectively and independently in respect of fulfilling the requirements in undertaking the AF notwithstanding. In the exercise of his function, the AF receives support from several units of the risk management department and from other departments of the company.

Furthermore it is the common understanding between the AF and the Risk Management Function (RMF) that a broad exchange of information and a competent support of each other function is useful to fulfil their individual tasks and in addition supports the aim of the company of an efficient structure.

With respect to the underwriting policy, the AF is supported by those departments assigned to the risk management, which are concerned with premium risk respectively with the measurement of underwriting risk. For the evaluation of the retrocession and the accompanying risks, there is a close collaboration between respective departments within the risk management. In addition those departments which coordinate the retrocession program of the company are involved.

### Tasks

The tasks of the AF are inter alia:

- Coordination and validation of the calculation of the TP
- Ensure the appropriateness of the applied methods, the underlying models and assumptions
  - used for the calculation of the TP for solvency and accounting purposes as well as
  - used as a basis for the appropriate recognition of the inherent risks of these methods, models and assumptions in the internal model
- Evaluation of the uncertainty associated with the estimations made in the calculation of the TP
- Regular review and assessment of the underlying data in terms of sufficiency and quality
- Regular comparison of best estimates against experience
- Reconciliation of TP between local accounting principles and Solvency II
- Recommendations on improving processes and models used for the calculation of the TP, including data collection if deficiencies have been observed and monitoring of their implementation
- In the context of the contribution to the RMF inter alia
  - Support of the internal model, especially with respect to underwriting risks (delivery/validation of models, data, parameters)
  - Monitoring of the reserve level within the scope of the system of limits and thresholds for Technical Provisions (IFRS and HGB, respectively)
  - Evaluation/risk assessment for large transactions and new types of business
- Preparation of the AF report containing inter alia the following topics
  - Tasks of the AF
  - Activities of the AF in the reporting period
  - Methods, results and sensitivity analyses in respect of TP
  - Opinion on the underwriting policy, and
  - Opinion on the retrocession policy

## Reporting Lines

In addition to the annual AF report, the responsible owner of the AF reports regularly directly to the executive board and to the Actuarial Committee. The Actuarial Committee is the responsible committee for the information exchange with the AF. If necessary, the AF reports to the board or the Actuarial Committee on an ad hoc basis or upon requests. These direct reporting lines ensure the independence of the AF from the other key functions and the operational management.

The Actuarial Committee consists of the CEO, CFO, and the board member who is responsible for the coordination of Property and Casualty reinsurance, the head of the AF and the head of the AF for Life & Health reinsurance.



## B.7 Outsourcing

Hannover Rück has an outsourcing policy in place which is approved by the Executive Board. The outsourcing policy describes all statutory, regulatory and internal requirements imposed on the outsourcing of (re-)insurance activities and functions. Here, the entire outsourcing management process is described, which consists of the following five process steps:

- Planning and classification
- Risk analysis and due diligence
- Contract management and notification
- Steering and monitoring
- Renewal and termination

All relevant stakeholder groups are thus involved in the outsourcing management process. Intra-Group outsourcings are also integrated into the outsourcing management process.

Among others, Hannover Rück has currently outsourced the asset and investment management, this on an intra-Group basis to Talanx Asset Management GmbH. This matter concerns the only so-called important outsourcing.

## B.8 Any other information

### B.8.1 Evaluating the appropriateness of the system of governance

The Executive Board has established a committee which supports the assessment of the system of governance. The assessment presented by the committee dated 31 March 2017 was adopted by the Executive Board.

The committee is made up of the Heads of key functions, the Head of Corporate Development and the Head of Human Resources, and convenes at least once a year. Guests are invited on an event-driven basis. The basis for the assessment of the system of governance includes, among other things, the annual reports submitted by the key functions.

Based on the assessment of the committee, the Executive Board has reached the conclusion that the system of governance of Hannover Rück is, in terms of its type, scope and complexity, appropriate for determining the inherent risks of its business activities.

### B.8.2 Other information

Other information that has a significant influence on the system of governance is not available.

## C. Risk Profile

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.

In the following chapters, the risk presentation of Hannover Rück conforms to the so-called “look-though” principle including subsidiary companies and branches. This corresponds with a modelling approach as the whole Hannover Re Group after, i. e. excluding minorities. This means that the perception of the key risk indicators differs from that of the exposures in chapter D, but corresponds with the partial internal model approved by the supervisory authority.

In the course of the mid-term planning we observe the business’s development over a time horizon of five years. Besides the basic scenario we also behold alternative scenarios in respect of macro-economic developments and evolution of (re)insurance markets. Under the assumptions within the mid-term business plan, the risk profile and the capitalisation of Hannover Rück remains stable. It is remarkable that the prognosis of the capital demand is based on various assumptions for the future economic and business environment and is therefore to be handled with caution.

Large transactions are assessed in regards of the influence on the risk profile, the capitalization and the defined limits for different risk categories. Therewith we secure that the risks develop in line with our risk appetite.

Retrocession has a particular significance within risk appetite and risk reduction, and is used in a targeted way, albeit on a limited basis, as required. Business which does not remain in deductibles is retroceded to third parties in order to protect the capital of Hannover Rück. This ensures that Hannover Rück can benefit from any price increases following a market-changing event. The process of strategic placement for Hannover Rück and its subsidiaries is determined by the respective Board member and overseen by the Board as a whole.

Identified risks or product ideas possibly lead to (re)insurance solutions, which are to be assessed with a specific process concerning their risk characteristics. In the year 2016 one such new product process was absolved and the product was approved by the Executive Board for distribution.

## C.1 Underwriting risk

### C.1.1 Underwriting risk Property and Casualty

Risk management in property and casualty reinsurance has defined various overall guidelines for efficient risk steering. These include, among other things, the limited 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 crucial 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 Solvency Capital Requirement for underwriting risks in property and casualty reinsurance breaks down as follows:

#### Solvency Capital Requirement for underwriting risks in property and casualty reinsurance

in TEUR	2016
Premium risk (including catastrophe risk)	2,357,848
Reserve risk	2,121,418
Diversification	-1,136,562
<b>Underwriting risk property and casualty</b>	<b>3,342,705</b>

#### C.1.1.1 Risks arising from natural disasters

The largest share of the Solvency Capital Requirement for the premium risk (incl. catastrophe risk) is attributable to risks from natural disasters. The following table shows the Solvency Capital Requirement for our four largest natural hazards scenarios:

#### Solvency Capital Requirement for the four largest natural hazards scenarios

In TEUR	2016
Hurricane US / Caribbean	1,412,310
Earthquake US West Coast	999,037
Winter storm Europe	721,495
Earthquake Japan	627,601

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**

Effect on forecast net income

in TEUR	2016
<b>Windstorm Europe</b>	
100-year loss	-358,953
250-year loss	-497,851
<b>Windstorm United States</b>	
100-year loss	-816,752
250-year loss	-1,093,412
<b>Windstorm Japan</b>	
100-year loss	-218,607
250-year loss	-277,837
<b>Earthquake Japan</b>	
100-year loss	-352,498
250-year loss	-604,954
<b>Earthquake California</b>	
100-year loss	-426,756
250-year loss	-774,466
<b>Earthquake Australia</b>	
100-year loss	-199,734
250-year loss	-428,182

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**

Loss relative to the underwriting result

in TEUR	Limit 2016	Threshold 2016	Actual utilisation (July 2016)
All natural catastrophe risks			
200-year aggregate annual loss	1,827,000	1,644,300	1,518,727

### C.1.2 Reserve risk

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 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.

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 order to partially hedge inflation risks Hannover Rück 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.

### C.1.3 Risk mitigation techniques Property & Casualty

#### C.1.3.1 Strategic aims and key figures

The strategic aims in relation to the placement of retrocessions are determined by the placing unit (Group Protections) and the relevant member of the Executive Board. The Executive Board oversees the placement of the retrocessions as a whole, in particular the limits, premiums and contractual terms.

#### C.1.3.2 Description of Hannover Rück’s main types of cover against natural perils

In the event of a claim, Hannover Rück shall receive relief from its various protections. Further details on the individual forms of reinsurance covers are described in the text below.

#### C.1.3.3 Whole Account Protections 2016

The Whole Account Protections cover all property, motor hull and engineering business of the Hannover Re-Group, i. e. business recorded in Hannover and through subsidiaries or other branch offices. The protections are placed on a gross claim basis.

#### C.1.3.4 K-transactions 2016

##### K-quota share and K-aggregate XLs on the K-portfolio:

The K-portfolio consists of the following segments/regions of the Cat XL business of the Hannover Re-Group:

- Natural perils in Australia, Japan, Canada and USA (mainly wind and earthquakes)
- Natural perils in northern Europe (mainly wind, earthquakes, hail and floods)
- Natural perils in New Zealand (mainly earthquakes)
- Aviation (all XL contracts) and Marine & Energy (all XL contracts)

In addition to K-quota share, Hannover Rück places aggregate XLs on the basis of the K-portfolio. These provide additional coverage for the following scenarios: Chile - earthquakes, Italy - earthquakes and floods, Turkey - earthquakes.

##### K-Transactions 2016

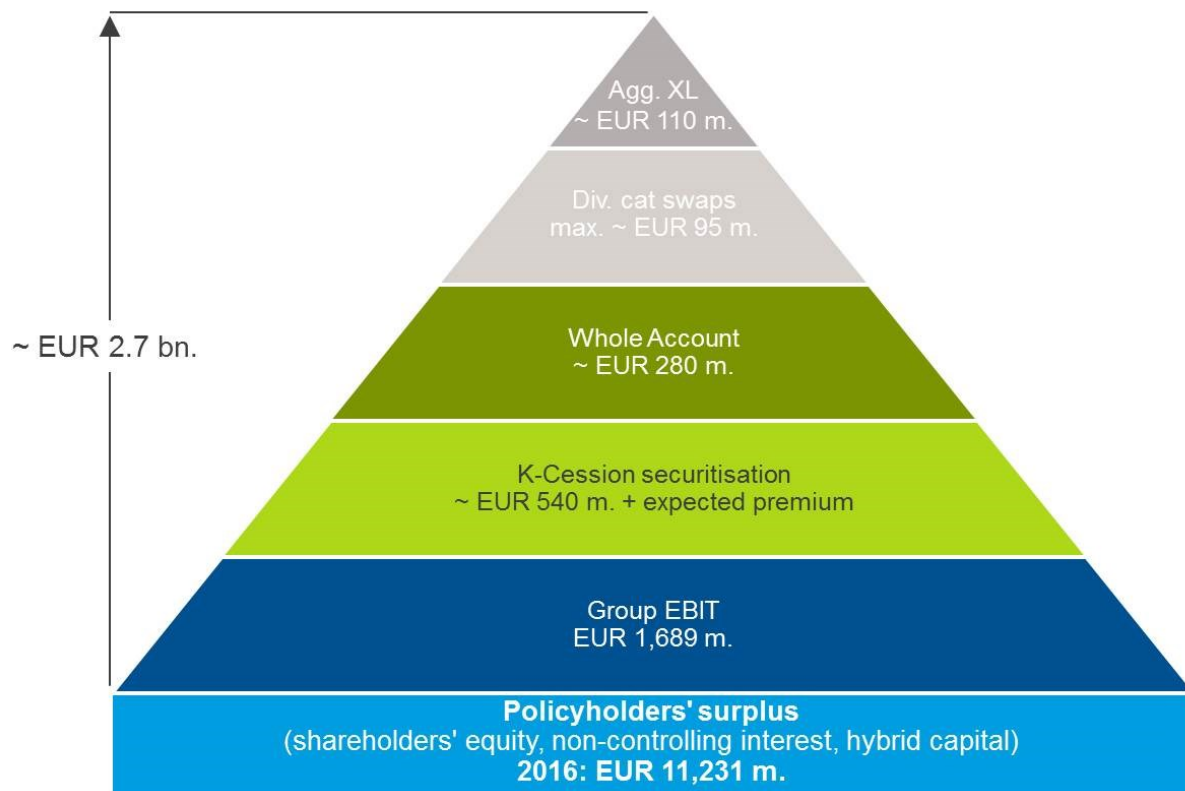
By way of its “K” transactions Hannover Rück has raised underwriting capacity for catastrophe risks on the capital market. The “K Cession”, which was placed with investors in North and South America, Europe and Asia, involves a quota share cession on worldwide natural catastrophe business as well as aviation and marine risks. Of the total volume of the “K Cession”, a large part equivalent to TEUR 384,440 was securitised via structured entities as at the balance sheet date. The transaction has an indefinite term and can be cancelled annually by the investors. Segregated accounts of Kaith Re Ltd. are used for transformer purposes for part of this transaction. Hannover Rück also uses further segregated accounts of Kaith Re Ltd. and other structured entities outside the Group for various retrocessions of both its traditional and ILS covers, which in each case are passed on to institutional investors in securitised form. The volume of these transactions is measured by the ceded exposure limit of the underlying retrocession agreements and amounted to altogether TEUR 1,884,667 as at the balance sheet date. The structured entities are in all cases fully funded by contractually defined investments in the form of cash and equivalent liquid assets. Given that the entire exposure limit of the structured entities is therefore wholly collateralised in each case, there is no risk of loss for Hannover Rück.

#### C.1.3.5 Catastrophe Bond Eurus III

The catastrophe bond (CAT bond) Eurus III was issued by Hannover Rück for the purpose of transferring to the capital market peak natural catastrophe exposures deriving from European windstorm events. The CAT bond, which had a volume of nominally TEUR 100,000 and a maturity date of 31 March 2016, was placed by Eurus III Ltd. The structured entity was fully funded by contractually defined investments in the form of cash and equivalent liquid assets. The transaction had ended as at the balance sheet date.

#### C.1.3.6 Multilevel protection - an overview

The multilevel protection consisting of the types of cover listed above increases the reinsurance capacity for natural catastrophes and thus provides additional revenues with a defined risk appetite.



#### C.1.3.7 Process of retrocession placement

The Executive Board derives the risk budget for natural perils from the global risk budget. It forms the starting point for the system of limits and thresholds. The utilisation of the limits is controlled using a traffic light system. Many risk tolerances are based on net income, i. e. the placement of retrocessions plays a key role in adhering to the limits.

Capacities are derived from the global and local risk tolerances on a per scenario and market sector basis. The capacity matrix forms the operational management tool and ensures a consistent top-down approach.

During the planning phase in September and October every year, the Executive Board decides on the capacities for the following year. The aim of the planning process is the utilisation of all risk tolerances up to the respective thresholds. An under-utilisation would correspond to an under-utilisation of the allocated capital. The yellow area between the threshold and limit acts as a buffer for changes in planning over the course of the year, currency developments and model changes.

#### C.1.4 Underwriting risk Life and Health

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

#### Required risk capital for underwriting risks life and health reinsurance

Required risk capital at a confidence level of 99.5 %

in TEUR	2016
Mortality risk	1,637,661
Longevity risk	1,331,006
Morbidity and disability risk	394,849
Lapse risk	603,520
Expense risk	270,916
Diversification	-2,121,401
<b>Underwriting risk life and health</b>	<b>2,116,551</b>

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.

#### **C.1.4.1 Risk mitigation techniques Life & Health**

In the Life & Health business group, retrocessions for the purposes of risk reduction are only used on an extremely limited basis.

An index-based pandemic cover was structured in 2013 as a swap and, since then, has been placed with different investors in various tranches. The overall capacity placed is flexibly collateralised, such that the level of collateralisation can be increased depending on the current WHO pandemic alert phases.

Some large longevity deals are retroceded proportionally and on regular premiums basis, in order to reduce the volatility of the longevity portfolio with regards to particular large contracts. Two sided collateral provisions ensure future liabilities are collateralized if receivables from or to the retrocessionaires resulting from expected business development are projected to exceed an agreed threshold.

The existing pool retrocessions for high sum assured individual policies mainly originate from times when a lower retention per life applied for Hannover Rück. For risk reduction reasons, they are no longer necessary and have been placed in run off.

Some non-European branches use inter-company retrocession for capital relief reasons under local regulatory capital requirements.

All other existing retrocessions are not placed for reasons of active risk reduction, but rather to maintain existing customer relationships and gain access to attractive fronting business or are placed with affiliates in order to reduce HGB train from large financing transactions..

The effectiveness of the retrocessions is closely linked with the default risk of the retrocessionaires. The monitoring of the default risk of retrocessionaires is performed across all business segments of Hannover Rück in a standardized way, using standard systems and methods which are described in C.3.

## C.2 Market risk

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 Rück'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 Rück 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 for market risks

Including Private Equity

in TEUR	2016
Credit and spread risk	2,687,289
Interest rate risk	1,135,400
Foreign exchange risk	1,295,655
Equity risk	1,186,927
Real estate risk	482,482
Diversification	-2,798,599
<b>Market risk</b>	<b>3,989,154</b>

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 % as at the end of the reporting period.

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

in TEUR	Scenario	Portfolio change on a fair value basis
Equity securities and private equity	Share prices -10 %	-63,683
	Share prices -20 %	-127,367
	Share prices +10 %	63,683
	Share prices +20 %	127,367
Fixed-income securities	Yield increase +50 basis points	-419,580
	Yield increase +100 basis points	-819,843
	Yield decrease -50 basis points	438,896
	Yield decrease -100 basis points	897,108
Real Estate	Real estate market values -10 %	-5,110
	Real estate market values +10 %	5,110

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.

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.

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.

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 downside 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 Rück holds further derivative financial instruments to hedge interest rate risks from loans taken out to finance real estate. In addition, Hannover Rück 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.

### C.3 Credit risk

The credit risk or 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 TEUR 295,362 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 Webbased 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 the proportion of assumed risks that we do not retrocede (i. e. that we run in our retention):

#### Gross written premium retained

in %	2016
Hannover Rück	72.4
Property and casualty reinsurance	63.7
Life and health reinsurance	85.4

Alongside traditional retrocessions in property and casualty reinsurance we also transfer risks to the capital market. Please refer also to chapter C.1.3.

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.

## C.4 Liquidity risk

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. We control the total liquidity of our portfolio of government bonds as well as our cash holdings by monitoring the respective liquidity of these portfolio items on a stock exchange every day. These measures serve to effectively reduce the liquidity risk.

For the “total amount of the expected profit included in future premiums” required by Art. 295 (5) of the Delegated Regulation 2015/35 please refer to the Quantitative Reporting Template S.23.01.01., item R0790. We do not use this figure for our liquidity management.

## C.5 Operational risk

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.

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 Rück'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.

Risks associated with the outsourcing of functions can result from such outsourcing of functions, services and/or organisational units to third parties outside Hannover Rück. 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 Hannover Rück 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 Hannover Rück. 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.



## C.6 Other material risks

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

### C.6.1 Emerging 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, political risks and supply chain risks.

### C.6.2 Strategic risks

Strategic risks derive from a possible imbalance between the corporate strategy of Hannover Rück 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.

### C.6.3 Reputational risks

Reputational risks refer to the risk that the trust put in our company by clients, shareholders, employees or the public at large may be damaged. This risk has the potential to jeopardise the business foundation of Hannover Rück. 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 Hannover Rück. 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.

## D. Valuation for Solvency Purposes

### General valuation principles

The valuation of assets and liabilities pursuant to Solvency II is based on economic and market-consistent principles, and takes account of inherent risks.

In line with this concept the assets and liabilities are valued as follows:

- Assets should be valued according to the amount with which they could be exchanged between knowledgeable willing parties in an arm's length transaction.
- Liabilities should be valued according to the amount with which they could be exchanged between knowledgeable willing parties in an arm's length transaction.
- The fair value of money should be reflected, i.e. all cash flows have to be discounted.
- When valuing liabilities, no value adjustments are made in order to account for the creditworthiness of the insurance or reinsurance company.
- The valuation of assets and liabilities is based on the assumption that the company will continue its business activity ("going concern principle").
- Individual assets and liabilities are valued separately.
- Concepts of materiality shall apply. Absent or erroneous information pertaining to items shall be deemed significant if it could influence the individual or aggregated business decisions of the recipients.
- Simplifications may be applied when the method is deemed appropriate for the type, scope and complexity of the inherent risk.

The underlying principle used for determining the market values of assets and liabilities, with the exception of technical provisions, is the valuation principle pursuant to International Accounting Standards, as was adopted by the EU Commission pursuant to the Directive (EC) No. 1606/2002. For example, the guideline for determining fair values pursuant to IFRS 13 serves as a source of orientation.

The value of technical provisions corresponds to the current amount an insurance or reinsurance company would have to pay if they were to transfer their insurance and reinsurance obligations immediately to another insurance or reinsurance company. Technical provisions must be calculated in a prudent, reliable and objective manner, and must display market consistency.

The value of underwriting provisions shall be largely equal to the sum of a "best estimate" and a risk margin:

- The best estimate liability (BEL) is the present value of all future cash flows.
- The calculation of the risk margin is done using a Cost of Capital approach.

Only a small part of the cash flows from underwriting payables can be recreated by financial market products.

Any valuation methods used must always work in sync with Article 75, respectively Articles 77 to 82 and Article 86 of the Directive 2009/138/EC.

## Assessing active markets

In the course of valuing assets, it is necessary to assess as to whether a market is either active or not. Only when a market is active may the current value be taken directly from these markets or derived from comparable assets traded there, in order to determine the market value of assets. If a market cannot be categorised as active, the market value is to be determined using valuation models. Whether or not a market can be viewed as an active market hinges on a discretionary decision regarding the type of financial instruments and local markets. At Hannover Rück this is, however, based on the following, predetermined parameters.

- Business transactions occur with sufficient frequency and corresponding volume, so that price information is continuously available
- The products which are traded on the market are homogeneous
- Contractually willing buyers/sellers can, as a rule, be found at any time
- Prices are freely accessible to the public

An active market is deemed not to exist when, due to the complete and long-term decline in buyers and/or sellers, market liquidity is no longer established. Should transactions be verified as resulting exclusively from forced deals, compulsory liquidations or distressed sales, this is just as much an indicator for an inactive market as are high bid/ask spreads.

In the event that an inactive market has been verified, we use valuation models for the calculation of market values. Please refer to section D.4.

### Note

Rounding differences of +/- one unit can occur in the following tables.

## Solvency II balance sheet as of 31 December 2016

We show our Solvency II balance sheet as of 31 December 2016 on the following two pages.

In the headings of the subsections of “D.1 Assets” and “D.3 Other Liabilities”, we use the item designations from EIOPA for improved readability and clear assignment of the sub-chapters to the corresponding items in the Solvency II balance sheet.

in TEUR	Item	2016
<b>Assets</b>		
Intangible assets	R0030	
Deferred tax assets	R0040	195,404
Pension benefit surplus	R0050	
Property, plant & equipment held for own use	R0060	63,050
Investments (other than assets held for index-linked and unit-linked contracts)	R0070	31,473,858
Property (other than for own use)	R0080	3,992
Holdings in related undertakings, including participations	R0090	9,102,660
Equities	R0100	426,690
Equities - listed	R0110	426,690
Equities - unlisted	R0120	
Bonds	R0130	20,441,252
Government Bonds	R0140	10,578,750
Corporate Bonds	R0150	9,220,190
Structured notes	R0160	214,214
Collateralised securities	R0170	428,098
Collective Investments Undertakings	R0180	899,977
Derivatives	R0190	39,023
Deposits other than cash equivalents	R0200	560,265
Other investments	R0210	
Assets held for index-linked and unit-linked contracts	R0220	
Loans and mortgages	R0230	
Loans on policies	R0240	
Loans and mortgages to individuals	R0250	
Other loans and mortgages	R0260	
Reinsurance recoverables from:	R0270	3,190,315
Non-life and health similar to non-life	R0280	2,646,639
Non-life excluding health	R0290	2,421,967
Health similar to non-life	R0300	224,672
Life and health similar to life, excluding health and index-linked and unit-linked	R0310	543,675
Health similar to life	R0320	361,110
Life excluding health and index-linked and unit-linked	R0330	182,565
Life index-linked and unit-linked	R0340	
Deposits to cedants	R0350	2,232,913
Insurance and intermediaries receivables	R0360	2,213,963
Reinsurance receivables	R0370	71,746
Receivables (trade, not insurance)	R0380	483,539
Own shares (held directly)	R0390	
Amounts due in respect of own fund items or initial fund called up but not yet paid in	R0400	
Cash and cash equivalents	R0410	352,524
Any other assets, not elsewhere shown	R0420	65,309
<b>Total assets</b>	<b>R0500</b>	<b>40,342,621</b>

in TEUR	Item	2016
<b>Liabilities</b>		
Technical provisions – non-life	R0510	18,014,089
Technical provisions – non-life (excluding health)	R0520	16,341,888
TP calculated as a whole	R0530	
Best Estimate	R0540	15,906,394
Risk margin	R0550	435,494
Technical provisions - health (similar to non-life)	R0560	1,672,200
TP calculated as a whole	R0570	
Best Estimate	R0580	1,624,667
Risk margin	R0590	47,534
Technical provisions - life (excluding index-linked and unit-linked)	R0600	4,572,566
Technical provisions - health (similar to life)	R0610	1,104,086
TP calculated as a whole	R0620	
Best Estimate	R0630	994,322
Risk margin	R0640	109,764
Technical provisions – life (excluding health and index-linked and unit-linked)	R0650	3,468,480
TP calculated as a whole	R0660	
Best Estimate	R0670	2,530,338
Risk margin	R0680	938,142
Technical provisions – index-linked and unit-linked	R0690	-23,175
TP calculated as a whole	R0700	
Best Estimate	R0710	-24,094
Risk margin	R0720	919
Contingent liabilities	R0740	
Provisions other than technical provisions	R0750	112,052
Pension benefit obligations	R0760	129,795
Deposits from reinsurers	R0770	517,830
Deferred tax liabilities	R0780	2,097,752
Derivatives	R0790	31,787
Debts owed to credit institutions	R0800	
Financial liabilities other than debts owed to credit institutions	R0810	83,791
Insurance & intermediaries payables	R0820	792,280
Reinsurance payables	R0830	396,941
Payables (trade, not insurance)	R0840	325,333
Subordinated liabilities	R0850	1,696,475
Subordinated liabilities not in BOF	R0860	
Subordinated liabilities in BOF	R0870	1,696,475
Any other liabilities, not elsewhere shown	R0880	24,899
<b>Total liabilities</b>	<b>R0900</b>	<b>28,772,416</b>
<b>Excess of assets over liabilities</b>	<b>R1000</b>	<b>11,570,206</b>

## D.1 Assets

### D.1.1 Intangible assets R0030

in TEUR	Solvency II	Statutory accounts value
Intangible assets	-	75,793

Under Solvency II the definitions in IAS 38 “Intangible Assets” are to be used, including the definition of active markets. Intangible assets are valued at zero, unless they can be sold individually and there is a determined market price on an active market for the same or similar intangible assets.

According to the German Commercial Code (HGB) intangible assets are classified under fixed assets and must be recognised. However, not all intangible assets may be capitalised in the balance sheet. While mandatory capitalisation applies for purchased intangible assets, a right to capitalisation exists pursuant to Section 248 Para 2 Section 1 of the German Commercial Code (HGB) for internally generated items classified under fixed assets, which is not, however, used by the company.

The commercial valuation of intangible assets is executed in line with the regulations stipulated in Sections 341 et seq. of the German Commercial Code (HGB). They are valued at acquisition cost less scheduled depreciation in line with the average useful life.

#### Differences in valuation

The valuation base in the commercial annual accounts stands at TEUR 75,793. This predominantly concerns the future capitalised income value of the Life portfolio of a branch, as well as software. These may not be capitalised in the Solvency II balance sheet for the above-stated reasons.

### D.1.2 Deferred tax assets R0040

in TEUR	Solvency II	Statutory accounts value
Deferred tax assets	195,404	-

Should differences occur between the commercial and tax valuation bases for assets, liabilities and deferred items, which are projected to invert in subsequent financial years, this can on-balance result in a tax relief being stated as a deferred tax asset, or a tax burden being stated as a mandatory deferred tax liability in the trade balance. In the exercising of a voting right pursuant to Section 274 Para 2 of the German Commercial Code (HGB), no deferred tax claims have been stated for a resulting over-funding in the trade balance of Hannover Rück.

The approach to and valuation of deferred tax claims in the Solvency II balance sheet are explained under item “Deferred tax liabilities R0780”.

### D.1.3 Property, plant & equipment held for own use R0060

in TEUR	Solvency II	Statutory accounts value
Property, plant & equipment held for own use	63,050	45,323

Under Solvency II a differentiation is to be made for property regarding whether it is intended for use by the company or a third party. Property is to be classified for the company's own use if the owner uses 50% or more of the square meters. Property values are to be set at their fair value pursuant to Solvency II – irrespective of how the property is to be used.

The market value of internally-used property is calculated as follows: The market price is determined by the price which could be achieved at that point in time, during normal trading in line with statutory regulations and actual market circumstances, while also taking into consideration other attributes and the location of the real estate without accounting for unusual or personal circumstances. The objective evaluation of property, i. e. developed or undeveloped real estate as well as rights to real estate including buildings on third-party real estate, is ensured by way of standardised principles and processes in line with market practices. In this regard, the gross rental method is applied for the determination of fair market values, which is described in further detail in Chapter “D.4 Alternative methods for valuation”.

In line with commercial law, real estate is valued in principle at its cost of procurement, less scheduled depreciation and, when necessary, recognition of impairments pursuant to Section 253 Para 3 of the German Commercial Code (HGB).

The fixtures, fittings and equipment are valued in principle according to their procurement and/or manufacturing cost in line with commercial law, less scheduled depreciation and, if necessary, recognition of impairments. Low-value assets are fully depreciated in the year of acquisition. With regard to the fixtures, fittings and equipment the valuation base pursuant to the Solvency II balance sheet is seen as identical with the valuation base used for annual accounts in line with commercial law. A revaluation is not conducted for reasons of materiality.

#### Differences in valuation:

The difference between the valuation bases found in the Solvency II balance sheet and the annual accounts according to commercial law totalling TEUR 17,727 is particularly attributable to the valuation of shares in the building located on Karl-Wiechert-Allee 50 and 57 in Hannover.

With regard to the fixtures, fittings and equipment the valuation base pursuant to the Solvency II balance sheet is seen as identical with the valuation base used for annual accounts in line with commercial law totalling TEUR 15,902. A revaluation is not conducted for reasons of materiality.

### D.1.4 Property (other than for own use) R0080

in TEUR	Solvency II	Statutory accounts value
Property (other than for own use)	3,992	3,489

The valuation is made in principle in accordance with the description found in “Property, plant & equipment held for own use R0060”.



**Differences in valuation:**

The difference between the Solvency II value and the value listed in the annual accounts pursuant to the German Commercial Code (HGB) as at the balance sheet date amounts to TEUR 503 and is exclusively attributable to the different regulations found in the valuation bases according to the German Commercial Code (HGB) and Solvency II. In line with the German Commercial Code (HGB) amortised acquisition costs are applied less scheduled depreciation; under Solvency II the market values are to be used. In its entirety, the sum of TEUR 503 thus concerns hidden reserves.

**D.1.5 Participations and related undertakings R090**

in TEUR	Solvency II	Statutory accounts value
Participations and related undertakings	9,102,660	6,086,753

Participations are stated at market values under Solvency II. Here, Solvency II balance sheets are generated for affiliates or other participations, or the proportional fair value is calculated within the meaning of Article 13 of the Implementation Regulation (Durchführungsverordnung [DVO]). For reasons of materiality some participations are stated using the IFRS participation value.

Participations and shares/investments in affiliates are recognised pursuant to Section 255 Para 1 of the German Commercial Code (HGB) at their acquisition costs less possible depreciation as a lower fair value pursuant to Section 341 b Para 1 Sentence 2 of the German Commercial Code (HGB) in connection with Section 253 Para 3 Sentence 4 of the German Commercial Code (HGB).

**Differences in valuation:**

A difference in the valuation bases to the amount of TEUR 3,015,907 is predominantly attributable to participations held by the Hannover Re-Group in domestic and foreign reinsurers.

**D.1.6 Equities R0100**

in TEUR	Solvency II	Statutory accounts value
Listed equities	426,689	376,917

Listed equities are valued on the basis of current, publicly available share prices.

The valuation of listed shares is performed fundamentally on an item-by-item basis. The quotation listed on the domestic stock exchange is used as a standard. If it is deemed prudent (e. g. due to a more liquid trading venue) the quotation may be taken from another stock exchange.

Irrespective of the trading venue, a hierarchy of quotation types is applied. Highest priority is allocated to the quotation type "Bid". If this is unavailable the quotation types "Traded" and "Close" are to be used in second and third place respectively.

All applied methods and stipulations are assessed for their topicality and/or appropriateness at least once a year, and adjusted as necessary.

## Differences in valuation:

The difference between the Solvency II value and the value listed in the annual accounts pursuant to the German Commercial Code (HGB) as at the balance sheet date amounts to TEUR 49,772 and is attributable to the different regulations found in the valuation bases according to the German Commercial Code (HGB) and Solvency II. Pursuant to the German Commercial Code (HGB) shares are valued according to the diluted lower value principle in line with the regulations pertaining to fixed assets; under Solvency II market values are to be applied. The figure TEUR 49.772 exclusively concerns hidden reserves.

### D.1.7 Bonds R0130

Government bonds, corporate bonds, structured products and collateralised bonds are predominantly valued on the basis of quoted prices, which have been realised on active markets. If no publicly available price quotations are available or the markets in which they originate are deemed to be inactive, the items are allocated a theoretical valuation.

Market quotations are provided by selected price service agencies, trading information systems or intermediaries (brokers) deemed to be trustworthy. The potential sources of price information available are allocated a ranking within a hierarchy. As a rule, price quotations issued by price service agencies are allocated the highest priority, while those provided by intermediaries are allocated the lowest. Exceptions can occur, for example, for selected market segments / currency combinations.

Irrespective of the trading venue a hierarchy of price types is applied (for further information please refer to “Equities R0100”).

In the event of a theoretical valuation, the present value method is applied as the valuation method for bonds without particular structural characteristics. For structured products, valuation is performed using interest rate models, cf. also “D.4 Alternative methods for valuation”. Furthermore, the net assets valuation method - based on market values - is used.

All applied methods and stipulations are assessed for their topicality and/or appropriateness at least once a year, and adjusted as necessary.

#### D.1.7.1 Government Bonds R0140

in TEUR	Solvency II	Statutory accounts value
Government Bonds	10,578,750	9,841,159

Under Solvency II, investments listed under the following balance sheet items pursuant to the German Commercial Code (HGB) are allocated to this item:

- bearer bonds and other fixed-interest securities
- registered bonds and
- notes receivable.

For the valuation we refer to the detailed explanations in “Bonds R0130”.

#### Differences in valuation:

The difference between the Solvency II value of these investments and their value stated within the annual accounts pursuant to the German Commercial Code (HGB) comes to an overall total of TEUR 737,590.

Here, approximately TEUR 204,393 are attributable to hidden reserves arising from the different valuation bases and TEUR 61,051 to the different approaches to stating accrued interest. Pursuant to Solvency II these are aggregated to the market value (dirty value), while in line with the German Commercial Code (HGB), the accrued interest of a balance sheet item is allocated separately from investments – to accrued items. In addition, a further TEUR 472,146 is attributable to the consolidation of a special fund under Solvency II, which is listed under the German Commercial Code (HGB) as a share certificate under investment funds.

#### D.1.7.2 Corporate Bonds R0150

in TEUR	Solvency II	Statutory accounts value
Corporate Bonds	9,220,190	8,126,239

Under Solvency II, investments listed under the following balance sheet items pursuant to the German Commercial Code (HGB) are allocated to this item:

- bearer bonds and other fixed-interest securities
- registered bonds and
- notes receivable.

For the valuation we refer to the detailed explanations in “Bonds R0130”.

#### Differences in valuation:

The difference between the Solvency II value of these investments and their value stated within the annual accounts pursuant to the German Commercial Code (HGB) comes to an overall total of TEUR 1,093,951.

Here, approximately TEUR 260,484 are attributable to hidden reserves arising from the different valuation bases and TEUR 90,386 to the different approaches to stating accrued interest. Pursuant to Solvency II these are aggregated to the market value (dirty value), while in line with the German Commercial Code (HGB) the accrued interest of a balance sheet item is allocated separately from investments – to accrued items. In addition, a further TEUR 743,080 is attributable to the consolidation of a special fund, which is listed under the German Commercial Code (HGB) as a share certificate under investment funds.

**D.1.7.3 Structured notes R0160**

in TEUR	Solvency II	Statutory accounts value
Structured notes	214,214	207,577

Under Solvency II, investments listed under the following balance sheet items pursuant to the German Commercial Code (HGB) are allocated to this item:

- Registered bonds
- bearer bonds and other fixed-interest securities

In addition to the valuation methods presented in “Bonds R0130” the following interest rate models are used with structured products: the Hull-White Model, the Black-Karasinski Model and the Libor Market Model.

The application of interest rate models is based on the assumption that changes in interest rates follow certain probability distributions and stochastic processes.

**Differences in valuation:**

The difference between the Solvency II value of these investments and their value stated within the annual accounts pursuant to the German Commercial Code (HGB) totals TEUR 6,638.

Here, approximately TEUR 6,159 are attributable to hidden reserves arising from the different valuation bases and TEUR 478 to the different approaches to stating accrued interest. Pursuant to Solvency II these are aggregated to the market value (dirty value), while in line with the German Commercial Code (HGB) the accrued interest of a balance sheet item is allocated separately from investments – to accrued items.

**D.1.7.4 Collateralised securities R0170**

in TEUR	Solvency II	Statutory accounts value
Collateralised securities	428,098	357,365

Under Solvency II, investments listed under the following balance sheet items pursuant to the German Commercial Code (HGB) are allocated to this item:

- bearer bonds and other fixed-interest securities

In addition to the valuation methods stated in “Bonds R0130” it should be noted that special forms of collateralised securities such as, for example, the CDO/CLO are valued externally on the basis of specialist service providers. Given that, as a rule, no public price quotation is available, the market value is derived theoretically using a Mark-to-Model approach. This is done using the valuation model “Intex” (industry standard) and parameterised on the basis of input factors observed in the market.

Collateralisation is recognised as a risk-minimising factor in the valuation; however a spread, migration and default risk is allocated.

For special forms of collateralised papers such as, for example the CDO/CLO assumptions are made regarding the speed of prepayment and recovery rates.

#### Differences in valuation:

The difference between the Solvency II value of these investments and their value stated within the annual accounts pursuant to the German Commercial Code (HGB) totals TEUR 70,733.

Here, approximately TEUR 67,500 are attributable to hidden reserves arising from the different valuation bases and TEUR 3,234 to the different approaches to stating accrued interest. Pursuant to Solvency II these are aggregated to the market value (dirty value), while in line with the German Commercial Code (HGB) the accrued interest of a balance sheet item is allocated separately from investments – to accrued items.

### D.1.8 Collective Investments Undertakings R0180

in TEUR	Solvency II	Statutory accounts value
Collective Investments Undertakings (Investmentfonds)	899,977	1,735,605

Investment funds are valued at the official withdrawal price.

The withdrawal price is regularly calculated and published by the investment company in accordance with prescribed regulations. As a rule, they are also made available automatically by price service agencies. Alternatively, the Net Asset Value (NAV) method can be applied. The Net Asset Value is calculated using the sum of all assets (this case predominantly comprises investments as well as bank balances and deposits) less potential liabilities.

All applied methods and stipulations are assessed for their topicality and/or appropriateness at least once a year, and adjusted as necessary.

#### Differences in valuation:

The difference between the Solvency II value and the value stated in the annual accounts totals EUR -835,629 for investment trust shares.

This is attributable, on the one hand, to the different regulations stipulated by the valuation bases of the German Commercial Code (HGB) and Solvency II and, on the other hand, to the consolidation of a special fund.

Pursuant to the German Commercial Code (HGB) investment trust shares are valued according to the diluted lower value principle in line with the regulations pertaining to fixed assets; under Solvency II market values are to be applied. This subsequently leads to a valuation difference to the amount of TEUR 382,928. This exclusively concerns hidden reserves.

In accordance with the German Commercial Code (HGB) the special fund is recognised as a share certificate under investment funds. In line with Solvency II the consolidated investments are allocated to the respective Solvency II balance sheet items. The shares in this special fund equate

to a value to the amount of TEUR 1,215,227 pursuant to the German Commercial Code (HGB) and are not contained in the Solvency II value.

### D.1.9 Derivatives R0190

in TEUR	Solvency II	Statutory accounts value
Derivatives	39,023	10,556

Derivative financial instruments include financial derivatives, derivatives which are unbundled from insurance contracts pursuant to IFRS 4.7, and derivatives on biometric indices.

Derivative assets (R0190) and Derivative liabilities (R0790) are stated in the Solvency II balance sheet as separate items, unoffset at their market value. The market value of derivatives primarily corresponds with the stock exchange rate. If no stock exchange rates are available, derivatives are valued on the basis of parameters derived from observed market data (interest and spread curves, volatilities, spot and forward rates) within the applied framework of suitable valuation models and methods.

In annual accounts pursuant to the German Commercial Code (HGB) the valuation of financial derivatives and derivatives on biometric indices is done on a Mark-to-Market basis. Derivatives which are part of an insurance contract are valued as part of technical liabilities, and are not stated separately.

#### Differences in valuation:

Hannover Rück concludes central hedging transactions with third parties for some of its subsidiaries. The valuation of these financial derivatives is carried out at fair value. Hannover Rück transfers the cost of these hedging transactions internally to these subsidiaries, so that in their Solvency II balance sheet, derivative assets stand vis-à-vis derivative liabilities in equal amount (TEUR 26,367) as at the balance sheet date on 31 December 2016.

Pursuant to the German Commercial Code (HGB) the company had summarised, as at the reporting date, reciprocal forward foreign-exchange contracts into valuation units under the application of the net hedge presentation method. The reciprocal effects from these valuation units are fully correlated. The application of the net hedge presentation method means that changes in the value of the underlying and hedging transactions are offset and are neither stated in the balance sheet nor in the profit and loss statement, insofar as the occurrence of risks is excluded and the positive and negative changes in value of the underlying and hedging transactions are fully equalised. Thus TEUR 26,367 of the difference in valuation are traced back to the different reporting of the hedging transactions under Solvency II and the German Commercial Code (HGB).

Unbundled derivatives and derivatives on biometric indices are stated individually in the Solvency II balance sheet pursuant to IFRS 4 and IAS 39 as derivative assets (TEUR 1,381) and - with regards to item R0790 - as liabilities (TEUR 5,354) together with the financial derivatives, and are recognised in the profit and loss account at their fair value. The value assessment is made on the basis of theoretical models in the absence of a market value, in particular through the use of the present value method, which is described in Chapter "D.4 Alternative methods for valuation".

**D.1.10 Deposits other than cash equivalents R0200**

in TEUR	Solvency II	Statutory accounts value
Deposits other than cash equivalents	560,265	559,009

Deposits are valued at their redemption rate.

**Differences in valuation:**

The difference between the Solvency II value of these investments and their value stated within the annual accounts pursuant to the German Commercial Code (HGB) totals TEUR 1,257.

The difference is attributable to two effects: on the one hand to hidden reserves stemming from the different valuation bases to an amount of TEUR -40 and, on the other, to the different methods of stating accrued interest to an amount of TEUR 1,297. The accrued interest is allocated in accordance with the German Commercial Code (HGB) to accrued items, while under Solvency II it is allocated to the respective balance sheet item (dirty value).

**D.1.11 Other investments R0210**

in TEUR	Solvency II	Statutory accounts value
Other investments	-	156,447

In the Solvency II balance sheet other investments are to be recognised at their market value. The Solvency II regulations align with IAS 39 (Financial instruments: recognition and valuation). Pursuant to this standard, financial instruments are to be allocated to one of four categories (“Hold until maturity”, “Available for disposal”, “Held for trading purposes” and “Loans and receivables”).

Pursuant to the German Commercial Code (HGB) other investments are valued at their acquisition cost and/or at the lower market value. Investments which are intended to permanently facilitate business operations are valued pursuant to Section 341 b Para 2 of the German Commercial Code (HGB) and in connection with Section 253 Para 3 of the German Commercial Code (HGB) in accordance with the diluted lowest value principle. An assessment regarding the permanence of value adjustments is undertaken on a case-by-case basis.

**Differences in valuation:**

The value stated in the annual accounts pursuant to commercial law, which stands at TEUR 156,447 comprises accrued interest and rental payments. These are listed in the Solvency II balance sheet in the respective investment item, so that no value is listed under other investments.

### D.1.12 Reinsurance recoverables R0270

in TEUR	Solvency II	Statutory accounts value
Life & Health reinsurance	543,675	1,531,020
Property & Casualty reinsurance	2,646,639	4,655,352
<b>Total</b>	<b>3,190,315</b>	<b>6,186,372</b>

The approach used for the calculation of the reinsurance recoverables under Solvency II is identically to the approach used for the BEL calculation, refer to section D.2.1 (Property and Casualty) and section D.2.2 (Life and Health). The business is segmented based on the structure of the reinsurance agreements. A counterparty default adjustment is taken into account if the reinsurance recoverable is an asset, i.e. if the reinsurance recoverable (per counterparty) is positive.

The reinsurance recoverables are calculated per reinsurance contract under HGB.

#### Valuation Difference

The main difference in the valuation of the reinsurance recoverables under Solvency II and HGB arises from the netting of the deposits from reinsurers against the reinsurance recoverables under Solvency II. More information can be found under section D.2.2 (Life and Health) or section 2.1 (Property and Casualty) and “Deposits from reinsurers R0770”.

The remaining differences in the valuation approach between Solvency II and HGB are comparable to the differences in the valuation of the Best Estimate Liability, refer to section „D.2.1 Technical Provisions Property & Casualty“ and section „D.2.2.4 Comparison of the Technical Provision with the HGB Liability“ for the Life and Health segment.

### D.1.13 Deposits to cedants R0350

in TEUR	Solvency II	Statutory accounts value
Deposits to cedants	2,232,913	8,312,224

The economic value of the deposits of the asset side is determined as the balance sheet item “Deposits to cedants”. The deposits are netted against the Best Estimate Liability, if

- the contractual relationship includes an offset clause in case of insolvency of the cedant or
- the amount of the deposit is subject to a significant risk of loss from capital market fluctuations.

Only the remaining portion of the deposits (for which at least one of the two criteria is not entirely fulfilled), is shown on the asset side of the balance sheet. For netted deposits, the cash flows of the deposits (increase, reduction and interest on deposit, respectively) are an integral part of the calculation of the Best Estimate Liability.

#### Valuation Difference

The difference is caused by the partial offsetting of the deposits against the TP.



**D.1.14 Insurance and intermediaries receivables R0360**

in TEUR	Solvency II	Statutory accounts value
Insurance and intermediaries receivables	2,213,963	2,221,988

EIOPA differentiates between receivables as follows:

- Receivables from insurance companies and intermediaries: Amounts due from insurance policyholders, other insurance companies or insurance-related companies, which have not been accounted for in the cash flow of technical provisions, in particular payments which are overdue
- Receivables from reinsurers: Amounts due from reinsurers or reinsurance-related companies, which are not considered in the technical provisions

Pursuant to Solvency II receivables from insurance companies and intermediaries are to be valued at the expected present value of future cash flows, i. e. they are to be discounted using the applicable rate of interest pursuant to Solvency II. Furthermore, the counter-party default risk is to be taken into consideration in the valuation. Both are omitted for reasons of simplification.

Receivables from insurers and intermediaries are recognised at their nominal amounts in line with the German Commercial Code (HGB).

**Differences in valuation:**

Pursuant to the German Commercial Code and/or the Insurance Accounting Decree (RechVersV) no differentiation is made between active reinsurance and retrocession for accounts receivable/payable. The German Commercial Code (HGB) values of this item therefore also comprise the receivables from reinsurers.

The differences in valuation of items R0360 and R0370 are therefore analysed together and amount to TEUR 63,721. They result from the fact that – regarding a group company – a part of the receivable, that is due only in the future, is considered here.

**D.1.15 Reinsurance receivables R0370**

in TEUR	Solvency II	Statutory accounts value
Reinsurance receivables	71,746	-

Pursuant to Solvency II receivables from reinsurers are to be valued at the expected present value of future cash flows, i. e. they are to be discounted using the applicable rate of interest pursuant to Solvency II. Furthermore, the counter-party default risk is to be taken into consideration in the valuation. Both are omitted for reasons of simplification.

Receivables from reinsurers are recognised at their nominal amounts in line with the German Commercial Code (HGB). Valuation reserves have been formed for default risks.

The differences in valuation are stated in the item “Insurance and intermediaries receivables R0360”.

**D.1.16 Receivables (trade, not insurance) R0380**

in TEUR	Solvency II	Statutory accounts value
Receivables (trade, not insurance)	483,539	483,014

Pursuant to Solvency II receivables are to be valued at the expected present value of future cash flows i. e. they are to be discounted using the applicable rate of interest pursuant to Solvency II. Furthermore, the counter-party default risk is to be taken into consideration in the valuation. Both are omitted for reasons of simplification.

Receivables are recognised at their nominal amount pursuant to the German Commercial Code (HGB). Valuation reserves have been formed for default risks.

**Differences in valuation:**

The difference between the items in the Solvency II balance sheet and in the annual accounts pursuant to commercial law to the amount of TEUR 525 are the result of different re-classifications.

**D.1.17 Cash and cash equivalents R0410**

in TEUR	Solvency II	Statutory accounts value
Cash and cash equivalents	352,524	352,354

Cash and cash equivalents include deposits, current account balances with banks and cash in hand. Nominal amounts are recognised in accordance with both Solvency II and the German Commercial Code (HGB).

**Differences in valuation:**

The difference between the items in the Solvency II balance sheet and in the annual accounts in accordance with commercial law predominantly result from reclassifications.

**D.1.18 Any other assets, not elsewhere shown R0420**

In TEUR	Solvency II	Statutory accounts value
Sonstige nicht an anderer Stelle ausgewiesene Vermögenswerte	65,309	70,619

Other assets are to be recognised at their fair value in line with Solvency II. Pursuant to the German Commercial Code (HGB) they are valued at their amortised acquisition costs. The counter-party default risk is to be taken into consideration in the valuation

**Differences in valuation:**

The difference between the items in the Solvency II balance sheet and in the annual accounts pursuant to commercial law to the amount of TEUR -5.310 are the result of different re-classifications.

## D.2 Technical Provisions

The technical provision (TP) under Solvency II is determined as the sum of the best estimate liability (BEL) and the risk margin (RM).

Determining the TP, the risk-free yield curve in line with EIOPA requirements are used. Neither a volatility nor a matching adjustment is applied. Furthermore, the risk-free yield curve is not adjusted as set out in article 308c of the directives 2009/138/EC.

A temporary deduction according to article 308d of the directives 2009/138/EC is not applied.

The concept of calculating the TP “as a whole” is currently not applied to any business written.

For Solvency II purposes, all contracts have to be evaluated over the whole lifetime (ultimate view). In general, a contract boundary is set on that future date where at least one of the following criteria is met:

- The future date where the (re)insurance undertaking has a unilateral right to terminate the contract
- The future date where the (re)insurance undertaking has a unilateral right to reject premiums payable under the contract
- The future date where the (re)insurance undertaking has a unilateral right to amend the premiums or benefits payable under the contract in such a way that the premiums fully reflect the risks.

In case no contract boundaries exist, the projection is based on a look-through approach, i. e. the policies are projected until their natural expiry.

The BEL is shown on a gross basis in the following, i. e. before the reduction of reinsurance recoverables, and the RM is shown on a net basis, i. e. reflecting the risk mitigating effect of retrocessions. This is consistent with the methodology used in the Solvency II balance sheet.

### Best Estimate Liability (BEL)

The calculation of the BEL is based on the projection of future cash in- and outflows like premiums, claims, and expenses. Best estimate assumptions are used in the calculation of the BEL. The expenses consist of direct administration expenses and costs of on-going operations.

As described in Section “Deposits to cedants R0350”, cash flows in connection with funds withheld (increase, decrease or interest on funds withheld) of the underlying business are usually netted against the liability cash flows. Exceptions from this rule are funds held with inherent capital market risk and funds withheld with insufficient offset possibilities (with the respective liabilities). The respective amounts are shown separately on the asset side of the balance sheet, if applicable. The netting of the deposits has no impact on the own funds.

For the Property & Casualty business there are not any material financial options and guarantees (FOGs). For the Life & Health business, there is an immaterial amount of FOGs for US business only. It is included in the BEL.

The projections are done separately for assumed and retroceded business using the same bases, methods and assumptions.

## Risk Margin (RM)

According to article 37 (1) of the delegated acts (EU) 2015/35, a uniform cost-of-capital approach is used for calculating the risk margin.

The Cost of Capital (CoC) factor is 6%. The required capital is the SCR under Solvency II according to Hannover Re's partial internal model (operational risk according to standard formula). The allocation of the SCR to the lines of business reflects the contribution to the SCR (Art. 37). The distributed capital is run off in future years using appropriate risk drivers for each line of business.

Diversification between the Property & Casualty and Life & Health reinsurance business group is not taken into account.

## D.2.1 Technical Provisions Property & Casualty

### D.2.1.1 Value of technical provisions

Technical provisions of property and casualty reinsurance, split by lines of business  
in TEUR

Line of business	BEL	RM	TP	TP HGB	Difference SII and HGB
General liability insurance	2,582,836	58,004	2,640,839	3,335,542	-694,702
Workers' compensation insurance	150,373	4,597	154,970	253,754	-98,784
Income protection insurance	216,488	4,508	220,995	338,468	-117,472
Fire and other damage to property insurance	1,976,227	51,079	2,027,306	2,907,823	-880,517
Motor vehicle liability insurance	662,852	14,777	677,629	990,629	-313,000
Credit and suretyship insurance	910,853	27,065	937,918	1,328,744	-390,826
Marine, aviation, transport	1,049,928	20,859	1,070,787	1,555,098	-484,311
Other motor insurance	245,794	6,946	252,740	286,370	-33,630
Other insurance	131,390	3,270	134,660	205,547	-70,887
Non-proportional health reinsurance	1,257,234	38,412	1,295,646	1,879,663	-584,017
Non-proportional property reinsurance	1,719,817	50,616	1,770,433	2,528,050	-757,617
Non-proportional marine, aviation and transport	1,235,669	37,288	1,272,957	2,061,454	-788,497
Non-proportional casualty reinsurance	5,391,601	165,607	5,557,208	7,904,856	-2,347,648
<b>Total Non-Life Obligation</b>	<b>17,531,061</b>	<b>483,028</b>	<b>18,014,089</b>	<b>25,575,997</b>	<b>-7,561,908</b>

The table above gives an overview of the technical provisions of property and casualty reinsurance.

“Other insurance” comprises the lines of business assistance, legal expenses insurance, medical expense insurance and miscellaneous financial loss.

### D.2.1.2 Valuation of Technical Provisions

#### Bases

For the calculation of the BEL under Solvency II the business of the company is split into homogeneous risk groups such that the nature, scale and complexity of the business is adequately taken into account.

In general, there are no deviations regarding the valuation methods between the different lines of business, therefore the valuation methods described in the following paragraphs are valid for all segments of property and casualty reinsurance.

#### Methods

The evaluation of the BEL is based on the estimation of future cash flows, including all expected (future) cash in- and outflows related to existing obligations taking into account the time value of money. The BEL is calculated separately with respect to the best estimate premium provisions and the best estimate claims provisions.

The best estimate premium provision relates to claim events occurring after the valuation date and hence considers all loss, premium and cost cash flows relating to unearned incepted business taking into account the respective discount effect.

The best estimate claims provision relates to claim events occurring before the valuation date and hence considers all loss, premium and cost cash flows relating to earned business taking into account the respective discount effect.

The Solvency II calculations to determine all relevant cash flows for premium and claims provision reflect a best estimate projection. The calculation of BEL is based on gross data. Therefore, cash flows for premiums, claims and costs are modelled separately.

For the calculation, a whole-contract-view (with respect to the contractual agreements) is taken into account, i. e. all cash in- and outflows are projected to the economic ultimate within the contract boundaries.

The BEL comprises the sum of the discounted cash flows and is aggregated to the minimum lines of business according to Solvency II requirements.

Proportional non-life reinsurance obligations are mapped on the following lines of business under Solvency II:

- Medical expense insurance
- Income protection insurance
- Workers' compensation insurance
- Motor vehicle liability insurance
- Other motor insurance
- Marine, aviation, transport
- Fire and other damage to property insurance
- General liability insurance
- Credit and suretyship insurance
- Legal expenses insurance
- Assistance
- Miscellaneous financial loss

Non-Proportional non-life reinsurance obligations are allocated on

- Non-proportional health reinsurance
- Non-proportional casualty reinsurance
- Non-proportional marine, aviation and transport
- Non-proportional property reinsurance

### Assumptions

For the calculation of the BEL, development pattern and estimated ultimates are applied on the segments which are used for IFRS reserving. The pattern and the ultimates are determined on run-off triangles using state-of-the-art actuarial methods. The triangles are generated using up-to-date and trustworthy data.

With respect to currencies the cash flows are calculated on a minimum granularity level according to the internal model. The cash flows are discounted using the risk-free interest rates provided by EIOPA and converted to the reporting currency using the exchange rate on the valuation date.

Overall, the described valuation bases, methods and assumptions ensure that the calculation of the BEL is proportionate to the nature, scale and complexity of the underlying risks.

### Reinsurance Recoverables

In general, the projection of reinsurance recoverables is undertaken analogously to the principles applied for the calculation of technical (gross) provisions of property and casualty reinsurance.

Reinsurance recoverables are adjusted with regard to the expected loss upon default of the counterparty. This adjustment is determined separately and is based on the valuation of the probability of default per counterparty – whether it be through insolvency or legal dispute – as well as the resulting average loss per default

According to the German Commercial Code (HGB) the demandable amounts from reinsurance contracts are calculated on the basis of reinsurance contracts. Valuation reserves have been formed for default risks.

The differences in the valuation apply analogously to the differences in the valuation of the Best Estimate Liability, please refer to chapter “D.2.1.4 Comparison with other provisions”.

#### D.2.1.3 Level of Uncertainty

The economic valuation of the P&C reserves comprises a certain level of uncertainty. This consists of the uncertainty of the timing of future cash flows, ultimate loss size and retrocessionaire default and is constantly monitored by several assessments.

Besides internal quality assurance and validation work, the actuarial calculations regarding the adequacy of the reserves are also subject to annual quality assurance reviews conducted by external firms of actuaries and auditors.

In the course of the segmentation of the business and the process of assumption setting it is ensured that the economic value of the technical provisions is calculated in a prudent, reliable and objective manner following the indications of Section 75 of the insurance supervision law (VAG).



The nature and complexity of the reinsurance business and inherent reserving risks and data uncertainties is taken adequately into account.

For incorporating a default of the retrocessionaires, an expected default adjustment is made, which is related to the particular rating of the counterparty.

The risk margin, which is allocated to the different lines of business, can be taken as an indicator for the inherent risk of the business.

The calculation of the risk margin includes uncertainty with respect to the amount of solvency capital requirement and with respect to the projection of the future development of the solvency capital requirement. The solvency capital requirement is calculated using the (partial) internal model of the company, which is embedded into the internal control system of the company and is subject to defined validation standards. The assumptions regarding the projection of the future development of the solvency capital requirement are agreed within the company and – as part of the solvency balance sheet - are subject to an external audit of the auditing company.

#### D.2.1.4 Comparison with other provisions

This section outlines the reconciliation of the technical provisions from HGB to the Solvency II opening balance sheet as at 31 December 2016.

The following table quantifies the material revaluation effects.

##### Major revaluation effects in TEUR

Description	2016
<b>Technical provisions property and casualty reinsurance net under HGB</b>	<b>20,920,645</b>
Proportion of business that is ceded to reinsurer under HGB	4,655,352
Reclassification of equalisation reserve	-3,058,021
Discounting of cash flows	-1,086,043
Risk margin	483,028
Other revaluation effects	-3,900,872
<b>Total revaluation effect from HGB to Solvency II</b>	<b>-2,906,556</b>
<b>Technical provisions property and casualty reinsurance under Solvency II</b>	<b>18,014,089</b>

The valuation methods described above hold for all lines of business of property and casualty reinsurance, the different revaluation effects are not split into the Solvency II lines of business.

Under Solvency II safety loadings are inapplicable due to the 'best estimate' calculating principle, whereas under HGB safety loadings are implicitly included in the technical provisions due to the principle of prudence. Similarly, the equalisation reserve is omitted, which is also a technical provision under HGB to compensate uncertainties.

Instead, a risk margin is build up under Solvency II. The risk margin covers the costs of providing an amount of eligible own funds equal to the Solvency Capital Requirement necessary to support the insurance and reinsurance obligations over the lifetime thereof.

The calculation of the technical provisions under HGB follows the realisation principle, which only allows a profit to be reported when a profitable transaction has been legally or at least economically

realised. A deferral as with, for example, unearned premiums under HGB is not applicable under Solvency II.

Solvency II technical provisions are calculated as a probability weighted average, whereas under HGB generally only annuity reserves are discounted.

## D.2.2 Technical Provisions Life & Health

### D.2.2.1 Quantitative Information on Technical Provisions Life & Health

In this section the quantitative information with respect to BEL, RM, TP as well as the statutory liability is provided.

Details with respect to the basis of valuation, the valuation methods, and the main assumptions underlying the calculation of the TP are given in Section „D.2.2.2 Valuation of the technical provisions“.

Material differences between the TP and the statutory liability are explained in Section D.2.2.4.

The following companies comprise the life & health business of Hannover Rück:

- Hannover Rück SE: Home Office and Branches of the Hannover Rück SE (direct written business)
- Hannover Life Reassurance Company of America, Orlando
- Hannover Life Re of Australasia Ltd, Sydney
- Hannover Life Reassurance Africa Ltd, Johannesburg.

The following table provides an overview of the liabilities of the segments. The index linked and unit linked business is shown in the life segment. This information is further explained in the following sections.

#### Technical Provisions Life & Health per line of business in TEUR

Line of Business	BEL	RM	TP	HGB Liability*	Comparison SII and HGB
Life	2,506,245	939,060	3,445,305	3,580,761	-135,456
Health	994,322	109,764	1,104,086	1,252,880	-148,794
<b>Total</b>	<b>3,500,567</b>	<b>1,048,824</b>	<b>4,549,391</b>	<b>4,833,641</b>	<b>-284,250</b>

\*) Net of under Solvency II netted funds withheld

The statutory liability contains inter alia components for claims, expenses and provisions. It deviates from that in the statutory balance sheet shown liability, because in addition deposits are taken into account (in case that they are netted under Solvency II) to increase the comparability.

For certain business, parts of the funds withheld are netted with the Best Estimate Liability (refer to section D.2 and “Deposits to cedants R0350”).

In the following table an overview about the funds withheld under HGB is provided.

#### Funds withheld Life & Health Reinsurance in TEUR

Line of Business	Net funds withheld	Total funds withheld
Life	6,359,906	7,048,108
Health	296,912	446,847
<b>Total</b>	<b>6,656,819</b>	<b>7,494,955</b>

The non-netted funds withheld in the Solvency II balance sheet differ from the non-netted funds withheld which can be determined from the table below, because the figures shown here are based on statutory reporting and there are certain market value adjustments under Solvency II. The funds withheld of the Life & Health business amount to TEUR 2,232,913 under Solvency II and the comparable value under HGB amounts to TEUR 838,132.

#### **D.2.2.2 Valuation of the technical provisions Life & Health**

##### **Valuation Basis**

All business is valued employing current best estimate assumptions. If not mentioned otherwise, all explanations provided in the following sections shall apply for both the life and the health segment. The general methodology used for calculating the BEL, RM and TP is described in Section D.2.2.

For material treaties the BEL is calculated individually per treaty. Smaller treaties are combined in modelling groups. The calculation is based on weighted model points (paragraph “Valuation Methods”) or - if available and material – based on individual policy data. Usually the portfolio development is modelled using appropriate mortality and morbidity tables, respectively, as well as lapse rates. A certain part of the risk premium basis business is modelled based on a loss-ratio based approach.

##### **Valuation Methods**

In the following the valuation methods for calculating the TP are described.

Based on weighted model points (e. g. tariff, gender mix, entry age, policy term, reinsurance conditions) and policy data, respectively, as well as assumptions for mortality, morbidity, lapse and relevant interest rate curves, the portfolio development and all resulting reinsurance profit items (i. e. premium, commission, benefits, reserve changes, and interest) are projected into the future.

Assumed and retroceded business is projected separately. Management expenses are allocated to treaties/modelling groups and projected into the future. Usually the BEL is calculated in the respective treaty currency and using currency specific interest rate curves.

Solvency II admissible simplified methods are not used for calculating the BEL and RM, respectively.

##### **Material Assumptions for the Life and health business (excluding Longevity Business)**

Business is written all over the world with a wide range of different policy types, tariffs and mortality/morbidity tables

For treaties projected individually, the calculation of the BEL is initially based on weighted model points (or even on policy data). The assumptions are monitored when the accounts from the cedants are booked and adjusted, if necessary. The base mortality/morbidity table is usually the table used in pricing. Also here adjustments are made in case that the actual figures materially differ from the expectation, or if other relevant information becomes available.

For the majority of the business in the US and UK market, specific mortality and morbidity assumptions are derived from the Company's base standard tables and updated regularly. For financial solution and morbidity risk solution business in the US market, mortality/morbidity assumptions are set using best estimate pricing assumptions. Also they are validated regularly. The

projection of structured financial transactions in the US market allows for counterparty recapture assumptions. Rates can be increased for certain health business in the US market. This circumstance is reflected in the projections.

Lapse rates are set from the original pricing basis of the treaty and adjusted for actual experience where credible data exists.

The reinsurance conditions of the treaty are reflected in the calculation of the BEL.

With exception of mortality business in the US and UK market, no allowance for future mortality improvement is made.

For smaller treaties modelled in groups, more general assumptions are made. Base mortality/morbidity tables are chosen in order to be appropriate for the respective market covered by the modelling group calculation. Reinsurance conditions are representative for the respective modelling group. The assumptions are monitored based on the booked results per modelling group in the past and adjusted if necessary.

For a small portion of the individually modelled business as well as of the business modelled in groups, expected claims are based on claims ratios. I.e. instead of using explicit mortality/morbidity and lapse rates the claims are estimated via a certain proportion of the premium.

#### **Material Assumptions for the Longevity Business**

The calculation of the BEL is based on policy data. Best estimate base mortality assumptions are set on a treaty level. Best estimate mortality improvement assumptions are set either by treaty as well or by country.

The assumptions are monitored when the accounts from the cedants are booked and adjusted, if necessary. Furthermore, detailed mortality studies are carried out to allow for a comparison between expectation and experience and to adjust if necessary

#### **Reinsurance Recoverables**

For all retrocessions to third party reinsurers where the recoverable represents an asset to Hannover Rück, a default adjustment according to their average rating was included.

In total the reinsurance recoverables are positive (TEUR 543,675), i. e. it is to be seen as an asset for Hannover Rück and reduces the net Solvency II reserves.

The respective statutory reinsurance recoverables amounts to TEUR 1,530,957 and the statutory deposit amounts to TEUR 1,049,356. A balance sheet contraction according to Solvency II principles (of TEUR 536,391) yields to comparable reinsurance recoverables under HGB of TEUR 994,566 which constitutes an asset.

The receivables under Solvency II are lower mainly due to negative recoverables for some reinsurers, which are caused by future payments to the retrocessionaires (from financing business or profitable ceded business).

### D.2.2.3 Risk Assessment

The main area of uncertainty around the level of the TP relates to a potential deviation of actual experience from the underlying assumptions and the sensitivity of cash flows to changes in those assumptions. The Risk Margin can serve as an indicator of such uncertainty.

The most material uncertainty comes in the form of the longevity and mortality business. Longevity and mortality risks are the key driver to the overall level of uncertainty. This also becomes evident from the capital requirements under Solvency II presented in Section E.2.

The longevity business is very dependent on the appropriateness of the underlying mortality tables and mortality improvement assumptions in particular due to the long contractual period. While the premiums are known, the expected claim payments are very sensitive to the underlying mortality table, and more importantly in the later years, the mortality improvement that is applied to the underlying table. The underlying mortality assumptions are based on copious amounts of data and experience studies, both internally held and industry accepted. However, a certain level of judgment is involved in assessing the applicability of historical mortality improvement observations for forward-looking purposes. In general, changes in the interest rates have little impact as to the cash flows; however, they can have a material impact on the discounting of the cash flows.

For the mortality business - similarly to longevity business - small changes in the mortality rates can have significant effects on the claim payments. However, for a significant share of the portfolio, this risk is largely mitigated by profit commission arrangements or by limits regarding the retention of the cedant such that changes in mortality rates would change the underlying cash flow pattern but would have a limited impact on the associated BEL. The mortality rates are well grounded from available data. For longer tailed products, in particular in the US and UK market, mortality improvement and expert setting can also play an important role.

Changes in lapse rates are material for certain products as well, with a varying level of confidence based on product design and the experience available. The directionality of the lapse effect is dependent on the treaty and type of reinsurance used. In aggregate, an increase in lapse rates would be more adverse in that Hannover Re Group would forgo positive expected future cash flows.

Pandemic risk is a tail risk, i.e. a risk with a low probability of occurrence but a potential high impact. It has no impact on the expected mortality claims used for the calculation of the BEL. However, pandemic risk is one of the key drivers of capital requirements and is therefore allowed for in the Risk Margin.

Morbidity risks including Australian business are another driver of uncertainty in the modelling of business.

Financing business is generally not or only moderately exposed to mortality or morbidity risks and thus experiences a low level of uncertainty. Repayment of the outstanding financing amount can diminish on a combination of adverse biometric experience and lapses, but this is accounted for in the Risk Margin. Cedant default risk is also accounted for in the Risk Margin.

### D.2.2.4 Comparison of the Technical Provision with the HGB Liability

In the following, a reconciliation between HGB liability and TP is provided. The reconciliation steps are explained below this table.

**Reconciliation from HGB to Solvency II**  
 in TEUR

Reconciliation Step	Explanation	Amount
<b>(0)</b>	<b>HGB Liability*</b>	<b>4,833,641</b>
(1)	Risk margin	1,048,824
(2)	Further differences in methods/ assumptions	-1,333,074
<b>(3)=(0)+(1)+(2)</b>	<b>Solvency II TP</b>	<b>4,549,391</b>

\*) Net of under Solvency II netted funds withheld

In the following, the sources of the differences in methods and assumptions are described. Effects (a) to (c) cause a reduction in liabilities in the reconciliation from HGB to Solvency II and effect (f) causes an increase. Effects (d) and (e) can have either a positive or negative impact.

(a) The calculation of the BEL includes all future cash flows. For profitable business, this means including future profits. In contrast, the HGB liability does not allow for future profits according to the realization principle in connection with the prudence principle.

(b) For cash financing business, the repayment of the initial commission is included in the BEL, but not allowed to take into account for statutory valuation purposes.

(c) The BEL reflects current best estimate assumptions (e. g., regarding mortality and lapse), whereas the statutory assumptions are based on the prudence principle.

(d) The BEL (and the RM) are discounted with current risk free interest rates, whereas the statutory liabilities are calculated using valuation interest rates.

(e) For some treaties the Solvency II contract boundaries (CB) differ from the contract boundaries under statutory.

(f) For one material US treaty the modified coinsurance (modco) reserve is not reported in the reinsurer's balance sheet under US statutory. Under Solvency II the respective amount is shown as a deposit on the asset side and furthermore increases the BEL. Hence, the BEL is much higher than the statutory reserve. I. e. this kind of business is treated differently: the reserve is reduced by the deposits under statutory, but not under Solvency II. However, the effect on the own funds is identically under both approaches.

## D.3 Other Liabilities

### D.3.1 Provisions other than technical provisions R0750

in TEUR	Solvency II	Statutory accounts value
Provisions other than technical provisions	112,052	125,345

The following items are listed in the Solvency II balance sheet under non-underwriting provisions:

- Semi-retirement
- Annual leave and overtime remuneration
- Bonus payments and anniversary benefits
- Interest incurred for late tax payments
- Outstanding invoices
- Management team and Supervisory Board remuneration
- Impending losses
- Provisions for integration costs or restructuring
- other provisions.

In the Solvency II balance sheet, the fair value calculated pursuant to the regulations stipulated by IAS 37 is applied.

In accordance with commercial law, other provisions are formed according to the necessary settlement value dictated by sound business judgement.

#### Differences in valuation:

The difference in the Solvency II balance sheet and in the annual accounts pursuant to commercial law to the amount of TEUR -13,293 is the result of differing valuation approaches and a different definition respectively.

### D.3.2 Pension benefit obligations R0760

In TEUR	Solvency II	Statutory accounts value
Pension benefit obligations	129,795	83,619

In the Solvency II balance sheet, the valuation of pension payment obligations is made analogously to the valuation pursuant to IAS 19 "Employee Benefits" using the Projected Unit Credit Method, which is described in Chapter "D4. Alternative methods for valuation".

Pursuant to the German Commercial Code (HGB) pension payment obligations are set in principle according to the necessary settlement value based on sound business judgement. They are discounted using the average interest rate of the previous seven years and with an assumed residual maturity of 15 years, as published by the German Central Bank (Deutsche Bundesbank) pursuant to the Regulation on the Discounting of Provisions (RückAbzinsVO). This interest rate currently stands at 4.0%. The pension payment obligations are calculated using the Projected Unit Credit Method. The salary trend, pension trend and performance adjustment due to profit



participation by reinsurers are taken into account. Probabilities of fluctuation are calculated separately depending on age and gender. The calculations are based on Klaus Heubeck's 2005 G mortality tables.

With employee-financed pension commitments, the amount of which is defined exclusively by the fair value of the receivables reinsurance cover (financed by employer) a valuation is made pursuant to Section 253 Para 1 Sentence 3 of the German Commercial Code (HGB). For these commitments, the settlement value corresponds to the fair value of the actuarial reserve plus profit participation.

#### Differences in valuation:

The difference between the valuation bases found in the Solvency II balance sheet and in the annual accounts according to commercial law totalling TEUR 46,176 is particularly attributable to the different interest rates applied for discounting. Pursuant to Solvency II a lower rate of interest is applied, which subsequently leads to a higher valuation for pension payment obligations.

### D.3.3 Deposits from reinsurers R0770

in TEUR	Solvency II	Statutory accounts value
Deposits from reinsurers	517,830	2,286,675

The deposits from reinsurers are determined analogously to the deposits to cedents. The respective methodology is described in section "Deposits to Cedents R0350".

Under Solvency II parts of the deposits from reinsurers are netted against the reinsurance recoverables. Using the same netting approach under HGB, the remaining difference between Solvency II and HGB deposits is stemming from the Life and Health segment and is described in section D.2.2.

### D.3.4 Deferred tax liabilities R0780

in TEUR	Solvency II	Statutory accounts value
Deferred tax liabilities	2,097,752	-

In the annual accounts of Hannover Rück, in line with commercial law, no deferred tax liabilities are stated due to the fact that, on balance, an asset surplus exists and the right to capitalisation is not exercised.

In the Solvency II balance sheet, a deferred tax asset totalling TEUR 195,404 is stated as well as a deferred tax liability to the amount of TEUR 2,097,752. This subsequently leads to a liability surplus, the calculation of which in principle is executed in two steps.

The first step involves the calculation of deferred taxes on the basis of valuation differences between the IFRS balance sheet and the tax balance sheet, within the scope of generating the IFRS balance sheet for the consolidated financial statement of the Hannover Re-Group. Here, deferred tax assets or liabilities are recognised pursuant to IAS 12 (Income taxes) as well as on an intra-year basis pursuant to IAS 34 (Interim financial reporting). Deferred tax assets or liabilities are

generated, insofar as asset or liability items in the IFRS balance sheet are to be recognised at lower or higher amounts than those in the tax balance sheet, and that these differences will invert in future (temporary differences). Temporary differences principally result from valuation differences between a tax balance sheet generated in line with national standards, and both the IFRS balance sheet and consolidation procedures.

Deferred tax assets are also calculated based on tax loss carry forwards and tax credits. Insofar as the deferred taxes relate to items, which are recognised directly in shareholders' equity, the resulting deferred taxes are also directly recognised in shareholders' equity. Value adjustments are made in relation to deferred tax assets as soon as the realisation of the deferred tax assets appears to be no longer probable in future. Deferred taxes are valued using the ratified rates of tax in the respective country, which apply and/or have been decreed as at the reporting due date.

The second step involves the calculation of deferred taxes on the basis of valuation differences between the Solvency II balance sheet and the IFRS balance sheet. As with IAS 12, no discounting is applied in the valuation of deferred taxes in the Solvency II balance sheet.

The result of these two steps is the generation of deferred taxes on the basis of valuation differences between the tax balance sheet and the Solvency II balance sheet.

### D.3.5 Derivatives R0790

in TEUR	Solvency II	Statutory accounts value
Derivatives	31,787	-

Recognition and valuation of obligations pertaining to derivatives are described in "Derivatives R0190".

### D.3.6 Financial liabilities other than debts owed to credit institutions R0810

in TEUR	Solvency II	Statutory accounts value
Financial liabilities other than debts owed to credit institutions	83,791	56,690

Liabilities are to be valued using the expected present value of future cash flows pursuant to Solvency II. For reasons of materiality no discounting is applied.

Liabilities are recognised at their fulfilment amounts in line with commercial law.

#### Differences in valuation:

The difference between the items in the Solvency II balance sheet and in the annual accounts pursuant to commercial law to the amount of TEUR 27,101 is the result of re-classifications.

### D.3.7 Insurance & intermediaries payable R0820

in TEUR	Solvency II	Statutory accounts value
Insurance & intermediaries payable	792,280	-

EIOPA differentiates between payables as follows:

- payables to insurance companies and intermediaries: Amounts due from insurance policyholders, other insurance companies or insurance-related companies, which have not been accounted for in the cash flow of technical provisions from reinsurance, in particular payments which are overdue
- payables to reinsurers: Amounts due from reinsurers or reinsurance-related companies, which are not registered in the underwriting provisions/demandable amounts from reinsurance.

Liabilities are to be valued using the expected present value of future cash flows pursuant to Solvency II. For reasons of materiality no discounting is applied. Liabilities are recognised at their fulfilment amounts in line with commercial law.

Pursuant to the German Commercial Code and/or the Insurance Accounting Decree (RechVersV) no differentiation is made between active reinsurance and retrocession for accounts receivable/payable. The German Commercial Code (HGB) values of the payables are summed under the item "Reinsurance payables R0830". For this reason, the differences in valuation for both items are described jointly in the explanations for R0830.

### D.3.8 Reinsurance payables R0830

in TEUR	Solvency II	Statutory accounts value
Reinsurance payables	396,941	1,037,084

Liabilities are to be valued using the expected present value of future cash flows pursuant to Solvency II. The predominant part of the payables to reinsurers is not discounted for reasons of materiality.

Liabilities are recognised at their fulfilment amounts in line with commercial law.

#### Differences in valuation:

The differences in valuation of items R0820 and R0830 are therefore taken together and amount to TEUR 152,138.

They result from the fact that – regarding a group company – a part of the receivable, that is due only in the future, is considered here.

**D.3.9 Payables (trade, not insurance) R0840**

in TEUR	Solvency II	Statutory accounts value
Payables (trade, not insurance)	325,333	322,403

Liabilities are to be valued using the expected present value of future cash flows pursuant to Solvency II. For reasons of materiality no discounting is applied.

Liabilities are recognised at their fulfilment amounts in line with commercial law.

**Differences in valuation:**

The difference between the items in the Solvency II balance sheet and in the annual accounts pursuant to commercial law to the amount of TEUR 2,930 is the result of different re-classifications.

**D.3.10 Subordinated liabilities in BOF R0870**

in TEUR	Solvency II	Statutory accounts value
Subordinated liabilities in BOF	1,696,475	1,500,000

Subordinated loans can be classified under Solvency II as subordinated own funds, which belong to basic own funds. Subordinated loans represent financial contractual obligations, which are subordinate to all other loan payables and obligations. The creditors have subordinated rights in comparison to all other debt capital providers. In particular in the event of insolvency, the subordinated capital possesses subordinated claims vis-à-vis other debt capital.

The economic valuation for the Solvency II balance sheet can be derived from the fair value approach pursuant to IAS 39; here, adjustments due to changes in the company's own creditworthiness are not accounted for in Solvency II.

An overview of the individual components of the subordinated loans under Solvency II is represented in Chapter "E.1.3.4 Subordinated own funds".

**Differences in valuation:**

Payables – including those which are subordinate – are to be recognised pursuant to Solvency II at the expected present value of future cash flows; they are principally subject to discounting. Pursuant to commercial law, payables are recognised at their fulfilment amounts and are not discounted. This results in a difference between the items in the Solvency II balance sheet and in the annual accounts pursuant to commercial law to the amount of TEUR 196,475.

**D.3.11 Any other liabilities, not elsewhere shown R0880**

in TEUR	Solvency II	Statutory accounts value
Any other liabilities, not elsewhere shown	24,899	65,345

Liabilities are to be valued using the expected present value of future cash flows pursuant to Solvency II. For reasons of materiality no discounting is applied.

Liabilities are recognised at their fulfilment amounts in line with commercial law.

**Differences in valuation:**

The difference between the items in the Solvency II balance sheet and in the annual accounts pursuant to commercial law to the amount of TEUR -40,447 is the result of re-classifications.

## D.4 Alternative methods for valuation

Valuation principles are applied pursuant to Solvency II. In addition to the general valuation principles the following valuation hierarchy is applied to the recognition and valuation of assets and other liabilities.

1. Stock exchange prices observed on active markets are utilised as part of the standard valuation method. The use of stock exchange prices should be based on the criteria stipulated for an active market, which are defined in the International Accounting Standards (IAS).
2. If no stock exchange prices in active markets are available for the assets and liabilities to be valued, stock exchange prices from similar assets and liabilities are used. Adjustments are made in order to reflect the differences.
3. In instances where the criteria for the use of stock exchange prices are not fulfilled, alternative valuation methods are utilised (different methods to those described in number 2). If alternative valuation methods are used these should be – to the greatest extent possible – based on market data, and should contain – to the least extent possible – company-specific influencing factors.

Hannover Rück uses alternative valuation methods for some balance sheet items, which are subsequently described in more detail:

### D.4.1 Gross Rental Method

The gross rental method is applied above all to developed real estate, the ownership of which serves to generate a sustainable income stream, i.e. above and beyond the residual useful life. The gross rental method concerns an indirect sales comparison approach due to the use of the property rate derived from comparative purchase prices.

### D.4.2 Projected Unit Credit Method

This method is applied for calculating pension payment obligations. It is calculated according to actuarial principles and is based on the commitments made by Hannover Rück to retirement, invalid and widowed pensions. The commitments are aligned with the duration of company tenure and the level of salary. This exclusively concerns performance-related pension plans (Defined Benefit Plans). The basis of the valuation is the estimated future salary development of those eligible for a pension. The discounting of benefit entitlements is made by applying the capital market interest rate for the highest rated securities. So-called planned assets do not exist.

### D.4.3 Market value determination for assets which are not listed on a stock exchange

For the calculation of market values for assets which are not listed on a stock exchange, or whose relevant markets are deemed to be inactive at the point in time of valuation (please also refer to Section D “Assessment of active markets”), we use the following valuation models and methods as an alternative. They represent the standard and recognised methods used for the respective assets,

and are used in order to be able to determine a market price in spite of the absence of available valuations from active markets.

Financial instruments	Parameters	Valuation models / methods
Unlisted plain-vanilla bonds, interest rate swaps	Interest rate curves	Present value method
Unlisted, structured bonds	Interest rate curve, volatility surfaces	Hull-White, Black-Karasinski, Libor Market Model among others
Unlisted CDO/CLO	Risk premiums, default rates, prepayment speed and recovery rates	Present value method
Unlisted equities and participations	Acquisition costs, cash flows, EBIT multiples, book value as applicable	Capitalised earnings method, discounted cash flow method, multiples-based approaches
Unlisted fixed income, equity and real estate funds	Audited net asset values (NAV)	Net asset value method
Currency forwards	Interest rate curves, spot and forward rates	Interest rate parity model
Insurance derivatives	Market values, actuarial parameters, interest rate curve	Present value method

The major proportion of inventories valued using alternative valuation methods is valued on the basis of the present value method. This is a predominantly assumption-free method, with which the future cash flows of securities are discounted with the use of suitable interest rate curves. These curves are derived from appropriate market data observed on publicly accessible markets. Broadly speaking, this procedure is premised on the assumption generally accepted in the market that price differences for comparable securities listed in transparent markets with regard to risk, term and creditworthiness are predominantly the result of issuance-specific characteristics and lower liquidity, and are thus deemed immaterial with regard to their influence on market value.

Specific assumptions are made in the valuation of CLOs. They relate to prepayment rates and retrieval rates. The prepayment rate describes the scope available for the instrument to repay to the bearer parts of the outstanding nominal amount before maturity. The retrieval rate is the proportion of the nominal amount repaid to the bearer subsequent to proceedings triggered by a potential default. Both parameters are estimated with an industry-standard fixed value. They do, however, have a comparably limited influence on the valuation. The significant valuation parameters here are either directly observable market data, or are derived there from.

If particular structures are embedded into the security such as, for example, termination rights, further valuation models are also utilised such as, for example, the Hull-White Model or the Libor Market Model. The models calculate, for example, the probability of termination rights being exercised with the help of swaption volatilities. No noteworthy assumptions are utilised here either.

The use of models includes different model risks, which can lead to a degree of valuation uncertainty:

- Modelling risk (appropriateness and suitability of the model)
- Data quality risk (incomplete or obsolete data for the model calibration or parameterisation)

- Risk pertaining to the validity of assumptions and estimations.
- Risks in the model implementation

Through a process of regular validation in which a systematic, quantitative and qualitative assessment of the appropriateness of valuation models and methods is undertaken, model risks can be limited. Furthermore, the model results (for items which are predominantly valued using alternative valuation methods) are continuously subject to plausibility checks as part of daily quality assurance processes.

## D.5 Any other information

Other information which has a significant influence on the valuation for solvency purposes are contingent liabilities and other financial obligations with a residual term longer than five years.

Hannover Rück placed two subordinated bonds in the European capital market via its subsidiary Hannover Finance (Luxembourg) S.A. The bonds from the years 2010 and 2012 each have a nominal volume of TEUR 500,000. The bonds benefit of a guarantee on a subordinated basis of Hannover Rück.

Hannover Rück uses pledges for the purposes of collateralising its underwriting obligations against cedants in the form of letters of credit (LoC), which have been issued by various banks. The overall volume amounts to TEUR 2,301,798. The letters of credit concluded by Hannover Rück protect both Hannover Rück directly and also its subsidiaries.

Hannover Rück is obligated under certain circumstances to defend and uphold the rights and obligations of its subsidiaries against third parties, due to novation clauses in reinsurance contracts. The subsidiaries have formed reserves totalling TEUR 869,586. During the financial year, the issuance of letters of comfort was waived.

Hannover Rück has submitted guarantees for affiliate companies against third parties totalling TUSD 5,251,000. The term of guarantees is determined by the secured obligations held by affiliate companies. Hannover Rück receives guarantee commissions for this. Furthermore, financial obligations against affiliate companies exist amounting to TUSD 300,000 in total.

Hannover Rück receives collateral from its retrocessionaires for the safeguarding of receivables from retroceded business. The provision of collateral by the retrocessionaires takes places in the form of letters of credit (LoCs) and deposits among other forms. 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.

Hannover Rück has residual payment obligations totalling TEUR 823,807 for special investments and shares in affiliate companies.



## E. Capital Management

Please note: Rounding differences of +/- one unit can occur in the following tables.

### E.1 Own Funds

#### E.1.1 Management of own funds

Capital management processes contain a classification of all own funds components with regard to the Solvency II tiering specifications, whether they are basic own funds or ancillary own funds and how effectively available they are. The results of these processes are taken into consideration for the ORSA process, in particular for the medium term capital plan.

In general, it is our objective that our hybrid capital instruments correspond with tier 2 category requirements. In accordance with the total balance sheet approach, hybrid capital is considered as basic own funds. The timing of each issue takes into account the current market conditions and our medium term growth objectives. In case of a required replacement of a subordinated bond, the planning process normally begins a year before the regular call date.

Hannover Rück's economic capital model is used for the evaluation of both the quantitatively measurable individual risks and also the overall risk position. The assumptions and calculation methods for the determination of the risk-bearing capacity of the company are recorded in the documentation of the risk model and in regular reports.

#### E.1.2 Tiering

The classification of own funds with regard to their ability to cover losses represents a central component of regulatory capital requirements pursuant to Solvency II. The individual components of the own funds will be classified into one of three quality classes ("tiers").

Own fund items classified under tier 1 possess the highest degree of quality, due to the fact that they are permanently available. They equalise verifiably unexpected losses, both during ongoing business operations and in the event of a company liquidation. Tier 2 refers to basic own funds and ancillary own funds which possess the ability to equalise losses incurred in the event of a company liquidation. Own fund items, which are not categorised under tier 1 or tier 2, are categorised under tier 3.

#### E.1.3 Basic own funds

The following table displays the composition of basic own funds held by Hannover Rück as of 31. December 2016.

**Structure of basic own funds**

in TEUR	Total	Tier 1 unrestricted	Tier 1 restricted	Tier 2
Ordinary share capital	120,597	120,597	-	-
Share premium account	880,608	880,608	-	-
Reconciliation reserve	9,966,015	9,966,015	-	-
Subordinated own funds	1,696,475	-	543,095	1,153,380
<b>Total</b>	<b>12,663,694</b>	<b>10,967,220</b>	<b>543,095</b>	<b>1,153,380</b>

The individual quality classes are subject to legal limitations in their ability to absorb losses. Against this background, available basic own funds items cannot completely be used to cover Hannover Rück's overall risk position. The proportion of basic own funds that can be called upon to cover the overall risk position pursuant to the SCR and MCR is designated as eligible own funds in the following section.

**Available and eligible own funds**

in TEUR	2016
Total available own funds	12,663,694
Total eligible own funds to meet SCR	12,663,694
Total eligible own funds to meet MCR	11,980,949

As a result of the regulations for the minimum capital requirements (MCR) with regard to the quality requirements on the loss-bearing own funds, own funds of the tier 2 level are allocated proportionately to the corresponding own funds items.

Hannover Rück's basic own funds can be derived from the German Commercial Code (HGB) shareholders' capital. The HGB shareholders' capital reduced by the dividend payments is corrected for differences in values and valuations and supplemented by deferred tax effects between the two balance sheet accounting regulations.

**Transition of HGB shareholders' capital to Solvency II own funds**

in TEUR	2016
Shareholders' capital (HGB)	4,165,716
Dividend	-602,986
Differences in values and valuations Solvency II to HGB:	<b>11,003,311</b>
Equalisation reserve	3,058,021
Deferred acquisition costs and other intangible assets	-76,359
Land, buildings and equipment	18,230
Shares/investments in affiliates and participations	3,015,907
Fixed-interest securities and other investments	996,503
Assets and liabilities from reinsurance business	4,050,049
Miscellaneous non-technical assets and liabilities	-59,040
Deferred taxes on tax differences between Solvency II and HGB	-1,902,348
<b>Available own funds (Solvency II)</b>	<b>12,663,694</b>

### **E.1.3.1 Ordinary share capital**

Ordinary capital of Hannover Rück stands at TEUR 120,597 as of 31 December 2016. The shares have been paid up in full. The share capital is divided into 120,597,134 no-par value registered shares which carry both voting and dividend rights. Every share grants the same right to vote and same dividend entitlement. As at the balance sheet date no treasury shares were held by the company.

During the reporting period, no new shares were issued.

The share capital paid in and the corresponding share premium in the capital reserve form the own funds bearing the highest degree of quality, which can be relied upon to equalise losses in the course of business operations.

### **E.1.3.2 Share premium account**

The share premium in relation to the share capital of Hannover Rück stands at TEUR 880,608 as of 31 December 2016.

The capital reserve is a separate item to which premiums, the amount between the value attained at the point in time of issuance and the value recorded in the share capital, are transferred in accordance with national statutory provisions.

### **E.1.3.3 Reconciliation reserve**

The reconciliation reserve pursuant to Solvency II represents an item of basic own funds attributable (in unlimited capacity) to category tier 1. It primarily comprises the excess of assets over liabilities, adjusted by the ordinary capital, the share premium and shareholder dividend payouts.

At the balance sheet date, the reconciliation reserve was TEUR 9,966,015.

The reconciliation increased by TEUR 793,807 during the reporting period. This change can be traced back to the ordinary business activities in this time period.

The reconciliation reserve represents reserves (in particular retained earnings) less value adjustments (e. g. ring-fenced funds); it does, moreover, harmonise the differences between the accounting valuation pursuant to the German Commercial Code (HGB) and the valuation pursuant to the Directive 2009/138/EC.

### **E.1.3.4 Subordinated own funds**

Hannover Rück held a subordinated debt and two subordinated loans in its portfolio at the balance sheet date, which fulfil the criteria stipulated under Solvency II pertaining to subordinated liabilities, and which thus can be categorised under basic own funds.

During the reporting period, no new subordinated own funds were issued.

**Subordinated own funds**

in TEUR	2016
Subordinated debt	543,095
Subordinated loans	1,153,380
<b>Total</b>	<b>1,696,475</b>

On 15 September 2014 Hannover Rück raised a subordinated debt with a nominal value of TEUR 500,000 from capital markets. This debt is classified under Solvency II as “Grandfathered restricted tier 1” own funds for a transitional period of a maximum of 10 years.

Hannover Finance (Luxembourg) S.A. raised two subordinated debts with a nominal value totalling TEUR 1,000,000 on the capital markets in 2010 and 2012, and subsequently granted loans to Hannover Rück. These loans are classified under Solvency II as (grandfathered) tier 2 own funds of Hannover Rück.

**E.1.4 Transferability**

In the period under consideration, no issues were identified that restrict the transferability of the capital for the covering of the solvency capital requirements. The transferability is checked regularly on the basis of stress tests.

## E.2 Solvency Capital Requirement and Minimum Capital Requirement

### E.2.1 Solvency Capital Requirement

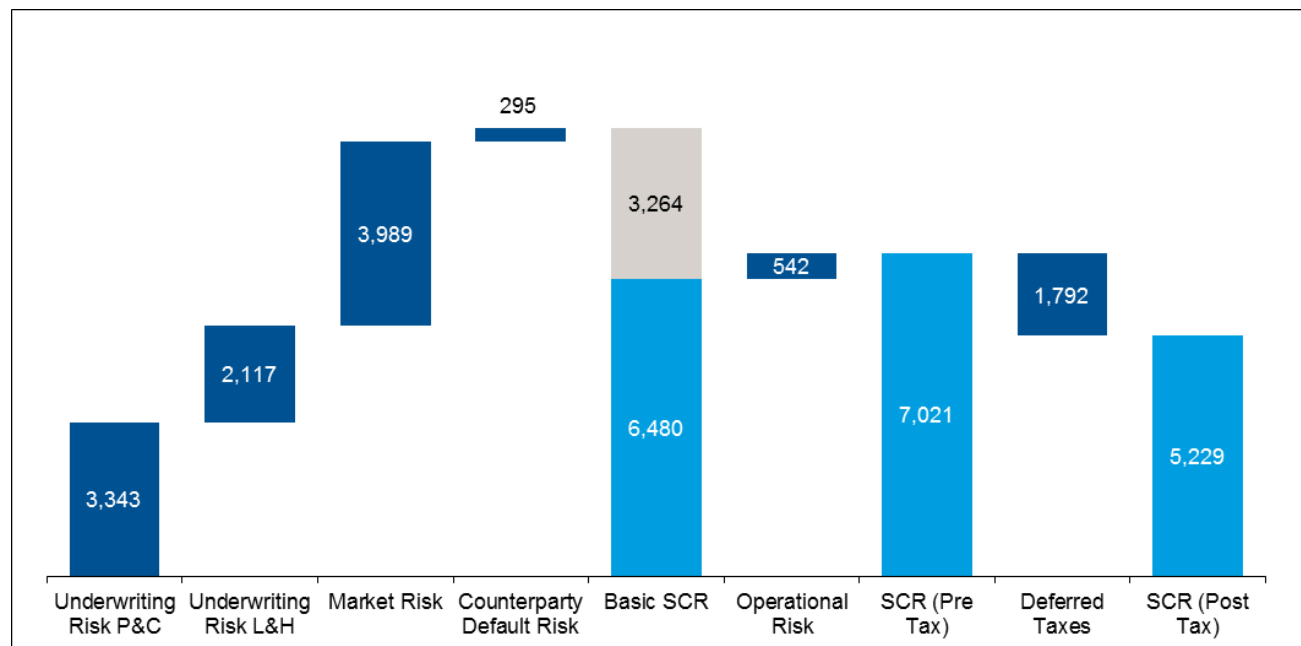
#### E.2.1.1 Solvency Capital Requirement (SCR) contingent on risk category

This chapter deals with the Solvency Capital Requirement and its sources. The risk categories of the partial internal model of Hannover Rück are defined in Chapter E.4.1.4.

Capital requirements per risk category are shown in the following.

The risk presentation of Hannover Rück conforms to the so-called “look-through” method including subsidiary companies and branches. This corresponds with a modelling approach as the whole Hannover Re Group after, i.e. excluding minorities. This means that the perception of the key risk indicators differs from that of the exposures in chapter D, but corresponds with the partial internal model approved by the supervisory authority.

**Solvency Capital Requirement – per risk category**  
in TEUR



**Solvency Capital Requirement (SCR)**

in TEUR

	2016
Solvency Capital Requirement	
Underwriting risk - Property & Casualty	3,342,705
Underwriting risk - Life & Health	2,116,551
Market risk	3,989,154
Counterparty default risk	295,362
<b>Diversification</b>	<b>3,264,174</b>
<b>Basic SCR</b>	<b>6,479,598</b>
Operational risk	541,684
<b>Total risk (pre-tax)</b>	<b>7,021,282</b>
Deferred tax	1,792,008
<b>Total risk (post-tax)</b>	<b>5,229,274</b>

The required capital has been calculated based on the approved partial internal model. The model is subject to close internal quality control and extensive validation. Furthermore, up to now the regular supervisory process with respect to the internal model did not show any material findings in the calculation of the solvency capital requirements. In particular, there are no capital add-ons.

**E.2.2 Minimum Capital Requirement**

The following table displays the Minimum Capital Requirement, the ratio of eligible own funds over the MCR and SCR taking into account the tiering restrictions.

**Ratio of eligible own funds to Minimum / Solvency Capital Requirement**

in TEUR	SCR	MCR
Eligible own funds	12,663,694	11,980,949
SCR/MCR	5,229,274	2,353,173
<b>Ratio of eligible own funds to SCR/MCR</b>	<b>242%</b>	<b>509%</b>

**E.3 Use of the duration-based equity risk sub-module in the calculation of the Solvency Capital Requirement**

Hannover Rück does not use a duration-based equity risk sub-module in the calculation of the Solvency Capital Requirement.

Apart from that, Germany did not make use of the option to allow the utilisation of a duration-based equity risk sub-module.

## E.4 Differences between the standard formula and any internal model used

### E.4.1 The internal model

Hannover Rück uses a Partial Internal Model (PIM) for the calculation of its Solvency Capital Requirement (SCR). The capital requirements for underwriting risk P&C and L&H, market risk and counterparty default risk are determined according to the internal model, the capital requirements for operational risks are calculated according to the Solvency II standard formula.

This section provides further detailed information regarding the internal capital model.

#### E.4.1.1 Introduction

The quantitative risk management of Hannover Rück provides a standardised framework for the assessment and management of all risks and our capital position. The internal model is our key instrument in this context. Operating as a stochastic model it covers all subsidiaries and divisions of Hannover Rück.

The central variable in risk and company management is the economic capital, which is calculated according to market-compatible valuation principles and which forms the basis for calculating the Solvency II capital.

Hannover Rück's internal model reflects all risks which influence the development of economic capital. These are subdivided into underwriting risks, market risks with an influence on investments, counterparty default risks and operational risks. We have determined a series of risk factors for each of these risk categories, for which we define the respective probability distribution. These risk factors include, for example, economic indicators, which are specific to every currency area such as, for example, interest rates, exchange rates and inflation rates, as well as insurance-specific indicators such as the mortality rates in a specific age group of our insurance portfolio in a certain country, or the number of natural disasters in a certain region and the insured loss per disaster.

The specification of probability distributions for the risk factors is based on historical and publicly accessible data, as well as on industry specific and internal (re-)insurance data of Hannover Rück. This procedure is also supplemented by the expertise of internal and external experts. The suitability of probability distributions is subject to regular review by our specialist departments and - more importantly - in conjunction with the regular, company-wide application of the capital model, when risks are evaluated and capital costs are applied. Hannover Rück calculates the required risk capital using the Value at Risk (VaR) approach regarding changes in economic value over a period of one year with a confidence level of 99.97%. This reflects the objective with regard to the one year ruin probability of not surpassing a level of 0.03%. The internal target capitalisation of the Hannover Re Group is therefore significantly higher than the confidence level of 99.5% as required by Solvency II.

The internal capital model is based on current insurance and financial industry techniques. For underwriting risks we can base our calculations on a comprehensive internal data history for the purpose of deriving the probability distribution e. g. for reserving risk. For natural catastrophe risks external models are used. These external models are adjusted in the course of detailed internal reviews in order to better reflect our risk profile. For Life and Health reinsurance business long-term cash flows are determined for different scenarios. The determination of scenarios and probability distributions is based on internal data for all mentioned risks. The internal data base is enriched

with parameters set by experts. These parameters are of importance in particular in the area of extreme events that have not been observed by now.

The aggregation of single risks takes into account dependencies between risk factors. Dependencies arise, e. g., by the reason of market shocks, which affect several market segments at the same time, such as the financial crisis. Furthermore, market phenomena such as pricing cycles can cause dependencies over time. We generally assume that extreme events do not occur all at the same time. The absence of complete dependency is denoted as diversification. Hannover Rück's business model is i. a. based on establishing a preferably well-balanced portfolio such that a significant diversification effect can be generated and the capital can be used efficiently. Diversification effects exist between reinsurance contracts, division, business segments and risks. The capital costs that have to be earned at the level of business units are determined on the basis of the required capital of business segments and divisions and on their contribution to the diversification effect.

#### **E.4.1.2 Basic principles**

A key purpose of the capital model of Hannover Rück relates to the calculation of the required and available capital for Hannover Rück. The principles outlined below are the manifestation of Hannover Rück's risk capacity and how it is consistently measured within a quantitative framework.

**Target variable:** Our main target variable for the calculation of risk based capital is the change in net asset value in relation to the expected change.

**Time horizon:** For calculating the required capital a one year time horizon is considered.

**Risk measure:** We use two statistics to measure and allocate risk capital, namely the Value-at-Risiko (VaR) and the Expected Shortfall (ES).

**Ongoing business operations:** We operate on the premise of an ongoing trading organisation and the continuing business operations of Hannover Rück, in order to calculate the company's sufficient capitalisation until the period end.

**New business assumptions:** We consider one year of new business. This assumption holds for all lines of business.

**Stochastic simulation:** The capital model of Hannover Rück is based on stochastic simulations, i. e. we generate discrete approximations for the probability distribution of our target variables.

**Consolidation method:** The capital model of Hannover Rück comprises all business units by using the consolidation method, as also stipulated under International Accounting Standards (IAS). Deduction and aggregation as defined under Solvency II is not applied.

The capital model uses a stochastic simulation model for the purposes of implementing these principles, which combines random variables depending on the company-legal dependency structure.

#### **E.4.1.3 Main applications**

Hannover Rück considers its Economic Capital Model (ECM) as key component of its enterprise risk management system for the purposes of analysing its overall risk position, the quantification of



its risks and the determination of the required capital in order to face these risks. Applications include in particular:

- financial condition analysis,
- monitoring of risk figures,
- capital allocation,
- investment optimisation and
- evaluation of reinsurance programmes.

#### **E.4.1.4 Scope of the model**

This section provides an overview of the risks, which are currently captured in the capital model of Hannover Rück. This covers, among other things, the following risk dimensions:

- the sources of risk, i. e. the risk landscape of Hannover Rück and
- the individual (legally independent) entities, which have taken over the risks.

The complete risk landscape of Hannover Rück consists of the main categories of underwriting risks (Property & Casualty, Life & Health), market risks, counterparty default risks, operational risks and other risks.

The risk categories addressed by the ECM of Hannover Rück using a quantitative model are the categories underwriting risk life, underwriting risk non-life, market risk, counterparty default risk and operational risk. These risks and their interactions are accounted for in the presentation of target variables through the application of stochastic simulation models. It has to be considered that concentration risk is taken into account in the calculations of required capital for each risk category.

The risk presentation of Hannover Rück follows the so-called “look-through” method including subsidiary companies and branches. This corresponds with a modelling approach as the whole Hannover Re-Group after, i. e. excluding minorities. This means that the perception of the key risk indicators differs from that of the exposures in chapter D, but corresponds with the partial internal model approved by the supervisory authority. For more on the structure of the Hannover Re-Group, please also refer to Section “A.1.4 Group structure”.

These entities each have their own sub-model for underwriting risks within the ECM. The market risk model comprises the capital investments under own management by these entities, as well as the assets and investments of all non-insurance entities.

#### **E.4.2 Calculation techniques for the purposes of integrating results into the standard formula**

The Solvency Capital Requirements (SCR) for operational risk is calculated according to the standard formula of Solvency II. It is integrated into the results of the partial internal model pursuant to the standard methods described in Article 239 of the delegated regulation. In particular, the application of this method signals the fulfilment of the requirements of A (2) included in the ANNEX XVIII of the delegated regulation. The adjustment of the loss-absorbing capacity of deferred taxes is within the scope of the partial internal model.

#### E.4.2.1 Type and suitability of data

Hannover Rück has established a comprehensive internal control system, in order to guarantee the quality and topicality of data. All data used in the internal model is subject to the data standards for internal models. This design is appropriate, in order to be able to supply current data, which is free from significant errors.

Hannover Rück utilises the relevant historical company data, in order to calibrate the model - above all for the underwriting risk. Generally speaking, company data relating to insurance performance within non-life is available for more than 30 years. This is deemed sufficiently historical information. However, due to the particular characteristics of early underwriting years, e. g. low premium volume, changing business segmentation or non-representative market segments, only portions of this data are used as part of the internal model calibration.

Internal company data, above all for the model validation, is used for underwriting risk pertaining to life and health insurance, due to the fact that only a limited number of significant (and thus rare) deviations are available that are suitable for the calibration of extreme events.

Long-term market data is used for the calibration of the market and counterparty risk model.

#### E.4.3 Comparison between the internal model and the standard formula

The standard formula is designed to fit a typical European (or EEA) primary insurer. As a consequence, mainly European data has been used to calibrate the standard formula.

There are many aspects which make Hannover Rück quite different from a typical European primary insurer, in particular, its access to global diversification across regions, markets, cedents and all lines of business. The difference in diversification is the driving force of differences between the standard formula and the internal model for life, health and non-life underwriting risk. It has also some influence on counterparty and market risk.

The standard formula offers a detailed module for the quantification of EU natural catastrophe risk. Due to its focus it does offer a very broad, premium-based approximation for non-EU and non-proportional natural catastrophe risk, only. Hannover Rück assumes more than 70% of its natural catastrophe risk outside the EU and thus has a detailed internal model for such risks.

The standard formula is designed for a single primary insurer and thus has no module to recognize diversification between different primary insurers. The latter is an important feature of Hannover Rück's internal model and founded on Hannover Rück's internal data analysis.

The standard formula allows for appropriate recognition of some but not all reinsurance structures. For example multi-line covers are not fully effective. The internal model is able to recognize all retrocession structures currently implemented by Hannover Rück.

Technically, the internal model is a stochastic approach while the standard formula is factor-based (deterministic) approach. The concept for underlying risk factors is in many areas similar, e.g. for market and counterparty risk but in general more detailed in Hannover Rück's internal model. Hannover Rück's internal model allows for bottom-up, non-linear dependency structures within and between market, underwriting, operational and counterparty risk.

## **E.5 Non-compliance with the Minimum Capital Requirement and non-compliance with the Solvency Capital Requirement**

Both solvency and minimum capital requirements were complied with at all times during the period under consideration.

## **E.6 Any other information**

Other information that has a significant influence on capital management is not available.

## Abbreviations and glossary

**AC:** Finance and Audit Committee

**AF:** Actuarial function

**BaFin:** Bundesanstalt für Finanzdienstleistungsaufsicht, Federal Financial Supervisory Authority

**BEL:** Best Estimate Liability

**BOF:** Basic own funds

**CDO:** Collateralized Debt Obligation

**CLO:** Collateralized Loan Obligation

**CEO:** Chief Executive Officer

**CFO:** Chief Financial Officer

**ECM:** Economic Capital Model

**EBIT:** Earnings before interest and taxes

**EIOPA:** European Insurance and Occupational Pensions Authority

**E+S Rück:** E+S Rückversicherung AG, Hannover

**GA:** Group Auditing, internal audit of the Hannover Re Group

**Hannover Rück:** Hannover Rück SE, Hannover, Germany

**HDI:** HDI Haftpflichtverband der Deutschen Industrie V.a.G., Hannover, Germany

**HGB:** Handelsgesetzbuch, German Commercial Code

**Home Office:** The expression „Home Office“ comprises Hannover Rück and E+S Rück.

**IAS:** International Accounting Standard

**ICS:** Internal Control System

**IFRS:** International Financial Reporting Standards

**L&H:** Life and Health

**MCR:** Minimum Capital Requirement

**NAV:** Net asset value

**ORSA:** Own Risk and Solvency Assessment

**P&C:** Property and Casualty

**RechVersV:** Verordnung über die Rechnungslegung von Versicherungsunternehmen (Versicherungsunternehmens-Rechnungslegungsverordnung), Insurance accounting regulation

**RM:** Risk margin

**RMF:** Risk Management Function

**SCR:** Solvency Capital Requirement

**Talanx:** Talanx AG, Hannover

**TP:** Technical provisions

**VAG:** Gesetz über die Beaufsichtigung der Versicherungsunternehmen (Versicherungsaufsichtsgesetz), Insurance Supervision Act

**VaR:** Value-at-Risk

**WpHG:** Gesetz über den Wertpapierhandel (Wertpapierhandelsgesetz), German Securities Trading Act

**WpÜG:** Wertpapiererwerbs- und Übernahmegesetz, German Securities Acquisition and Takeover Act

## Quantitative Reporting Templates

All values are shown in TEUR if not otherwise stated.

Values below TEUR 0.5 are displayed as “0”. Empty cells represent the fact that Hannover Rück has no value to state.

Rounding differences of +/- one unit can occur in the following tables.

Hannover Rück makes no use of transitionals, volatility adjustment and matching adjustment. Thus the template “S.22.01.21 Impact of long term guarantees and transitional measures” does not apply.

**S.02.01.02****Balance sheet****Assets**

Intangible assets
Deferred tax assets
Pension benefit surplus
Property, plant & equipment held for own use
Investments (other than assets held for index-linked and unit-linked contracts)
Property (other than for own use)
Holdings in related undertakings, including participations
Equities
Equities - listed
Equities - unlisted
Bonds
Government Bonds
Corporate Bonds
Structured notes
Collateralised securities
Collective Investments Undertakings
Derivatives
Deposits other than cash equivalents
Other investments
Assets held for index-linked and unit-linked contracts
Loans and mortgages
Loans on policies
Loans and mortgages to individuals
Other loans and mortgages
Reinsurance recoverables from:
Non-life and health similar to non-life
Non-life excluding health
Health similar to non-life
Life and health similar to life, excluding health and index-linked and unit-linked
Health similar to life
Life excluding health and index-linked and unit-linked
Life index-linked and unit-linked
Deposits to cedants
Insurance and intermediaries receivables
Reinsurance receivables
Receivables (trade, not insurance)
Own shares (held directly)
Amounts due in respect of own fund items or initial fund called up but not yet paid in
Cash and cash equivalents
Any other assets, not elsewhere shown
<b>Total assets</b>

	Solvency II
	C0010
<b>R0030</b>	
<b>R0040</b>	195,404
<b>R0050</b>	
<b>R0060</b>	63,050
<b>R0070</b>	31,473,858
<b>R0080</b>	3,992
<b>R0090</b>	9,102,660
<b>R0100</b>	426,690
<b>R0110</b>	426,690
<b>R0120</b>	
<b>R0130</b>	20,441,252
<b>R0140</b>	10,578,750
<b>R0150</b>	9,220,190
<b>R0160</b>	214,214
<b>R0170</b>	428,098
<b>R0180</b>	899,977
<b>R0190</b>	39,023
<b>R0200</b>	560,265
<b>R0210</b>	
<b>R0220</b>	
<b>R0230</b>	
<b>R0240</b>	
<b>R0250</b>	
<b>R0260</b>	
<b>R0270</b>	3,190,315
<b>R0280</b>	2,646,639
<b>R0290</b>	2,421,967
<b>R0300</b>	224,672
<b>R0310</b>	543,675
<b>R0320</b>	361,110
<b>R0330</b>	182,565
<b>R0340</b>	
<b>R0350</b>	2,232,913
<b>R0360</b>	2,213,963
<b>R0370</b>	71,746
<b>R0380</b>	483,539
<b>R0390</b>	
<b>R0400</b>	
<b>R0410</b>	352,524
<b>R0420</b>	65,309
<b>R0500</b>	40,342,621

	Solvency II
	C0010
<b>Liabilities</b>	
Technical provisions – non-life	<b>R0510</b> 18,014,089
Technical provisions – non-life (excluding health)	<b>R0520</b> 16,341,888
TP calculated as a whole	<b>R0530</b>
Best Estimate	<b>R0540</b> 15,906,394
Risk margin	<b>R0550</b> 435,494
Technical provisions - health (similar to non-life)	<b>R0560</b> 1,672,200
TP calculated as a whole	<b>R0570</b>
Best Estimate	<b>R0580</b> 1,624,667
Risk margin	<b>R0590</b> 47,534
Technical provisions - life (excluding index-linked and unit-linked)	<b>R0600</b> 4,572,566
Technical provisions - health (similar to life)	<b>R0610</b> 1,104,086
TP calculated as a whole	<b>R0620</b>
Best Estimate	<b>R0630</b> 994,322
Risk margin	<b>R0640</b> 109,764
Technical provisions – life (excluding health and index-linked and unit-linked)	<b>R0650</b> 3,468,480
TP calculated as a whole	<b>R0660</b>
Best Estimate	<b>R0670</b> 2,530,338
Risk margin	<b>R0680</b> 938,142
Technical provisions – index-linked and unit-linked	<b>R0690</b> -23,175
TP calculated as a whole	<b>R0700</b>
Best Estimate	<b>R0710</b> -24,094
Risk margin	<b>R0720</b> 919
Contingent liabilities	<b>R0740</b>
Provisions other than technical provisions	<b>R0750</b> 112,052
Pension benefit obligations	<b>R0760</b> 129,795
Deposits from reinsurers	<b>R0770</b> 517,830
Deferred tax liabilities	<b>R0780</b> 2,097,752
Derivatives	<b>R0790</b> 31,787
Debts owed to credit institutions	<b>R0800</b>
Financial liabilities other than debts owed to credit institutions	<b>R0810</b> 83,791
Insurance & intermediaries payables	<b>R0820</b> 792,280
Reinsurance payables	<b>R0830</b> 396,941
Payables (trade, not insurance)	<b>R0840</b> 325,333
Subordinated liabilities	<b>R0850</b> 1,696,475
Subordinated liabilities not in BOF	<b>R0860</b>
Subordinated liabilities in BOF	<b>R0870</b> 1,696,475
Any other liabilities, not elsewhere shown	<b>R0880</b> 24,899
<b>Total liabilities</b>	<b>R0900</b> 28,772,416
<b>Excess of assets over liabilities</b>	<b>R1000</b> 11,570,206



S.05.01.02

Premiums, claims and expenses by line of business

		Line of Business for: <b>non-life insurance and reinsurance obligations (direct business and accepted proportional reinsurance)</b>								
		Medical expense insurance	Income protection insurance	Workers' compensation insurance	Motor vehicle liability insurance	Other motor insurance	Marine, aviation and transport insurance	Fire and other damage to property insurance	General liability insurance	Credit and suretyship insurance
		<b>C0010</b>	<b>C0020</b>	<b>C0030</b>	<b>C0040</b>	<b>C0050</b>	<b>C0060</b>	<b>C0070</b>	<b>C0080</b>	<b>C0090</b>
<b>Premiums written</b>										
Gross - Direct Business	<b>R0110</b>									
Gross - Proportional reinsurance accepted	<b>R0120</b>	26,002	163,708	102,826	413,173	295,112	380,309	2,062,757	606,711	585,060
Gross - Non-proportional reinsurance accepted	<b>R0130</b>									
Reinsurers' share	<b>R0140</b>	109	13,088	55,380	236,266	73,485	213,973	1,463,036	198,745	142,503
Net	<b>R0200</b>	25,894	150,620	47,445	176,907	221,627	166,337	599,721	407,966	442,558
<b>Premiums earned</b>										
Gross - Direct Business	<b>R0210</b>									
Gross - Proportional reinsurance accepted	<b>R0220</b>	12,620	167,354	92,744	566,576	298,153	404,753	1,969,805	582,642	552,733
Gross - Non-proportional reinsurance accepted	<b>R0230</b>									
Reinsurers' share	<b>R0240</b>	117	13,800	59,300	287,093	75,079	218,008	1,456,784	197,237	123,708
Net	<b>R0300</b>	12,503	153,554	33,444	279,483	223,074	186,745	513,022	385,404	429,025
<b>Claims incurred</b>										
Gross - Direct Business	<b>R0310</b>									
Gross - Proportional reinsurance accepted	<b>R0320</b>	12,888	120,894	70,512	364,666	193,509	243,344	1,354,380	442,039	350,139

		Line of Business for: <b>non-life insurance and reinsurance obligations (direct business and accepted proportional reinsurance)</b>								
		Medical expense insurance	Income protection insurance	Workers' compensation insurance	Motor vehicle liability insurance	Other motor insurance	Marine, aviation and transport insurance	Fire and other damage to property insurance	General liability insurance	Credit and suretyship insurance
		<b>C0010</b>	<b>C0020</b>	<b>C0030</b>	<b>C0040</b>	<b>C0050</b>	<b>C0060</b>	<b>C0070</b>	<b>C0080</b>	<b>C0090</b>
Gross - Non-proportional reinsurance accepted	<b>R0330</b>									
Reinsurers' share	<b>R0340</b>	93	8,197	60,541	184,186	57,524	109,391	881,527	101,152	81,214
Net	<b>R0400</b>	12,795	112,696	9,971	180,480	135,985	133,953	472,853	340,887	268,926
<b>Changes in other technical</b>										
Gross - Direct Business	<b>R0410</b>									
Gross - Proportional reinsurance accepted	<b>R0420</b>		-2,712				-23	30	5	
Gross - Non- proportional reinsurance accepted	<b>R0430</b>									
Reinsurers'share	<b>R0440</b>						-4	4	1	
Net	<b>R0500</b>		-2,712				-19	25	4	
<b>Expenses incurred</b>	<b>R0550</b>	2,205	49,937	14,792	60,225	82,099	68,903	204,642	140,170	182,050
<b>Other expenses</b>	<b>R1200</b>									
<b>Total expenses</b>	<b>R1300</b>									

		Line of Business for: <b>non-life insurance and reinsurance obligations (direct business and accepted proportional reinsurance)</b>			Line of business for: <b>accepted non-proportional reinsurance</b>				Total
		Legal expenses insurance	Assistance	Miscellaneous financial loss	Health	Casualty	Marine, aviation, transport	Property	
		<b>C0100</b>	<b>C0110</b>	<b>C0120</b>	<b>C0130</b>	<b>C0140</b>	<b>C0150</b>	<b>C0160</b>	<b>C0200</b>
<b>Premiums written</b>									
Gross - Direct Business	<b>R0110</b>								
Gross - Proportional reinsurance accepted	<b>R0120</b>	1,428	690	84,930					4,722,707
Gross - Non-proportional reinsurance accepted	<b>R0130</b>				149,182	731,222	295,310	1,251,775	2,427,489
Reinsurers' share	<b>R0140</b>	234	108	14,248	3,066	8,236	44,793	126,611	2,593,881
Net	<b>R0200</b>	1,194	582	70,682	146,116	722,985	250,517	1,125,164	4,556,314
<b>Premiums earned</b>									
Gross - Direct Business	<b>R0210</b>								
Gross - Proportional reinsurance accepted	<b>R0220</b>	3,334	690	78,297					4,729,700
Gross - Non-proportional reinsurance accepted	<b>R0230</b>				149,996	731,457	298,307	1,248,467	2,428,228
Reinsurers' share	<b>R0240</b>	526	108	13,379	3,066	19,807	43,889	111,155	2,623,055
Net	<b>R0300</b>	2,808	582	64,918	146,931	711,650	254,418	1,137,312	4,534,873

		Line of Business for: <b>non-life insurance and reinsurance obligations (direct business and accepted proportional reinsurance)</b>			Line of business for: <b>accepted non-proportional reinsurance</b>				Total
		Legal expenses insurance	Assistance	Miscellaneous financial loss	Health	Casualty	Marine, aviation, transport	Property	
		<b>C0100</b>	<b>C0110</b>	<b>C0120</b>	<b>C0130</b>	<b>C0140</b>	<b>C0150</b>	<b>C0160</b>	
<b>Claims incurred</b>									
Gross - Direct Business	<b>R0310</b>								
Gross - Proportional reinsurance accepted	<b>R0320</b>	4,065	617	52,007					3,209,061
Gross - Non-proportional reinsurance accepted	<b>R0330</b>				175,703	453,188	68,814	865,622	1,563,327
Reinsurers' share	<b>R0340</b>	604	90	9,961	1,145	-5,581	8,188	137,785	1,636,019
Net	<b>R0400</b>	3,460	527	42,046	174,558	458,769	60,626	727,837	3,136,369
<b>Changes in other technical</b>									
Gross - Direct Business	<b>R0410</b>								
Gross - Proportional reinsurance accepted	<b>R0420</b>								-2,701
Gross - Non- proportional reinsurance accepted	<b>R0430</b>								
Reinsurers'share	<b>R0440</b>								1
Net	<b>R0500</b>								-2,702
<b>Expenses incurred</b>	<b>R0550</b>	184	182	25,342	38,438	181,396	43,958	144,443	1,238,966
<b>Other expenses</b>	<b>R1200</b>								
<b>Total expenses</b>	<b>R1300</b>								1,238,966

		Line of Business for: life insurance obligations					Life reinsurance obligations		Total	
		Health insurance	Insurance with profit participation	Index-linked and unit-linked insurance	Other life insurance	Annuities stemming from non-life insurance contracts and relating to health insurance obligations	Annuities stemming from non-life insurance contracts and relating to insurance obligations other than health insurance obligations	Health reinsurance	Life reinsurance	
		C0210	C0220	C0230	C0240	C0250	C0260	C0270	C0280	C0300
<b>Premiums written</b>										
Gross	<b>R1410</b>							1,312,714	3,454,167	4,766,880
Reinsurers' share	<b>R1420</b>							144,566	553,108	697,674
Net	<b>R1500</b>							1,168,148	2,901,058	4,069,206
<b>Premiums earned</b>										
Gross	<b>R1510</b>							1,276,890	3,414,652	4,691,542
Reinsurers' share	<b>R1520</b>							141,197	550,450	691,646
Net	<b>R1600</b>							1,135,693	2,864,202	3,999,895
<b>Claims incurred</b>										
Gross	<b>R1610</b>							874,838	3,909,199	4,784,036
Reinsurers' share	<b>R1620</b>							40,729	973,770	1,014,499
Net	<b>R1700</b>							834,108	2,935,429	3,769,537
<b>Changes in other technical</b>										
Gross	<b>R1710</b>							-45,568	757,706	712,138
Reinsurers' share	<b>R1720</b>							-36,306	413,947	377,641
Net	<b>R1800</b>							-9,263	343,759	334,497
<b>Expenses incurred</b>	<b>R1900</b>							301,127	427,348	728,475
<b>Other expenses</b>	<b>R2500</b>									
<b>Total expenses</b>	<b>R2600</b>									728,475

S.05.02.01

Premiums, claims and expenses by country

	Home Country	Top 5 countries (by amount of gross premiums written) - non-life obligations					Total Top 5 and home country
	C0010	C0020	C0030	C0040	C0050	C0060	C0070
R0010		CA	CN	FR	GB	US	
	C0080	C0090	C0100	C0110	C0120	C0130	C0140
<b>Premiums written</b>							
Gross - Direct Business	R0110						
Gross - Proportional reinsurance accepted	R0120	253,527	129,853	294,840	150,895	498,046	1,020,254
Gross - Non-proportional reinsurance accepted	R0130	3,182	127,085	23,022	132,543	292,016	1,058,794
Reinsurers' share	R0140	846,445	-373	3,108	28	45,203	99,883
Net	R0200	-589,736	257,311	314,754	283,410	744,859	1,979,165
<b>Premiums earned</b>							
Gross - Direct Business	R0210						
Gross - Proportional reinsurance accepted	R0220	250,966	117,823	337,764	155,380	523,413	948,425
Gross - Non-proportional reinsurance accepted	R0230	2,577	127,027	23,116	135,779	290,718	1,065,747
Reinsurers' share	R0240	842,523	-373	3,101	5	45,013	115,765
Net	R0300	-588,980	245,223	357,779	291,153	769,117	1,898,407
<b>Claims incurred</b>							
Gross - Direct Business	R0310						
Gross - Proportional reinsurance accepted	R0320	201,258	85,422	253,327	84,661	345,735	646,909
Gross - Non-proportional reinsurance accepted	R0330	7,115	205,367	19,410	72,278	139,876	584,944
Reinsurers' share	R0340	482,205	14	2,373	1,289	9,237	136,817
Net	R0400	-273,832	290,774	270,364	155,650	476,375	1,095,036

	Home Country	Top 5 countries (by amount of gross premiums written) - non-life obligations					Total Top 5 and home country
	C0010	C0020	C0030	C0040	C0050	C0060	C0070
<b>R0010</b>	<del>                    </del>	CA	CN	FR	GB	US	<del>                    </del>
	C0080	C0090	C0100	C0110	C0120	C0130	C0140
<b>Changes in other technical provisions</b>							
Gross - Direct Business	<b>R0410</b>						
Gross - Proportional reinsurance accepted	<b>R0420</b>	-2,675			-26		-2,701
Gross - Non- proportional reinsurance accepted	<b>R0430</b>						
Reinsurers'share	<b>R0440</b>	1					1
Net	<b>R0500</b>	-2,676			-26		-2,702
<b>Expenses incurred</b>	<b>R0550</b>	-144,259	62,949	123,369	83,675	164,426	496,440
<b>Other expenses</b>	<b>R1200</b>	<del>                    </del>	<del>                    </del>	<del>                    </del>	<del>                    </del>	<del>                    </del>	<del>                    </del>
<b>Total expenses</b>	<b>R1300</b>	<del>                    </del>	<del>                    </del>	<del>                    </del>	<del>                    </del>	<del>                    </del>	786,601

		Home Country	Top 5 countries (by amount of gross premiums written) - life obligations					Total Top 5 and home country
		C0150	C0160	C0170	C0180	C0190	C0200	C0210
		C0220	C0230	C0240	C0250	C0260	C0270	C0280
	<b>R1400</b>		AU	CN	FR	GB	US	
<b>Premiums written</b>								
Gross	<b>R1410</b>	4,683	296,609	530,295	687,563	1,319,090	272,412	3,110,651
Reinsurers' share	<b>R1420</b>	107,403		155,361	217		6,892	269,873
Net	<b>R1500</b>	-102,721	296,609	374,934	687,346	1,319,090	265,520	2,840,778
<b>Premiums earned</b>								
Gross	<b>R1510</b>	4,683	296,135	500,484	684,735	1,319,140	272,528	3,077,705
Reinsurers' share	<b>R1520</b>	101,330		155,361	341		6,892	263,924
Net	<b>R1600</b>	-96,647	296,135	345,123	684,394	1,319,140	265,637	2,813,781
<b>Claims incurred</b>								
Gross	<b>R1610</b>	2,599	284,492	1,046,973	489,782	1,480,898	420,237	3,724,982
Reinsurers' share	<b>R1620</b>	70,204		552,164	774		3,891	627,033
Net	<b>R1700</b>	-67,605	284,492	494,809	489,009	1,480,898	416,346	3,097,949
<b>Changes in other technical provisions</b>								
Gross	<b>R1710</b>	1	-11,922	611,739	-100,915	51,176	211,928	762,006
Reinsurers' share	<b>R1720</b>	398		392,879			350	393,626
Net	<b>R1800</b>	-396	-11,922	218,860	-100,915	51,176	211,578	368,380
<b>Expenses incurred</b>	<b>R1900</b>	8,897	54,915	59,516	110,980	30,481	51,499	316,288
<b>Other expenses</b>	<b>R2500</b>							
<b>Total expenses</b>	<b>R2600</b>							316,288



**S.12.01.02**  
**Life and Health SLT Technical Provisions**

	Insurance with profit participation	Index-linked and unit-linked insurance		Other life insurance			Annuities stemming from non-life insurance contracts and relating to insurance obligation other than health insurance obligations	Accepted reinsurance	Total (Life other than health insurance, incl. Unit-Linked)	
		Contracts without options and guarantees	Contracts with options or guarantees	Contracts without options and guarantees	Contracts with options or guarantees					
	C0020	C0030	C0040	C0050	C0060	C0070	C0080	C0090	C0100	C0150
<b>Technical provisions calculated as a whole</b>	R0010									
Total Recoverables from reinsurance/SPV and Finite Re after the adjustment for expected losses due to counterparty default associated to TP as a whole	R0020									
<b>Technical provisions calculated as a sum of BE and RM</b>										
<b>Best Estimate</b>										
<b>Gross Best Estimate</b>	R0030								2,506,245	2,506,245
Total Recoverables from reinsurance/SPV and Finite Re after the adjustment for expected losses due to counterparty default	R0080								182,565	182,684

	Insurance with profit participation	Index-linked and unit-linked insurance		Other life insurance			Annuities stemming from non-life insurance contracts and relating to insurance obligation other than health insurance obligations	Accepted reinsurance	Total (Life other than health insurance, incl. Unit-Linked)	
		Contracts without options and guarantees	Contracts with options or guarantees	Contracts without options and guarantees	Contracts with options or guarantees					
	C0020	C0030	C0040	C0050	C0060	C0070	C0020	C0030	C0040	C0050
Best estimate minus recoverables from reinsurance/SPV and Finite Re - total									2,323,679	2,323,679
<b>Risk Margin</b>									939,060	939,060
<b>Amount of the transitional on Technical Provisions</b>										
Technical Provisions calculated as a whole										
Best estimate										
Risk margin										
<b>Technical provisions - total</b>									3,445,305	3,445,305

**Technical provisions calculated as a whole**

Total Recoverables from reinsurance/SPV and Finite Re after the adjustment for expected losses due to counterparty default associated to TP as a whole

**Technical provisions calculated as a sum of BE and RM**

**Best Estimate**

**Gross Best Estimate**

Total Recoverables from reinsurance/SPV and Finite Re after the adjustment for expected losses due to counterparty default

Best estimate minus recoverables from reinsurance/SPV and Finite Re - total

**Risk Margin**

**Amount of the transitional on Technical Provisions**

Technical Provisions calculated as a whole

Best Estimate

Risk Margin

**Technical provisions - total**

	Health insurance (direct business)			Annuities stemming from non-life insurance contracts and relating to health insurance obligations	Health reinsurance (reinsurance accepted)	Total (Health similar to life insurance)
	C0160	Contracts without options and guarantees C0170	Contracts with options or guarantees C0180			
R0010						
R0020						
R0030					994,322	994,322
R0080					361,110	361,110
R0090					633,212	633,212
R0100					109,764	109,764
R0110						
R0120						
R0130						
R0200					1,104,086	1,104,086

S.17.01.02

Non-life Technical Provisions

		Direct business and accepted proportional reinsurance								
		Medical expense insurance	Income protection insurance	Workers' compensation insurance	Motor vehicle liability insurance	Other motor insurance	Marine, aviation and transport insurance	Fire and other damage to property insurance	General liability insurance	Credit and suretyship insurance
		C0020	C0030	C0040	C0050	C0060	C0070	C0080	C0090	C0100
<b>Technical provisions calculated as a whole</b>	<b>R0010</b>									
Total Recoverables from reinsurance/SPV and Finite Re after the adjustment for expected losses due to counterparty default associated to TP as a whole	<b>R0050</b>									
<b>Technical provisions calculated as a sum of BE and RM</b>										
<b>Best estimate</b>										
Premium provisions										
Gross	<b>R0060</b>	-11	18,037	27,945	65,496	47,620	42,271	237,049	205,062	57,854
Total recoverable from reinsurance/SPV and Finite Re after the adjustment for expected losses due to counterparty default	<b>R0140</b>	8	999	8,331	23,156	2,214	14,621	18,125	34,058	6,305
Net Best Estimate of Premium Provisions	<b>R0150</b>	-18	17,038	19,614	42,340	45,407	27,649	218,924	171,004	51,549

Direct business and accepted proportional reinsurance										
	Medical expense insurance	Income protection insurance	Workers' compensation insurance	Motor vehicle liability insurance	Other motor insurance	Marine, aviation and transport insurance	Fire and other damage to property insurance	General liability insurance	Credit and suretyship insurance	
	C0020	C0030	C0040	C0050	C0060	C0070	C0080	C0090	C0100	
<b>Claims provisions</b>										
Gross	<b>R0160</b>	582	198,451	122,429	597,356	198,173	1,007,657	1,739,178	2,377,773	853,000
Total recoverable from reinsurance/SPV and Finite Re after the adjustment for expected losses due to counterparty default	<b>R0240</b>	66	16,670	202,912	296,718	14,083	383,806	236,183	847,250	145,842
Net Best Estimate of Claims Provisions	<b>R0250</b>	516	181,781	-80,484	300,638	184,091	623,851	1,502,996	1,530,524	707,157
<b>Total Best estimate - gross</b>	<b>R0260</b>	571	216,488	150,373	662,852	245,794	1,049,928	1,976,227	2,582,836	910,853
<b>Total Best estimate - net</b>	<b>R0270</b>	497	198,819	-60,870	342,978	229,497	651,501	1,721,919	1,701,527	758,706
<b>Risk margin</b>	<b>R0280</b>	18	4,508	4,597	14,777	6,946	20,859	51,079	58,004	27,065
<b>Amount of the transitional on Technical Provisions</b>										
Technical Provisions calculated as a whole	<b>R0290</b>									
Best estimate	<b>R0300</b>									
Risk margin	<b>R0310</b>									

Direct business and accepted proportional reinsurance										
Medical expense insurance	Income protection insurance	Workers' compensation insurance	Motor vehicle liability insurance	Other motor insurance	Marine, aviation and transport insurance	Fire and other damage to property insurance	General liability insurance	Credit and suretyship insurance		
C0020	C0030	C0040	C0050	C0060	C0070	C0080	C0090	C0100		
<b>Technical provisions - total</b>										
X										
Technical provisions - total	<b>R0320</b>	589	220,995	154,970	677,629	252,740	1,070,787	2,027,306	2,640,839	937,918
Recoverable from reinsurance contract/SPV and Finite Re after the adjustment for expected losses due to counterparty default - total	<b>R0330</b>	74	17,669	211,243	319,874	16,296	398,427	254,308	881,308	152,147
Technical provisions minus recoverables from reinsurance/SPV and Finite Re - total	<b>R0340</b>	515	203,327	-56,273	357,755	236,443	672,360	1,772,998	1,759,531	785,771

Direct business and accepted proportional reinsurance			Accepted non-proportional reinsurance				Total Non-Life obligation		
Legal expenses insurance	Assistance	Miscellaneous financial loss	Non-proportional health reinsurance	Non-proportional casualty reinsurance	Non-proportional marine, aviation and transport reinsurance	Non-proportional property reinsurance			
C0110	C0120	C0130	C0140	C0150	C0160	C0170	C0180		
<b>Technical provisions calculated as a whole</b>	<b>R0010</b>								
Total Recoverables from reinsurance/SPV and Finite Re after the adjustment for expected losses due to counterparty default associated to TP as a whole	<b>R0050</b>								
<b>Technical provisions calculated as a sum of BE and RM</b>									
<b>Best estimate</b>									
Premium provision									
Gross	<b>R0060</b>	-226	167	10,289	19,282	180,257	26,756	93,870	1,031,717
Total recoverable from reinsurance/SPV and Finite Re after the adjustment for expected losses due to counterparty default	<b>R0140</b>	51	5	908	-629	2,603	-170	2,520	113,103
Net Best Estimate of Premium Provisions	<b>R0150</b>	-277	162	9,381	19,911	177,654	26,925	91,351	918,614

		Direct business and accepted proportional reinsurance			Accepted non-proportional reinsurance				
		Legal expenses insurance	Assistance	Miscellaneous financial loss	Non-proportional health reinsurance	Non-proportional casualty reinsurance	Non-proportional marine, aviation and transport reinsurance	Non-proportional property reinsurance	Total Non-Life obligation
		C0110	C0120	C0130	C0140	C0150	C0160	C0170	C0180
<b>Claims provisions</b>									
Gross	<b>R0160</b>	5,974	513	114,102	1,237,952	5,211,344	1,208,914	1,625,946	16,499,344
Total recoverable from reinsurance/SPV and Finite Re after the adjustment for expected losses due to counterparty default	<b>R0240</b>	1,150	100	17,266	-3,685	24,042	8	351,123	2,533,536
Net Best Estimate of Claims Provisions	<b>R0250</b>	4,824	413	96,836	1,241,637	5,187,301	1,208,905	1,274,823	13,965,808
<b>Total Best Estimate - gross</b>	<b>R0260</b>	5,748	680	124,391	1,257,234	5,391,601	1,235,669	1,719,817	17,531,061
<b>Total Best Estimate - net</b>	<b>R0270</b>	4,547	575	106,217	1,261,548	5,364,956	1,235,830	1,366,173	14,884,422
<b>Risk margin</b>	<b>R0280</b>	136	21	3,096	38,412	165,607	37,288	50,616	483,028
<b>Amount of the transitional on Technical Provisions</b>									
Technical Provisions calculated as a whole	<b>R0290</b>								
Best Estimate	<b>R0300</b>								
Risk margin	<b>R0310</b>								
<b>Technical provisions - total</b>									
Technical provisions - total	<b>R0320</b>	5,883	700	127,488	1,295,646	5,557,208	1,272,957	1,770,433	18,014,089
Recoverable from reinsurance contract/SPV and Finite Re after the adjustment for expected losses due to counterparty default - total	<b>R0330</b>	1,201	105	18,174	-4,313	26,645	-161	353,643	2,646,639
Technical provisions minus recoverables from reinsurance/SPV and Finite Re - total	<b>R0340</b>	4,682	596	109,314	1,299,959	5,530,563	1,273,119	1,416,790	15,367,449



S.19.01.21

Non-life Insurance Claims Information

Accident year / Underwriting year 

Z0010	1/2
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Gross Claims Paid (non-cumulative)

(absolute amount)

Year	Development year											In Current year	Sum of years (cumulative)		
	0	1	2	3	4	5	6	7	8	9	10&+				
	<b>C0010</b>	<b>C0020</b>	<b>C0030</b>	<b>C0040</b>	<b>C0050</b>	<b>C0060</b>	<b>C0070</b>	<b>C0080</b>	<b>C0090</b>	<b>C0100</b>	<b>C0110</b>		<b>C0170</b>	<b>C0180</b>	
Prior	<b>R0100</b>											23,939,466	<b>R0100</b>	23,939,466	23,939,466
N-9	<b>R0160</b>	212,753	721,081	423,792	250,420	133,324	52,738	156,652	43,775	44,547	41,089		<b>R0160</b>	41,089	2,080,171
N-8	<b>R0170</b>	324,460	857,395	445,784	3,933,908	154,859	143,920	26,021	46,405	37,170			<b>R0170</b>	37,170	5,969,922
N-7	<b>R0180</b>	349,436	738,877	-2,434,530	157,150	2,200	222,893	101,322	75,690				<b>R0180</b>	75,690	-786,962
N-6	<b>R0190</b>	605,635	-101,641	684,905	249,343	147,561	232,571	149,655					<b>R0190</b>	149,655	1,968,029
N-5	<b>R0200</b>	735,000	1,240,496	746,114	462,564	202,538	169,871						<b>R0200</b>	169,871	3,556,583
N-4	<b>R0210</b>	942,494	1,170,694	669,478	299,702	207,236							<b>R0210</b>	207,236	3,289,604
N-3	<b>R0220</b>	792,937	1,168,707	609,312	301,929								<b>R0220</b>	301,929	2,872,885
N-2	<b>R0230</b>	813,535	1,306,604	639,938									<b>R0230</b>	639,938	2,760,077
N-1	<b>R0240</b>	1,083,198	1,224,376										<b>R0240</b>	1,224,376	2,307,574
N	<b>R0250</b>	1,043,802											<b>R0250</b>	1,043,802	1,043,802
	<b>Total</b>												<b>R0260</b>	3,890,756	49,001,151

**Gross undiscounted Best Estimate Claims Provisions**  
(absolute amount)

Year	Development year											Year end (dis- counted data)		
	0	1	2	3	4	5	6	7	8	9	10&+			
		<b>C0200</b>	<b>C0210</b>	<b>C0220</b>	<b>C0230</b>	<b>C0240</b>	<b>C0250</b>	<b>C0260</b>	<b>C0270</b>	<b>C0280</b>	<b>C0290</b>	<b>C0300</b>		<b>C0360</b>
Prior	<b>R0100</b>											2,305,664	<b>R0100</b>	2,131,252
N-9	<b>R0160</b>	-	-	-	-	-	-	-	-	-	552,170		<b>R0160</b>	510,755
N-8	<b>R0170</b>	-	-	-	-	-	-	-	-	669,868			<b>R0170</b>	621,036
N-7	<b>R0180</b>	-	-	-	-	-	-	860,468					<b>R0180</b>	797,404
N-6	<b>R0190</b>	-	-	-	-	-	1,176,050						<b>R0190</b>	1,090,484
N-5	<b>R0200</b>	-	-	-	-	1,349,604							<b>R0200</b>	1,260,122
N-4	<b>R0210</b>	-	-	-	1,542,118								<b>R0210</b>	1,445,399
N-3	<b>R0220</b>	-	-	1,779,761									<b>R0220</b>	1,674,023
N-2	<b>R0230</b>	-	2,129,933										<b>R0230</b>	2,016,298
N-1	<b>R0240</b>	-	2,809,351										<b>R0240</b>	2,683,341
N	<b>R0250</b>	2,359,264											<b>R0250</b>	2,269,228
	<b>Total</b>												<b>R0260</b>	14,368,090

**S.23.01.01  
Own Funds**

**Basic own funds before deduction for participations in other financial sector as foreseen in article 68 of Delegated Regulation (EU) 2015/35**

Ordinary share capital (gross of own shares)  
 Share premium account related to ordinary share capital  
 Initial funds, members' contributions or the equivalent basic own - fund item for mutual and mutual-type undertakings  
 Subordinated mutual member accounts  
 Surplus funds  
 Preference shares  
 Share premium account related to preference shares  
 Reconciliation reserve  
 Subordinated liabilities  
 An amount equal to the value of net deferred tax assets  
 Other own fund items approved by the supervisory authority as basic own funds not specified above

**Own funds from the financial statements that should not be represented by the reconciliation reserve and do not meet the criteria to be classified as Solvency II own funds**

Own funds from the financial statements that should not be represented by the reconciliation reserve and do not meet the criteria to be classified as Solvency II own funds

**Deductions**

Deductions for participations in financial and credit institutions

**Total basic own funds after deductions**

	Total	Tier 1 - unrestricted	Tier 2 - restricted	Tier 2	Tier 3
	C0010	C0020	C0030	C0040	C0050
<b>R0010</b>	120,597	120,597			
<b>R0030</b>	880,608	880,608			
<b>R0040</b>					
<b>R0050</b>					
<b>R0070</b>					
<b>R0090</b>					
<b>R0110</b>					
<b>R0130</b>	9,966,015	9,966,015			
<b>R0140</b>	1,696,475		543,095	1,153,380	
<b>R0160</b>					
<b>R0180</b>					
<b>R0220</b>					
<b>R0230</b>					
<b>R0290</b>	12,663,694	10,967,220	543,095	1,153,380	

**Ancillary own funds**

- Unpaid and uncalled ordinary share capital callable on demand
- Unpaid and uncalled initial funds, members' contributions or the equivalent basic own fund item for mutual and mutual - type undertakings, callable on demand
- Unpaid and uncalled preference shares callable on demand
- A legally binding commitment to subscribe and pay for subordinated liabilities on demand
- Letters of credit and guarantees under Article 96(2) of the Directive 2009/138/EC
- Letters of credit and guarantees other than under Article 96(2) of the Directive 2009/138/EC
- Supplementary members calls under first subparagraph of Article 96(3) of the Directive 2009/138/EC
- Supplementary members calls - other than under first subparagraph of Article 96(3) of the Directive 2009/138/EC
- Other ancillary own funds

**Total ancillary own funds**

**Available and eligible own funds**

- Total available own funds to meet the SCR
- Total available own funds to meet the MCR
- Total eligible own funds to meet the SCR
- Total eligible own funds to meet the MCR

**SCR**

**MCR**

**Ratio of Eligible own funds to SCR**

**Ratio of Eligible own funds to MCR**

	Total	Tier 1 - unrestricted	Tier 2 - restricted	Tier 2	Tier 3
<b>R0300</b>					
<b>R0310</b>					
<b>R0320</b>					
<b>R0330</b>					
<b>R0340</b>					
<b>R0350</b>					
<b>R0360</b>					
<b>R0370</b>					
<b>R0390</b>					
<b>R0400</b>					
<b>R0500</b>	12,663,694	10,967,220	543,095	1,153,380	
<b>R0510</b>	12,663,694	10,967,220	543,095	1,153,380	
<b>R0540</b>	12,663,694	10,967,220	543,095	1,153,380	
<b>R0550</b>	11,980,949	10,967,220	543,095	470,635	
<b>R0580</b>	5,229,274				
<b>R0600</b>	2,353,173				
<b>R0620</b>	2,4217				
<b>R0640</b>	5,0914				

**Reconciliation reserve**

- Excess of assets over liabilities
- Own shares (held directly and indirectly)
- Foreseeable dividends, distributions and charges
- Other basic own fund items
- Adjustment for restricted own fund items in respect of matching adjustment portfolios and ring fenced funds

**Reconciliation reserve**

**Expected profits**

- Expected profits included in future premiums (EPIFP) - Life business
- Expected profits included in future premiums (EPIFP) - Non- life business

**Total Expected profits included in future premiums (EPIFP)**

C0060		
<b>R0700</b>	11,570,206	X
<b>R0710</b>		X
<b>R0720</b>	602,986	X
<b>R0730</b>	1,001,205	X
<b>R0740</b>		X
<b>R0760</b>		X
<b>R0770</b>	1,493,213	X
<b>R0780</b>		X
<b>R0790</b>	1,493,213	X

S.25.02.21

Solvency Capital Requirement - for undertakings using the standard formula and partial internal model

Unique number of component	Components description	Calculation of the Solvency Capital Requirement	Amount modelled	USP	Simplifications
C0010	C0020	C0030	C0070	C008	C0090
101	Market Risk according to PIM	3,989,154	3,989,154		
102	Counterparty default risk according to PIM	295,362	295,362		
103	Life underwriting risk according to PIM	2,116,551	2,116,551		
104	Non-life underwriting risk according to PIM	3,342,705	3,342,705		
7	Operational risk according to SF	541,684			
107	LAC TP according to PIM				
108	LAC DT according to PIM	-1,792,008	-1,792,008		

**Calculation of Solvency Capital Requirement**

Total undiversified components

**R0110**

Diversification

**R0060**

Capital requirement for business operated in accordance with Art, 4 of Directive

**R0160**

**Solvency capital requirement excluding capital add-on**

**R0200**

Capital add-ons already set

**R0210**

**Solvency capital requirement**

**R0220**

**Other information on SCR**

Amount/estimate of the overall loss-absorbing capacity of technical provisions

**R0300**

Amount/estimate of the overall loss-absorbing capacity of deferred taxes

**R0310**

Capital requirement for duration-based equity risk sub-module

**R0400**

Total amount of Notional Solvency Capital Requirements for remaining part

**R0410**

Total amount of Notional Solvency Capital Requirements for ring fenced funds (other than those related to business operated in accordance with Art, 4 of Directive 2003/41/EC (transitional))

**R0420**

Total amount of Notional Solvency Capital Requirement for matching adjustment portfolios

**R0430**

Diversification effects due to RFF nSCR aggregation for article 304

**R0440**

**C0100**

8,493,447
-3,264,174
5,229,274
5,229,274
-1,792,008

**S.28.01.01**

**Minimum Capital Requirement - Only life or only non-life insurance or reinsurance activity**

**Linear formula component for non-life insurance and reinsurance obligations**

MCR <sub>NL</sub> Result	C0010		Net (of reinsurance/SPV) best estimate and TP calculated as a whole	Net (of reinsurance) written premiums in the last 12 months
	R0010	2,939,396		
Medical expense insurance and proportional reinsurance	R0020	497	26,754	
Income protection insurance and proportional reinsurance	R0030	198,819	152,247	
Workers' compensation insurance and proportional reinsurance	R0040		54,474	
Motor vehicle liability insurance and proportional reinsurance	R0050	342,978	172,328	
Other motor insurance and proportional reinsurance	R0060	229,497	230,276	
Marine, aviation and transport insurance and proportional reinsurance	R0070	651,501	166,969	
Fire and other damage to property insurance and proportional reinsurance	R0080	1,721,919	636,434	
General liability insurance and proportional reinsurance	R0090	1,701,527	408,604	
Credit and suretyship insurance and proportional reinsurance	R0100	758,706	442,756	
Legal expenses insurance and proportional reinsurance	R0110	4,547	1,190	
Assistance and proportional reinsurance	R0120	575	588	
Miscellaneous financial loss insurance and proportional reinsurance	R0130	106,217	70,880	
Non-proportional health reinsurance	R0140	1,261,548	147,677	
Non-proportional casualty reinsurance	R0150	5,364,956	726,917	
Non-proportional marine, aviation and transport reinsurance	R0160	1,235,830	246,296	
Non-proportional property reinsurance	R0170	1,366,173	1,120,447	

**Linear formula component for life insurance and reinsurance obligations**

	<b>C0040</b>
MCR <sub>L</sub> Result	<b>R0200</b> 433,127

	Net (of reinsurance/SPV) best estimate and TP calculated as a whole	Net (of reinsurance/SPV) total capital at risk
	<b>C0050</b>	<b>C0060</b>
Obligations with profit participation - guaranteed benefits	<b>R0210</b>	
Obligations with profit participation - future discretionary benefits	<b>R0220</b>	
Index-linked and unit-linked insurance obligations	<b>R0230</b>	
Other life (re)insurance and health (re)insurance obligations	<b>R0240</b> 2,956,891	
Total capital at risk for all life (re)insurance obligations	<b>R0250</b>	530,046,804

**Overall MCR calculation**

	<b>C0070</b>
Linear MCR	<b>R0300</b> 3,372,523
SCR	<b>R0310</b> 5,229,274
MCR cap	<b>R0320</b> 2,353,173
MCR floor	<b>R0330</b> 1,307,318
Combined MCR	<b>R0340</b> 2,353,173
Absolute floor of the MCR	<b>R0350</b> 3,600
	<b>C0070</b>
<b>Minimum Capital Requirement</b>	<b>R0400</b> 2,353,173