

*somewhat  
different*

Hannover Rück SE 2021

# Solvency and Financial Condition Report

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## Executive Summary

### Key figures

in TEUR	2021	2020
<b>Solvency II Balance Sheet</b>		
Assets	57,863,715	50,531,217
Technical Provisions	31,690,188	27,423,208
Other Liabilities	12,067,121	10,678,290
Excess of Assets over Liabilities	14,106,406	12,429,719
<b>Eligible Own Funds</b>		
Tier 1 Basic Own Funds (unrestricted)	13,348,564	11,857,483
Tier 1 Basic Own Funds (restricted)	533,225	548,243
Tier 2 Basic Own Funds	2,503,601	1,833,717
Tier 3 Basic Own Funds	64,408	29,549
Eligible Own Funds (SCR)	16,449,798	14,268,992
<b>Capital requirements</b>		
Solvency Capital Requirement	6,634,037	5,949,073
Minimum Capital Requirement	2,985,317	2,677,083
<b>Coverage Ratio</b>		
Ratio of Eligible Own Funds to SCR (Solvency Ratio)	248%	240%
Ratio of Eligible Own Funds to MCR	485%	483%

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 2021 and in the financial year 2021. The solvency ratio was above the internal threshold of 200% during the entire financial year.

Section D describes the valuation principles used to determine the eligible own funds, and Section E those used to determine the SCR, in particular with regard to the use of the internal capital model.

According to legal requirements, the Solvency II balance sheet was audited by the auditing firm.

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

Please note that rounding differences can occur in the presented tables. Values below TEUR 0.5 are displayed as “0”. Empty cells or cells with “-“ represent a value of EUR 0.00.

## 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 2021 financial year passed off satisfactorily for Hannover Rück. The gross premium in total business grew by 14.2% up to TEUR 21,941,453 (2020: TEUR 19,217,021). The level of retained premium increased from 68.3% to 69.0%. Net premium earned increased, climbing by 14.3% to TEUR 14,768,338 (2020: TEUR 12,923,326).

With technical income of TEUR 14,956,289 (2020: TEUR 13,112,683) and technical expenses of TEUR 15,083,156 (TEUR 13,321,803), Hannover Rück booked a total technical result in accordance with the German Commercial Code of TEUR -126,867 in the 2021 financial year after TEUR -209,120 in the previous year.

Measured in terms of premium volume and the total technical result in the 2021 financial year, the material lines of business are fire and other damage to property insurance (TEUR 119,797), credit and surety insurance (TEUR 102,980), marine, aviation and transport insurance (TEUR 63,410), life reinsurance (TEUR 34,312), general liability insurance (TEUR -196,348), and health reinsurance (TEUR -120,517).

In the marine, aviation and transport insurance segment, expenses for insurance claims increased relatively strongly, with higher net premiums earned and a moderate increase in operating expenses. Primarily growing US business as well as increases in the Advanced Solutions business segment lead to the increase in net premiums earned in the fire and other property insurance line. Relative to this increase, there were both lower claims and reduced reserve additions. In 2021, net premiums earned increased in the General Liability line of business primarily due to growing US business. Reserve additions were more pronounced compared to 2020. Net premiums earned in credit and surety business were virtually unchanged. Significantly lower expenses are attributable to high IBNR releases for surety.

In health reinsurance, the technical result improved slightly in the reporting period. This change comes mainly from positive effects from reserve adjustments in the disability business of our Australian portfolio. These compensate partly losses from Covid-19.

The life reinsurance showed a slight increase in net premiums. The technical result, on the other hand, decreased and the main driver were higher losses from Covid-19 compared to the previous year.

Against the backdrop of the continued challenging state of global financial markets, we are highly satisfied with the performance of our investments. Although it has been another challenging year with continuously low interest rate levels and a global economic and geopolitical situation which is more and more affected by numerous uncertainties and risks, we managed to excel in achieving our goals.

Ordinary income, including interests from funds withheld was slightly below the previous year’s level, mainly due to a prior-year one-off effect from our participation holding companies. However, ordinary income from fixed income securities reached last year’s level. Higher net gains from the disposal of investments were mainly due to the realization of hidden reserves in connection with the

restructuring of our equity shares and high-yielding bond portfolio. Write-downs on investments had to be made only to an even lower extent than in the year before. In view of the higher market values, these write-downs were also slightly compensated by minor write-ups on investments which had been written down in previous periods.

We adjusted the allocation of our investments to the individual classes of securities in that we acted on market opportunities in the first quarter and sold parts of our equity holdings. As far as our fixed-income securities were concerned, when it came to reinvesting or making new investments we increasingly focused throughout the year on instruments that – giving due consideration to their risk profiles – offer higher returns than government bonds. We expanded our holding of inflation-linked bonds so as to adjust it to requirements from the underwriting side as part of regular portfolio maintenance. Similarly, we further expanded our exposure to the areas of infrastructure and private equity. We substantially enlarged our real estate portfolio in Asia, making the most of attractive acquisition opportunities in Singapore and Japan, as well as in Germany and Poland. In the United States and South Korea we very successfully acted on the state of the real estate market to dispose of two large properties. In the high-yield bond sector we progressively realigned our portfolios away from fund structures towards direct investments. All other investment categories saw only limited adjustments as part of the regular portfolio maintenance programme.

Overall, our investment portfolio increased significantly in the year under review. Negative effects on market values from the yield environment were clearly overcompensated by positive currency effects mainly from the US dollar and pound sterling. As additional factors, cash inflows from issuance of a bond and the one-time reallocation of technical holdings to the investments under own management as part of a restructuring move in US mortality business favourably affected the portfolio.

Details on the Business and Performance can be found in Section 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 § 26 and §§ 29-31 of the Insurance Supervision Act (VAG) have been set up, entrusted with the tasks described and equipped with appropriate resources.

In the reporting year, a focus of the work of the Compliance Function was the further improvement of the Compliance Management System in combination with the revision of the Compliance Handbook. In addition, the Compliance Risk assessment was improved. Furthermore, a new methodology for the assessment of adequacy and effectiveness of mitigating measures for the Compliance Risk was introduced. Another focus of the Compliance activities lay again with the further implementation of sanction audit processes and their ongoing improvement.

The Executive Board has established a 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 appropriate considering the scope and complexity of its business activities and the inherent risks.

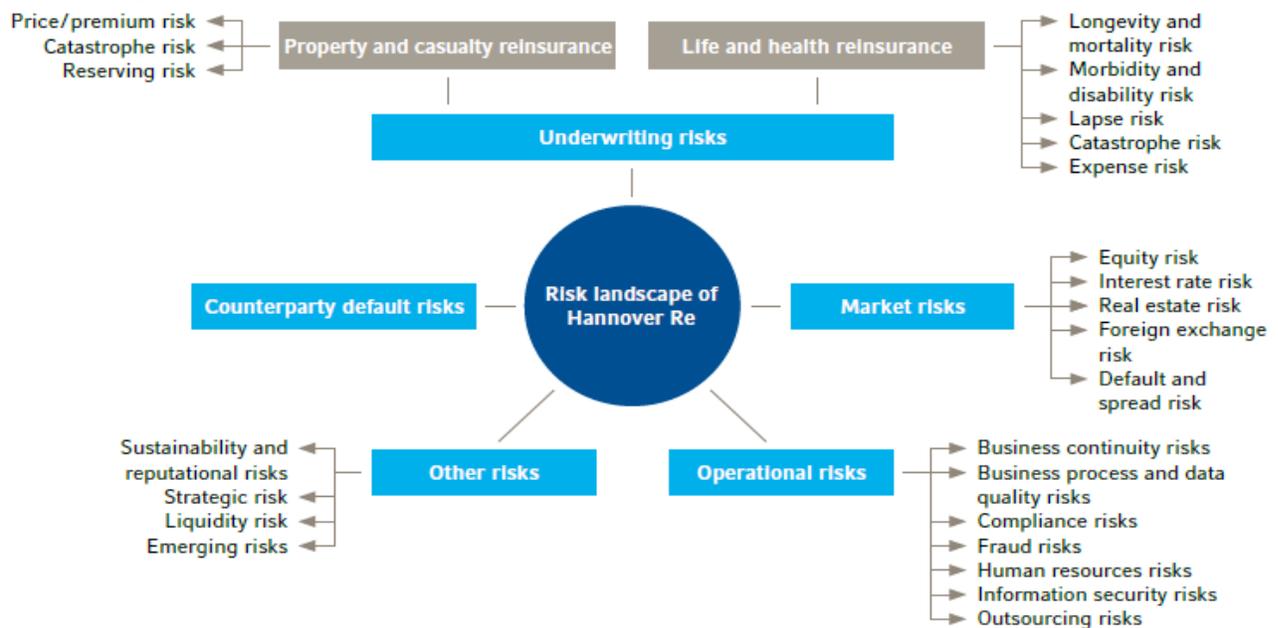
Hannover Rück has established an outsourcing management process that covers all process steps of an outsourcing and involves all relevant stakeholder groups. Currently, there is only one important outsourcing to Ampega Asset Management GmbH, covering the asset and investment management.

The individual elements of the system of governance of Hannover Rück are explained in Section B.

### C. Risk Profile

In the context of its business operations Hannover Re enters into a broad variety of risks. These risks are deliberately accepted, steered and monitored. They specifically concern underwriting risks pertaining to Property & Casualty and 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. In Section C, we describe the sources and management of those risks. We also explain how we handle potential future risks (emerging risks).

#### Risk landscape of Hannover Rück



Hannover Rück received approval from the regulatory authorities to calculate its solvency requirements using an internal capital model. Hannover Rück applies the static volatility adjustment according to §82 of the Insurance Supervision Law VAG. This is intended to mitigate the effect of temporary value fluctuations due to credit spread movements on the bond market. In order to capture this effect adequately for the calculation of the required capital Hannover Rück uses the dynamic volatility in its internal model.

The solvency capital requirements (SCR) as of 31 December 2021 are shown in the following table. The SCR includes the impact from the dynamic volatility adjustment for both reference dates. The impact of the volatility adjustment is displayed separately in Section D.2 as well as in the annex QRT S.22.01.21.

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

Solvency Capital Requirement	2021	2020
Underwriting risk - Property & Casualty	5,251,239	4,352,598
Underwriting risk - Life & Health	3,324,426	3,139,919
Market risk	4,612,492	4,143,238
Counterparty default risk	462,029	445,380
Operational risk	610,163	529,608
<b>Diversification</b>	<b>-5,121,055</b>	<b>-4,457,794</b>
<b>Total risk (pre-tax)</b>	<b>9,139,293</b>	<b>8,152,948</b>
Deferred tax	2,505,256	2,203,876
<b>Total risk (post-tax)</b>	<b>6,634,037</b>	<b>5,949,073</b>

The required capital is calculated based on the approved internal model. At present, our most significant risks are the default and spread risks within the market risks, the reserving and catastrophe risks within the underwriting risks of Property & Casualty reinsurance and the longevity risks within the underwriting risks of Life & Health reinsurance. In general, annuity portfolios are adversely impacted by improvements in mortality, while death benefit portfolios are adversely affected by deteriorations in mortality.

Overall, the required capital increased in the course of the year. This was principally driven by the larger business volumes, which have led to an increase in underwriting risks and market risks. The weaker euro against foreign currencies also contributed to this increase.

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

The business expansion in the areas of longevity and morbidity risks as well as the appreciation of foreign currencies lead to an increase in underwriting risks in life and health reinsurance.

The increase in the market risk reflects first and foremost the larger volume due to higher market values and new investments in the areas of private equity and real estate. The increased volumes of fixed-income securities as a result of business growth are a further factor here.

A higher volume of receivables due from retrocessionaires was the main driver for the increase in counterparty default risks.

The increase in operational risk can be attributed to an increase in those scenarios which are driven by the overall business volume and thus increase as business grows.

The risk monitoring and control mechanisms are presented in Section C.

In respect of the Covid-19 pandemic, the Crisis Management Team set up in 2020 continued to manage operations prudently in 2021. Business travel remained constrained. Working from home – which applied to large parts of the workforce – went smoothly, in part thanks to the use of videoconferencing and extensively digitalised business processes. Consequently, in 2021 we once again did not identify any material impacts of the Covid-19 pandemic on our operations.

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

In line with regulatory requirements, this report has a focus on the financial year 2021. Developments since year-end 2021 include the Russian invasion on the territory of Ukraine starting in February 2022. The impact of this war and its consequences cannot be assessed at the present in full detail. Major geopolitical shifts are to be expected. Substantial volatilities at the financial markets including high commodity prices have been observed. Most reinsurance treaties have some form of coverage exclusion for losses from war. However, specialty lines provide these covers under certain circumstance. Apart from risk of losses from these lines, increasing inflation and cyber activities pose additional risks. Investments are affected by the developments at the financial markets. The full scope of implications is currently not known. Hannover Rück has set up a continuous monitoring of the situation and has implemented the imposed sanctions.

#### **D. Valuation for Solvency Purposes**

For the purposes of calculating the eligible own funds, Hannover Re values the assets and liabilities pursuant to the provisions of §§ 74 et seq. of the Insurance Supervision Act (VAG), i.e. in accordance with Solvency II.

The valuation for Solvency purposes is set in principle at the fair value (market value). Insofar as IFRS values appropriately reflect the fair value of individual assets or liabilities, they are applied.

Technical provisions pursuant to Solvency II differentiate significantly from the definition of provisions pursuant to the local reporting standards (HGB), both in terms of structure and in relation to the calculation rules. A comparison of HGB and Solvency II technical provisions is shown as well as a comparison of current technical provisions under Solvency II and those calculated last year.

The Technical Provisions Life & Health include adjustments for already incurred as well as expected future claims of the Covid-19 pandemic. Nevertheless, there is a certain risk of higher claims in the near future and an adverse development in mortality and morbidity rates from long-term consequences for people suffering from Covid-19.

Section D explains the details of the valuation for solvency purposes.

#### **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, or both.

The solvency ratio with and without application of the volatility adjustment 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

2021, there was no breach of the limit of 180%. Further information on the calculation of the solvency ratio can be found in Section E.

The available economic capital increased significantly to TEUR 16,449,798 as at 31 December 2021. The increase is due to an economically successful course of the business year as well as the placement of a subordinated bond with an amount of TEUR 750,000.

Own funds in the Solvency II balance sheet consist of basic own funds, which comprise the excess of assets over liabilities and subordinated capital less foreseeable dividends. The different components are classified in quality tiers. Ordinary share capital, the share premium account and the reconciliation reserve are allocated to Tier 1. Additionally, subordinated capital of tiering classes 1 restricted and 2 is taken into account and net deferred tax assets, which are recognized as tier 3 capital. Hannover Rück does not use ancillary own funds.

The level of own funds by quality classes changed to the previous year due to the placement of a subordinated bond and an increase in deferred tax assets. The structure of economic capital remains very satisfactory with a ratio of over 80 % of Tier 1 capital. The structure of own funds allows Hannover Rück to use all own funds components to cover the solvency capital requirement.

Hannover Rück uses an approved full 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. The internal model is applied in a broad range of 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.

Section E explains the details of capital management.

## A. Business and Performance

### A.1 Business

#### A.1.1 Business model

Hannover Rück SE is a European Company, Societas Europaea (SE), headquartered in Hannover, Germany. We transact reinsurance in our Property & Casualty and Life & Health business groups.

The strategy pursued in both Property & Casualty and Life & Health reinsurance supports our Group's paramount mission, namely: "Striving for sustainable outperformance". Our entire business operations are geared to our goal of being the preferred business partner for our clients. It is for this reason that our clients and their concerns form the focus of our activities.

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

Furthermore, we strive for the broadest possible diversification and hence an efficient risk balance. This is achieved by accepting reinsurance risks with generally little or no correlation across all lines and regions of property & casualty and life & health reinsurance. In conjunction with efficient capital management, this is the key to our comparatively low cost of capital.

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

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

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

Through its global presence and activities Hannover Rück is directly or via affiliates affected by various foreign fiscal and regulatory developments.

#### A.1.2 Income and key transactions

In this and the following sections of Section A, the values indicated were determined in accordance with the German Commercial Code (hereafter referred to as HGB), as required by Art. 293 (2) DVO. Please note that the accounting rules under HGB differ significantly from those under Solvency II.

Hannover Rück recorded a pleasing development of its business in the 2021 financial year. The gross premium in total business grew by 14.2% to TEUR 21,941,453. The level of retained premium increased to 69.0%. Net premium earned climbed by 14.3% to TEUR 14,768,338.

The underwriting result (before changes in the equalisation reserve) came in at TEUR -126,866. An amount of TEUR 545,672 was allocated to the equalisation reserve and similar provisions in the year under review.

Large losses again exceeded our expectations in the 2021 financial year. Particularly notable major losses were incurred from disastrous flooding in Europe, hurricanes and other weather phenomena in the United States as well as losses from unrest in South Africa. The total net expenditure on major losses for Hannover Rück amounted to TEUR 598,397.

Ordinary investment income including deposit interest came in below the previous year's level at TEUR 1,505,724 primarily due to a one-time effect from our investment holding companies in the previous year. Ordinary income from fixed-income securities totaled TEUR 478,465. Net gains of TEUR 280,428 were realised on disposals. The increase resulted principally from the release of substantial hidden reserves in connection with the regrouping of our equity holdings and the portfolio of high-yield bonds.

Write-downs of TEUR 31,616 were taken on investments, for the most part on bearer debt securities held as current assets, in the area of alternative investments and on deposits with ceding companies. The write-downs contrasted with write-ups of TEUR 5,991 that were made on assets written down in previous periods in order to reflect increased fair values.

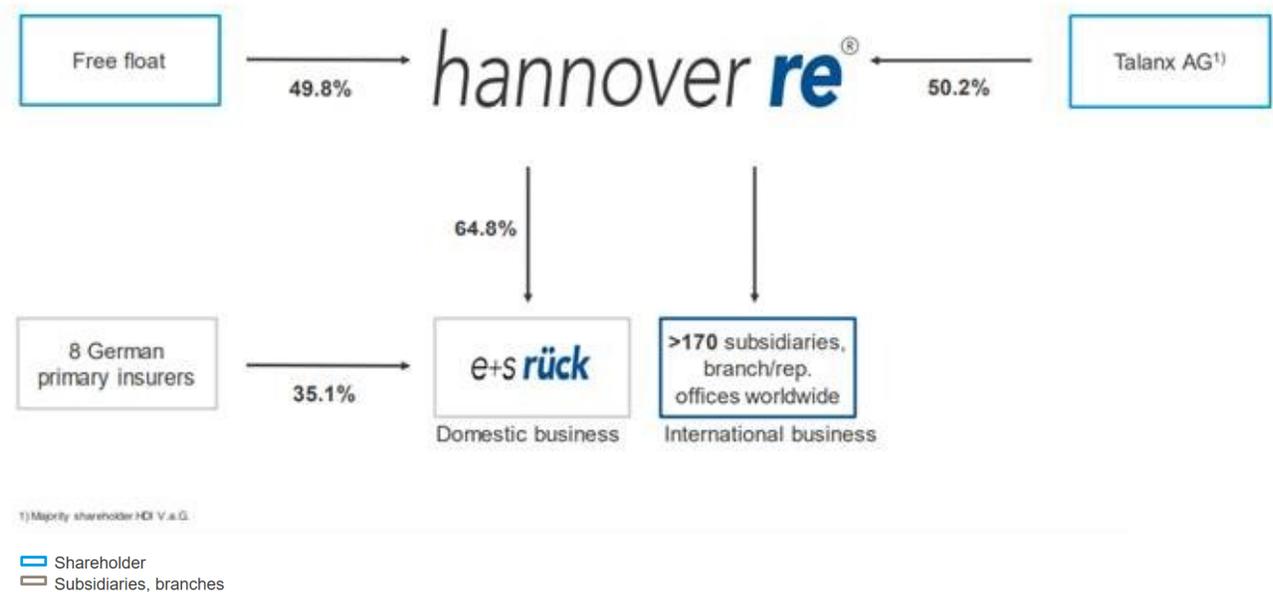
All in all, the net investment result increased slightly to TEUR 1,687,418.

The profit on ordinary activities contracted to TEUR 776,010. The year under review closed with a profit for the year of TEUR 701,209.

### **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 79.0% – by HDI Haftpflichtverband der Deutschen Industrie V.a.G. (HDI), Hannover.

Shareholders, subsidiaries and branches



Hannover Rück as well as Talanx and HDI are supervised by the Federal Financial Supervisory Authority (BaFin).

**Address of Federal Financial Supervisory Authority (BaFin)**

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alternatively:  
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Talanx AG is located in HDI-Platz 1, 30659 Hannover, Germany.

The Group auditor appointed for Hannover Rück within the meaning of Section 318 of the HGB is PricewaterhouseCoopers GmbH, Wirtschaftsprüfungsgesellschaft, Fuhrberger Straße 5, 30625 Hannover, Germany.

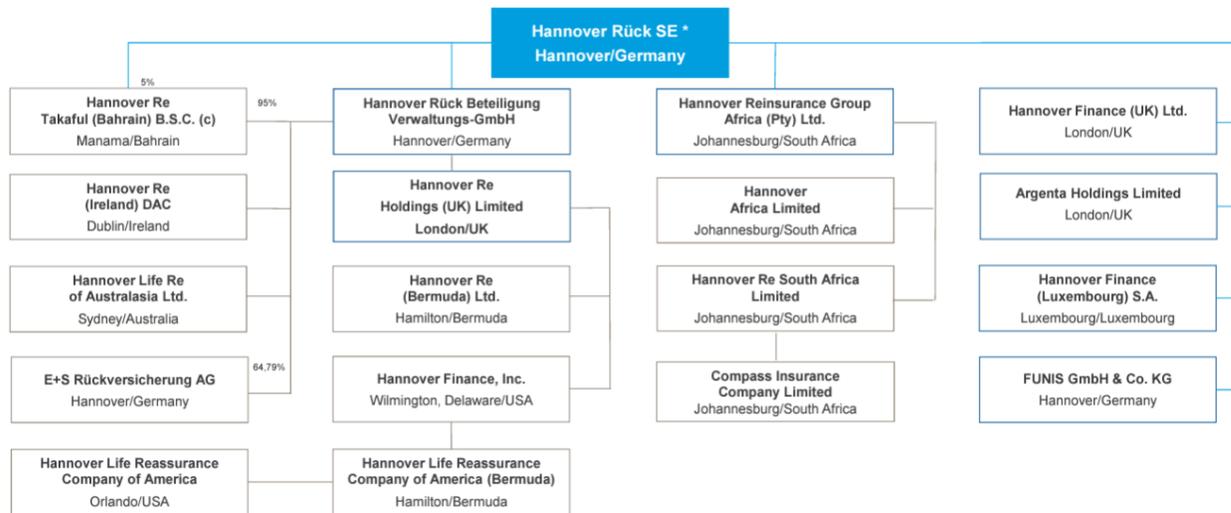
### A.1.4 Group structure

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

The company's network consists of more than 170 subsidiaries, affiliates, branches and representative offices worldwide with of 3,346 staff.

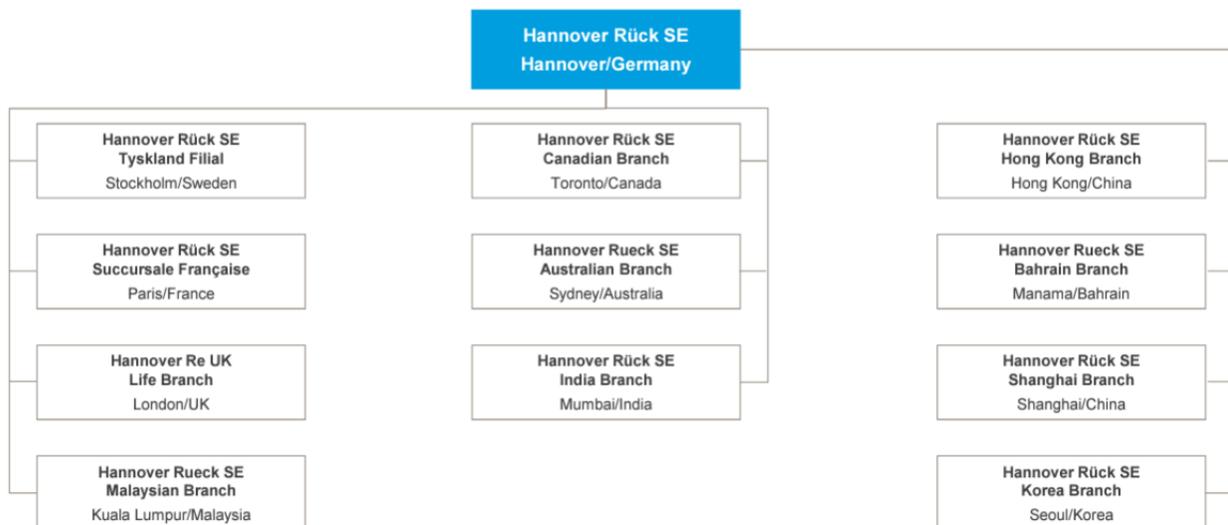
Subsidiaries and branches of Hannover Rück are presented in the following charts.

#### Subsidiaries of Hannover Rück SE



\* Unless otherwise stated, the shareholding is 100%

#### Branches of Hannover Rück SE



During 2021, Hannover Rück has sold its minority shareholdings in HDI Global Specialty SE.

### A.1.5 Material related undertakings

Our major shares in affiliated companies and participations are listed below.

#### List of major shareholdings

Hannover Rück Beteiligung Verwaltungs-GmbH, Hannover/Germany
E+S Rückversicherung AG, Hannover/Germany
Hannover Re Holdings (UK) Limited, London/UK
Hannover Re (Bermuda) Ltd., Hamilton/Bermuda
Hannover ReTakaful B.S.C. (c), Manama/Bahrain
Hannover Life Reassurance Company of America, Orlando/USA
Hannover Life Reassurance Company of America (Bermuda) Ltd., Hamilton/Bermuda
Hannover Life Re of Australasia Ltd, Sydney/Australia
Hannover Re (Ireland) Designated Activity Company, Dublin/Ireland
Hannover Finance (Luxembourg) S.A., Leudelange/Luxemburg
Sureify Labs Inc., Wilmington/USA
Inter Hannover (No.1) Limited, London/UK
Hannover Finance (UK) Limited, London/ UK
Hannover Services (UK) Limited, London/ UK
Hannover Finance, Inc.,Wilmington/USA
Glencar Insurance Company, Orlando/USA
Kubera Insurance (SAC) Ltd., Hamilton/Bermuda
<b>Hannover Reinsurance Group Africa (Pty) Ltd., Johannesburg/South Africa</b>
Hannover Reinsurance Group Africa (Pty) Ltd prepares its own subgroup financial statements which includes the following companies:
Hannover Africa Limited, Johannesburg/South Africa
Hannover Re South Africa Limited, Johannesburg/South Africa
Compass Insurance Company Limited, Johannesburg/South Africa
Lireas Holdings (Pty) Ltd., Johannesburg/South Africa
HILSP Komplementär GmbH, Hannover/Germany
Leine Investment General Partner S.à r.l., Luxemburg/Luxemburg
Leine Investment SICAV-SIF, Luxemburg/Luxemburg
LI RE, Hamilton/Bermuda
FUNIS GmbH & Co. KG, Hannover/Germany
Glencar Underwriting Managers, Inc., Chicago/USA
Integra Insurance Solutions Limited, Bradford/UK
Monument Insurance Group Limited, Hamilton/Bermuda
Reaseguradora del Ecuador S.A., Guayaquil/Ecuador
Trinity Underwriting Managers Ltd., Toronto/Canada
SWISS INSUREVOLUTION PARTNERS Holding (FL) AG, Triesen/Liechtenstein
SWISS INSUREVOLUTION PARTNERS Holding (CH) AG, Zürich/Switzerland
HANNOVER Finanz GmbH, Hannover/Germany
Kaith Re Ltd., Hamilton/Bermuda
WeHaCo Unternehmensbeteiligungs-GmbH, Hannover/Germany
Meribel Mottaret Limited, St. Helier/Jersey
FinLeap GmbH, Berlin/Germany
HAPEP II Komplementär GmbH, Hannover/Germany
Hannover America Private Equity Partners II GmbH & Co. KG, Hannover/Germany

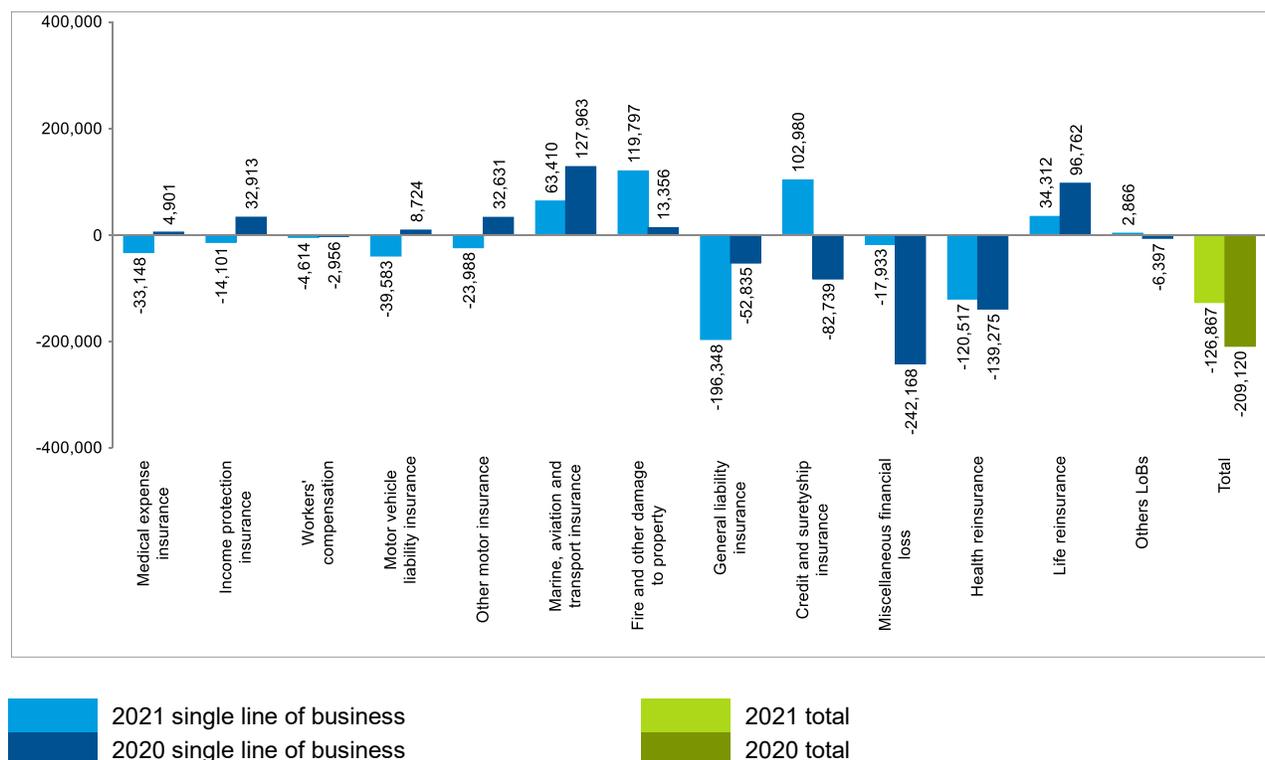
HAPEP II Holding GmbH, Hannover/Germany
Hannover Re Euro PE Holdings GmbH & Co. KG, Hannover/Germany
Hannover Re Global Alternatives GmbH & Co KG, Hannover/Germany
HR US Infra Debt LP, George Town/Cayman Islands
PAG Real Estate Asia Select Fund Limited, George Town/Cayman Islands
Hannover Re Euro RE Holdings GmbH, Hannover/Germany
HR GLL Central Europe GmbH & Co. KG, München/Germany
<b>Hannover Re Real Estate Holdings, Inc., Orlando/USA</b>
Hannover Re Real Estate Holdings, Inc. prepares its own subgroup financial statements which includes the following companies:
GLL HRE CORE Properties, L.P., Wilmington/USA
HR US Infra Equity LP, Wilmington/USA
<b>Argenta Holdings Limited, London/UK</b>
Argenta Holdings Limited prepares its own subgroup financial statements which includes the following companies:
Argenta Private Capital Limited, London/UK
Argenta Syndicate Management Limited, London/UK
Argenta Tax & Corporate Services Limited, London/UK
Argenta Underwriting Asia Pte. Ltd., Singapur/Singapore
Argenta Underwriting No.1 Limited, London/UK
Argenta Underwriting No.2 Limited, London/UK
Argenta Underwriting No.3 Limited, London/UK
Argenta Underwriting No.4 Limited, London/UK
Argenta Underwriting No.7 Limited, London/UK
Argenta Underwriting No.9 Limited, London/UK
Argenta Underwriting No.10 Limited, London/UK
Argenta Underwriting No.11 Limited, London/UK
Argenta No.13 Limited, London/UK
Argenta No.14 Limited, London/UK
Argenta No.15 Limited, London/UK
Argenta No.16 Limited, London/UK
Residual Services Limited, London/UK

## A.2 Underwriting performance

With technical income of TEUR 14,956,289 (2020: TEUR 13,112,683) and technical expenses of TEUR 15,083,156 (TEUR 13,321,803), Hannover Rück booked a total technical result in accordance with the German Commercial Code of TEUR -126,867 in the 2021 financial year after TEUR -209,120 in the previous year.

Broken down into lines of business pursuant to Annex I of the Delegated Regulation, the split of the technical result (net) for the business years 2020 and 2021 is as follows:

## Technical result (net) – Breakdown by lines of business in TEUR



Measured in terms of premium volume and the total technical result in the 2021 financial year, the material lines of business are fire and other damage to property insurance (TEUR 119,797), credit and surety insurance (TEUR 102,980), marine, aviation and transport insurance (TEUR 63,410), life reinsurance (TEUR 34,312), general liability insurance (TEUR -196,348), and health reinsurance (TEUR -120,517).

In marine, aviation and transport insurance, there was a relatively strong increase in expenses for claims and insurance benefits, with an increase in net premiums earned (TEUR 490,790 after TEUR 432,440) and a moderate increase in operating expenses. The underwriting result decreased by TEUR 64,553 to TEUR 63,410.

Growth in US and Group business as well as increases in the Advanced Solutions segment were the main factors in the rise in net premium earned in the line fire and other damage to property insurance. In relation to this increase, there were both lower claims burdens and reduced reserve allocations. The claims burden mainly relates to major loss events, such as Hurricane Ida in the USA and the onset of winter "Big Freeze", which in total increased compared to the previous year. This results in an underwriting result of TEUR 119,797 compared to TEUR 13,356.

In 2021 net premiums earned in the general liability insurance line increased to TEUR 2,092,833, compared to TEUR 1,631,591 in the previous year. This was primarily due to growing US business. Reserves were significantly more pronounced in 2021 compared to 2020. This leads to a lower underwriting result of TEUR -196,348 compared to TEUR -52,835.

In the credit and surety insurance line, net premiums earned were virtually unchanged. The significant decrease in expenses for insurance claims is attributable to high IBNR releases for

surety. With a slight increase in operating expenses in line with the premium, there was an underwriting profit of TEUR 102,980, compared with a loss of TEUR -82,739 in the previous year.

The most notable items reported under the line miscellaneous financial loss are other financial losses and other business interruption losses. Expenses for claims decreased to TEUR 121,779, as extensive reserves were set up in the previous year for claims in connection with the Covid-19 pandemic, which resulted in comparatively high claims expenses.

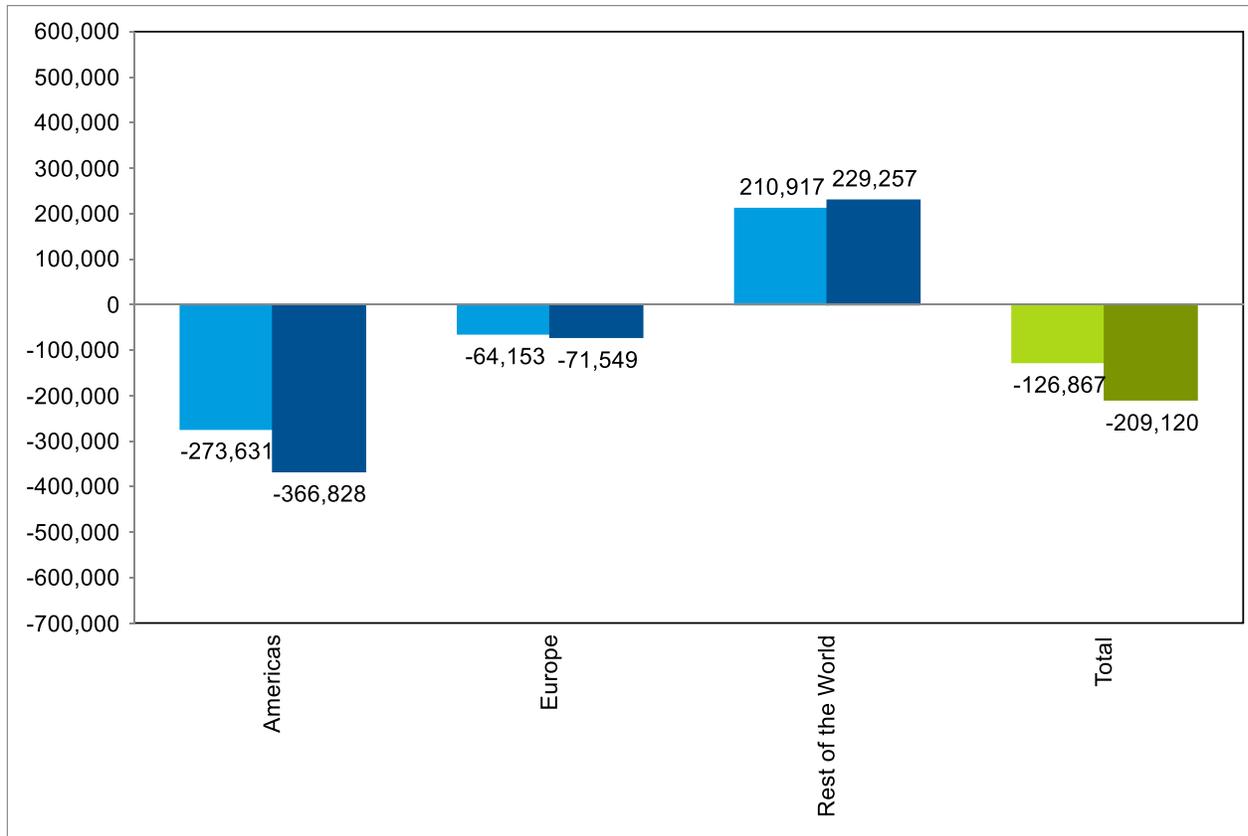
The health reinsurance business reported a slight increase in premium volume for the reporting period (TEUR 1,651,392, previous year: TEUR 1,458,570). Expenses for insurance claims (net) amounted to TEUR 1,364,338, the change in other insurance reserves (net) was TEUR -109,414 and operating expenses (net) were TEUR 298,157. For the reporting period, this results in a slightly improved underwriting result of TEUR -120,517 compared to the previous year, mainly due to relatively strong positive effects in the area of reserve adjustments from interest rate effects in the disability business in our Australian portfolio, offsetting higher claims from Covid-19.

A worldwide network of subsidiaries, branches and service companies administers the life reinsurance business. This decentralised approach combined with the worldwide expertise of Hannover Rück enables us to deliver a comprehensive customer support. Overall, the net premium earned of TEUR 3,103,981 increased compared to the previous reporting period (TEUR 2,887,836). The technical underwriting result declined and amounted to TEUR 34,312. The strongest driver for the decline compared to the previous year are higher claims from the Covid-19 pandemic, stemming mainly from South Africa and South America.

The category "Other lines of business" recognises the areas of legal expenses insurance and assistance insurance.

Grouped by geographical areas, the net technical result breaks down as follows:

**Technical result (net) – Regional breakdown**  
in TEUR



The technical result improved overall to TEUR -126,867 compared to TEUR -209,120 in the previous year. In the Americas, the result improved from TEUR -366,828 to TEUR -273,631. The result in the Rest of the World declined (TEUR 210,917 compared to TEUR 229,257), while Europe recorded a slight improvement in the result to TEUR -64,153 compared to TEUR -71,549.

In the rest of the world, the result declines mainly in the life reinsurance line due to Covid-19 charges in South America and South Africa. In the Americas, premium growth is also reflected in the positive earnings trend.

### 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 an overall low-risk mix, our investments reflect both the currency and maturity profile of our liabilities. Our portfolio contains a high level of fixed interest securities, so that credit and spread risks account for the main contribution to market risk.

Against the backdrop of the continued challenging state of global financial markets, we are highly satisfied with the performance of our investments. Although it has been another challenging year with continuously low interest rate levels and a global economic and geopolitical situation which is more and more affected by numerous uncertainties and risks, we managed to excel in achieving our goals.

Ordinary investment income including deposit interest came in below the previous year's level at TEUR 1,505,724 (TEUR 1,600,833), primarily due to a one-time effect from our investment holding companies in the previous year. Ordinary income from fixed-income securities totaled TEUR 478,465 (TEUR 485,004). Net gains of TEUR 280,428 (TEUR 166,170) were realised on disposals. The increase resulted principally from the release of substantial hidden reserves in connection with the regrouping of our equity holdings and the portfolio of high-yield bonds. Write-downs of TEUR 31,616 (TEUR 34,378) were taken on investments, for the most part on bearer debt securities held as current assets, in the area of alternative investments and on deposits with ceding companies. The write-downs contrasted with write-ups of TEUR 5,991 (TEUR 1,522) that were made on assets written down in previous periods in order to reflect increased fair values. All in all, the net investment result increased slightly to TEUR 1,687,418 (TEUR 1,673,282).

The following overview displays how the investment result achieved by Hannover Rück pursuant to the 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	Other income
Property, plant & equipment held for own use	2,582			
Property (other than for own use)	529		146	
Holdings in related undertakings, including participations	771,726	87,904		
Equities - listed				
Equities - unlisted				
Government Bonds	186,391	129,940	1,465	
Corporate Bonds	264,830	49,088		
Structured notes				
Collateralised securities	16,973	224		
Collective Investments Undertakings	47,052	132,186	4,380	
Derivatives	44,161	2,306		
Loans	1,717	55		
Deposits other than cash equivalents	26,852			
Deposits to cedants	142,882			
Cash and cash equivalents	29			
<b>Total</b>	<b>1,505,724</b>	<b>401,703</b>	<b>5,991</b>	

**Investment expenses**

in TEUR	Write-downs	Realised losses	Other expenses
Property, plant & equipment held for own use	-462		-2,098
Property (other than for own use)	-236		-326
Holdings in related undertakings, including participations			-10,707
Equities - listed			
Equities - unlisted			
Government Bonds	-7,848	-77,236	-10,868
Corporate Bonds	-3,492	-40,388	-8,573
Structured notes			
Collateralised securities		-421	-557
Collective Investments Undertakings	-7,122	-3,225	-1,547
Derivatives		-1	-30,532
Loans		-4	-288
Deposits other than cash equivalents			-1,002
Deposits to cedants	-12,455		-6,513
Cash and cash equivalents			-98
<b>Total</b>	<b>-31,615</b>	<b>-121,275</b>	<b>-73,109</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	2021			2020		
	Total investment income	Total investment expenses	Investment performance	Total investment income	Total investment expenses	Investment performance
Property, plant & equipment held for own use	2,582	-2,560	22	2,854	-2,788	66
Property (other than for own use)	675	-562	113	1,074	-819	255
Holdings in related undertakings, including participations	859,630	-10,707	848,923	900,111	-30,681	869,430
Equities - listed				309	-5	304
Equities - unlisted						0
Government Bonds	317,796	-95,952	221,844	330,917	-30,147	300,770
Corporate Bonds	313,918	-52,453	261,465	328,812	-24,633	304,179
Structured notes						0
Collateralised securities	17,197	-978	16,219	15,323	-2,075	13,248
Collective Investments Undertakings	183,618	-11,894	171,724	32,206	-10,905	21,301
Derivatives	46,467	-30,533	15,934	7,511	-23,638	-16,127
Loans	1,772	-292	1,480	207	-264	-57
Deposits other than cash equivalents	26,852	-1,002	25,850	16,058	-400	15,658
Deposits to cedants	142,882	-18,968	123,914	167,840	-3,614	164,226
Cash and cash equivalents	29	-98	-69	70	-41	29
<b>Total</b>	<b>1,913,418</b>	<b>-225,999</b>	<b>1,687,418</b>	<b>1,803,292</b>	<b>-130,010</b>	<b>1,673,282</b>

Hannover Rück does not record any profits or losses directly in shareholders' equity in accordance with the HGB.

In the item "Collateralised securities" in the Solvency II balance sheet of Hannover Rück securitisations are recorded in the form of Collateralised Loan Obligations (CLO). The resulting income and expenses along with their composition can be taken from the above table. CLOs 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 CLOs, 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 CLOs and, in addition, lower maximum thresholds for the sub-category "CLO Equity Tranches".

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

#### Collateralised Loan Obligations

in TEUR	Market value
Collateralised Loan Obligations	560.021
<b>Total</b>	<b>560.021</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.

#### Other income

in TEUR	2021	2020
Exchange rate gains	168,870	105,402
Income from sale of renewal rights	42,520	
Profit from services	35,557	34,071
Income from guarantees given	6,932	9,277
Separate value adjustments on accounts receivable and retrocessions	3,628	7,998
Release of non-technical provisions	2,553	6,297
Interest pursuant to § 233 a AO (Fiscal Code)	21,093	5,690
Allocated investment return	18,555	4,958
Income from reinsurance contracts	1,602	4,549
profit from joint ventures	5,573	2,024
Profit from clearing transactions	3,310	631
Amounts realised	187	68
Reimbursement of expenses	282	43
Income from discounting pursuant to § 277 (5) HGB (Commercial Code)	7	35
Other income	4,780	5,668
<b>Total</b>	<b>315,449</b>	<b>186,711</b>

**Other expenses**

in TEUR	2021	2020
Financing interest	76,441	87,904
Exchange rate losses	89,701	85,133
Deposit interest	62,492	72,017
Expenses for the company as a whole	68,539	60,469
Expenses from services	36,460	34,905
Separate value adjustments on accounts receivable and retrocessions	10,435	17,296
Expenses for joint ventures	7,219	7,800
Interest charges on old-age pension scheme	2,399	2,632
Expenses for letters of credit	2,302	2,109
Expenses from reinsurance contracts	1,726	1,197
Write-downs on accounts receivable	685	237
Interest charges from reinsurance transactions	205	205
Compounding of interest on provisions / expense from compounding pursuant to § 277 (5) HGB (Commercial Code)	37	43
Interest pursuant to § 233 a AO (Fiscal Code)	656	
Other interest and expenses	7,070	1,757
	366,367	373,704
<b>Less: Technical interest</b>	<b>9,534</b>	<b>7,619</b>
<b>Total</b>	<b>356,833</b>	<b>366,123</b>

**A.4.2 Significant leasing agreements**

There are no significant operating or financing-leasing agreements.

Individual operating leasing agreements exist related to office buildings and other assets.

**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

The Hannover Rück has an effective system of governance in place which provides for sound and prudent management. The main 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 the areas of responsibility to the members of the Executive Board as of 31 December:

#### Members of the Executive Board

Chairman	Chief Financial Officer	Property & Casualty Reinsurance			Life & Health Reinsurance	
Jean-Jacques Henchoz	Clemens Jungsthöfel	Dr. Michael Pickel	Sven Althoff	Silke Sehm	Claude Chèvre	Dr. Klaus Miller
Compliance	Finance and Accounting	Property & Casualty Reinsurance: Asia, Australia and Middle East.	Coordination of Property & Casualty Business Group	Property & Casualty Reinsurance: Continental Europe and Africa	Life & Health Reinsurance: Africa, Asia, Australia, Latin America, Middle East, Western and Southern Europe	Life & Health Reinsurance: North America, UK, Ireland, Northern, Eastern and Central Europe
Controlling	Information Technology	Germany, Switzerland, Austria and Italy.	Property & Casualty Reinsurance: North America.	Catastrophe XL (Cat XL)		
Innovation Management	Investment and Collateral Management	Latin America and Iberian Peninsula.	United Kingdom, Ireland and London Market.	Structured Reinsurance and Insurance-Linked Securities	Longevity Solutions	
Human Resources Management	Facility Management	Run-Off Solutions	Aviation and Marine	Retrocessions		
Internal Auditing		Agricultural Risks	Credit, Surety and Political Risks			
Risk Management & Actuarial		Group Legal Services	Facultative Reinsurance			
Corporate Development			Quotations			
Corporate Communications						

The four (Solvency II) key functions are allocated to the Chairman of the Executive Board. For further information on key functions (Solvency II) please refer to the following sections of chapter B.

### Supervisory Board

The Supervisory Board consists of nine members appointed by the AGM. Of these nine members, three shall be appointed on recommendation by the employees. The AGM is bound by these recommendations for the appointment of the employees' representatives. Apart from those, the AGM can freely propose candidates. Every member of the Supervisory Board can resign from his membership by adhering to a notice period of one month, without any obligation to specify 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.

The appointment for a successor of a member who has resigned prior to termination of his term is for the remaining 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	Nomination Committee	Staff representative
Torsten Leue, Chairman	X	X	X	
Herbert K. Haas, Deputy Chairman	X	X	X	
Natalie Bani Ardalan				X
Frauke Heitmüller				X
Ilka Hundeshagen				X
Dr. Ursula Lipowski		X		
Dr. Michael Ollmann				
Dr. Andrea Pollak			X	
Dr. Erhard Schipporeit	X			

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

The Supervisory Board received an analysis of the 2020 results in property & casualty and life & health reinsurance as well as a presentation from the Executive Board covering the profit expectations for the 2021 financial year and the operational planning for the 2022 financial year. In addition, the Chairman of the Supervisory Board was constantly kept informed by the Chairman of the Executive Board of major developments and impending decisions as well as of the company's risk situation. In summary, the Supervisory Board was involved in decisions taken by the Executive Board and assured ourselves of the lawfulness, regularity and efficiency of the company's management as required by our statutory responsibilities and those placed upon us by the company's Articles of Association.

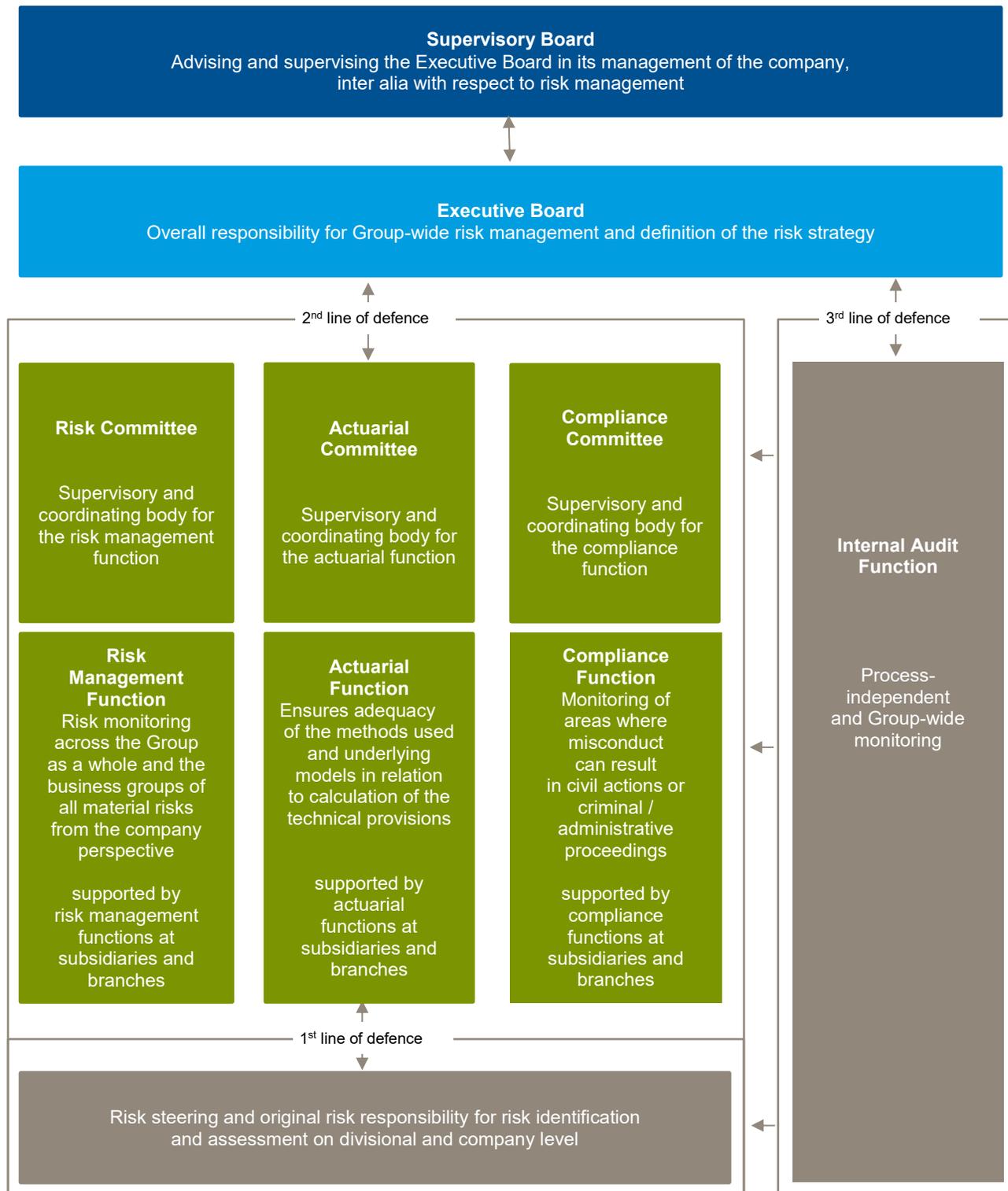
No audit measures pursuant to § 111 Para. 2 Sentence 1 Stock Corporation Act (AktG) were required in the 2021 financial year.

There were no changes in the composition of the Supervisory Board or its committees in the year under review. The term of office of the company's Supervisory Board ends pursuant to § 10 (3) of the Articles of Association of Hannover Rück SE at the end of the General Meeting that ratifies the acts of management for the 2023 financial year.

Nor were any changes made to the composition of the Executive Board in the year under review.

### 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 systems. The central risk management functions are closely interlinked with one another and the roles, tasks and reporting lines are clearly defined in the context of the so-called “three lines of defence” model. 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.

## **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 composed of 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 amounts to TEUR 8,417.

### **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 and regulated by the Statute.

The total remuneration received by the Supervisory Board of Hannover Rück amounts to TEUR 1,137.

### 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.1.3 Related party transactions

Talanx AG holds an unchanged majority interest of 50.22% in Hannover Rück SE. For its part, HDI Haftpflichtverband der Deutschen Industrie Versicherungsverein auf Gegenseitigkeit (HDI), Hannover, holds a stake of 79.0% in Talanx AG.

The business relationship between Hannover Rück SE and its subsidiary E+S Rückversicherung AG is based on a cooperation agreement. A retrocession by Hannover Rück SE to E+S Rückversicherung AG exists in Property & Casualty reinsurance. E+S Rückversicherung AG and Hannover Rück SE bear exclusive responsibility for German business and for international markets respectively.

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 Rück 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

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 function).

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

The professional and personal requirements for members of the Supervisory Board are comprised in a guideline document since 2017.

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 2021.

### **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 required specific knowledge for owners of one of the key functions including compliance, internal audit, risk management, and actuarial mathematics is included in the referred role description.

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

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

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

We manage our total enterprise risk such that we can expect to generate positive Group net income with a probability of 90% p.a. Our solvency ratio is subject to a limit of 180% and a threshold of 200%. Countermeasures would be triggered if the solvency ratio were to fall below this threshold. These indicators are monitored using our internal capital model and the Executive Board is informed quarterly about adherence to these key parameters as part of regular 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.

#### B.3.1.2 Risk capital

In the interests of our shareholders, clients and employees 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 Hannover Rück is a stochastic enterprise model. It covers all subsidiaries and business groups of Hannover Rück. 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 change of economic capital over a period of one year with a confidence level of 99.5%, in accordance with Solvency II. Independently from the regulatory reporting requirements, Hannover Rück calculates the regulatory capital requirements with a full internal model. This leads to according capital requirements for market risks, underwriting risks, counterparty default risks and operational risks.

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 is assessed as "AA-" (Very Strong, stable outlook) by Standard & Poor's and "A+" (Superior, stable outlook) by

A.M. Best. In the rating process, S&P as well as A.M. Best evaluate Hannover Rück's risk management as an important aspect in the financial strength assessment.

### **B.3.1.3 Internal model governance**

The governance of the internal model is defined in a number of documents and policies. In particular, governance rules include roles, responsibilities and standards for changes to the internal model and model validation as well as standards for internal and external data and expert settings used in the internal model. The rules have been set-up in compliance with the requirements of Solvency II.

The risk management function provides quarterly reports on internal model results and changes to the Executive Board and the Risk Committee. The reporting supports the tracking of changes to the risk profile and the solvency ratio over time. Apart from this reporting, internal model results are embedded in the essential internal steering processes such as capital cost allocation and new product evaluation.

The annual model validation ensures that the internal model meets all defined quality standards of the policies. The Solvency II directive requires that the validation is performed as an independent process. Therefore, Hannover Rück has set-up a validation process which assigns validation to departments different from the departments responsible for model operation, calibration and maintenance. The validation report includes numerous stress tests and sensitivity analyses.

There have not been any significant changes in the model governance during the reporting period. The model change policy remained unchanged as well.

### **B.3.1.4 Organisation of risk management and the tasks of the risk management function**

An overview of risk management's organisational structure is provided in Section B.1.1.2 above.

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. The Risk Committee also receives the model change reports according to the model change policy.

#### **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 (cf. section B.3.2). 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. There has been a change in the risk management system during the reporting period in respect of creation of a Reputational and Sustainability Risk Framework, due to the rising importance of all ESG related topics and risks from them.

### B.3.1.5 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 Hannover Rück 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 framework conditions and the risk control process. The rules, which are derived from the corporate strategy and the risk strategy, additionally take account of the regulatory requirements for risk management as well as international standards and developments relating to appropriate enterprise risk 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. Beyond that, the requirements by the risk management are stated in guidelines and policies, which are communicated Group-wide.

### 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. Those individual risks that can be quantitatively measured as well as 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 in particular the indicators derived and calculated from the risk-bearing capacity, along with other risk-related key figures. 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 assessed quantitatively. Only risk types for which quantitative risk measurement is currently impossible or difficult are assessed qualitatively (e.g. strategic, reputational or emerging 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, in the context of committee and project work, through 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. Furthermore, the Executive Board is the owner of the economic capital model and is responsible for the approval of major model changes. 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.3.1.6 Risk landscape**

In the context of its business operations, Hannover Rück 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 Hannover Rück, 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. 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 as well as
- Reputational and sustainability, liquidity, strategic and emerging risks.

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

The ORSA cycle mirrors our circuit of planning, action, monitoring und finally enhancement and comprises the elements listed in Section B.3.1.5.

The ORSA report is prepared on an annual basis and summarizes the results of the last ORSA cycle. Here, the internal model is used – especially for the calculation of solvency requirements in comparison to the allocated risk capital. 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 division and is subject to both assessment and approval by the Executive Board. In addition, the report is submitted to the Supervisory Board and the BaFin.

## Risk reporting

The risk monitoring function produces regular reports, which show the company's risk position.

These reports form the basis for the solvency and risk assessments described in the ORSA report. Therein all employees contributing to the above procedures are involved as data and information suppliers and consulted for quality assurance.

The Executive Board takes the ORSA results into consideration when assessing the degree of accomplishment of defined business targets. If needed, changes in the business process take place. This establishes a surveillance circuit for business enhancements and risk mitigation.

In the event that - because of a material change in risk profile - an ad hoc ORSA report becomes necessary, Hannover Rück has defined specific procedural plans and responsibilities. Hannover Rück conducted several ad-hoc analyses in 2021 as a response to the Covid-19 crisis. The analyses included additional stress tests and sensitivities.

In addition to the internal risk reporting and the ORSA report, we generate this annual Solvency and Financial Condition Report (SFCR) and an annual Regular Supervisory Report (RSR).

## B.4 Internal Control System

### B.4.1 Elements of the internal control system

The internal control system (ICS) is an important subsystem that serves, among other things, to secure and protect existing assets, prevent and reveal errors and irregularities and comply with laws and regulations. The core elements of Hannover Rück's ICS are documented in a guideline that establishes a common understanding of the differentiated execution of the necessary controls.

The guideline defines concepts, stipulates responsibilities and provides a guide for the description of controls. The ICS consists of systematically structured organisational and technical measures and controls within the enterprise. These include, among other things, the principle of dual control, separation of functions, documentation of the controls within processes as well as technical plausibility checks and access privileges in the IT systems.

The proper functioning of the ICS necessitates the involvement of management, executive staff and employees on all levels. The financial reporting must satisfy international and national financial reporting standards as well as regulatory requirements. This is safeguarded in the area of accounting and financial reporting by processes with integrated controls which ensure the completeness and accuracy of the annual and consolidated financial statements. A structure made up of differentiated criteria, control points and materiality thresholds assures our ability to identify and minimise the risk of errors in the annual and consolidated financial statements at an early stage.

## B.4.2 Compliance function

### Compliance Management System

Hannover Rück defines Compliance as the observance of the applicable statutory and regulatory provisions and intra-company guidelines.

Hannover Rück implemented a Compliance Management System (CMS) to ensure overall Compliance. It is based on accepted international standards and consists of six elements: Compliance Culture, Compliance Function, Compliance Risk, Compliance Programme, Compliance Communication, Compliance Monitoring and Improvement.

### Compliance Culture

Compliance Culture provides the basis for the adequacy and effectiveness of the CMS. The importance of Compliance is not only reflected in the Code of Conduct (CoC), it is an explicit part in the group strategy which in turn further emphasises the importance of Compliance from the management perspective (Tone from the Top).

In addition, in 2021 the Tone from the Top is further communicated during our Compliance Campaign by publishing dedicated individual Compliance videos by the members of our Executive Board and the Compliance Officer.

### 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 one department, but by various departments. The Compliance function is therefore located in several departments.

The head of the department Group Legal Services (GLS) is the holder of the key Compliance function at the same time.

The Executive Board of Hannover Rück has established the Compliance division within GLS for the fulfilment of some of the tasks of the Compliance function. The Compliance Officer is authorised to appoint further members of staff from GLS for the purpose of fulfilling compliance function tasks as necessary.

In the process of planning and organising of the CMS the particularly sensitive Compliance topics were identified through the employment of a risk-based approach and past experiences gained primarily by the Compliance and Internal Audit department (Group Auditing, GA). The scope is assessed annually. The Compliance Officer will propose an appropriate adjustment to the Executive Board if a change in assessment occurs.

The key areas of Compliance as mentioned above are monitored by the Compliance function at Hannover Rück. Therefore, different departments work together in order to fulfil this function. 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 handling of particularly Compliance-relevant topics by the departments, who collectively form the Compliance function, comprises at 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)

## Compliance Risk

The term compliance risk is commonly referred to as the risk of legal or regulatory sanctions due to non-compliance with laws, regulations and regulatory requirements or due to a serious financial loss or a loss of reputation.

The Compliance Risk assessment is based on the Compliance Risk Matrix which allows for a systematic evaluation and assessment of individual Compliance Risks. The risk assessment is thereby the result of the combination of probability of occurrence and impact (consequence). The consequence assessment differentiates between potential losses, reputational risks and other non-financial impacts, whereby the scenario with the highest impact is decisive in the assessment.

## Compliance Programme

Every year, the Compliance Officer generates a Compliance plan for the following year. This plan determines where the key areas of Compliance activity should be in the subsequent year. The report takes into account all relevant areas of activity of the company and the Compliance Risk.

Hannover Rück has specified its compliance policy in writing in a manual bearing the title "Group Compliance Handbook". 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.

The appointed Compliance Officer for Hannover Rück bears particular responsibility for monitoring of 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 Compliance Officer advises members of the Executive Board and members of staff of Hannover Rück upon request regarding Compliance topics.

## Compliance Communication

Compliance Communication comprises several aspects including reporting, training and a speak-up culture.

The Compliance Officer maintains constant contact and exchange with the further members of the Compliance Function both in Germany and abroad.

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

For the preparation of the Hannover Rück annual Compliance Report to be presented to the Supervisory Board in its Finance & Audit Committee meeting the Compliance Officer and the Compliance staff assess the monitoring plan of the Home Office as well as the Compliance report of the Local Offices. The report contains information on all Compliance-relevant topics.

The Compliance function also holds regular training sessions for members of staff, in particular with regard to legislative reforms, announcements by the insurance supervisory authority or other changes. In 2021, Compliance carried on the Compliance Campaign started in 2020 and scheduled for the duration of twelve months to raise awareness for Compliance relevant topics with all staff globally.

### Compliance Monitoring and Improvement

By way of continuous monitoring, the 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.

Compliance evaluates adequacy and effectiveness of implemented measures to mitigate identified Compliance Risks on an annual basis. The result of this evaluation did not show any indications that single measures for prevention of non-Compliance would have failed.

## 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 thereby creating added value. In addition to its auditing role, GA operates as an internal advisor generating valuable input 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, audit execution, reporting and the assessment of audit results. For the purposes of safeguarding independence, 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 Insurance Supervision Act (VAG), reports directly to the Executive Board in all 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 ("Internal Audit Charter"). This policy was released by the Executive Board and specifies the authorities of the internal audit function.

The GA team unites people of different educational backgrounds as well as different university and vocational degrees in order to cover the wide range of audit tasks. The employees hold a comprehensive professional experience, gained internally (especially from underwriting) as well as externally (in particular from external auditing and consulting). If a specific need for additional resources or skills arises, GA can involve internal peers or external capacities.

## 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 agreed recommendations and measures in the audits is monitored by GA up until the determined deadlines.

## B.6 Actuarial Function

### Implementation of the Actuarial Function

The Actuarial Function (AF) is decentral organised, as the given tasks are undertaken by several organisational units. Utilisation of the expertise and processes, which are directly linked to the core tasks of the respective organisational unit, ensures adequate actuarial knowledge for all tasks of the AF.

The responsible owner of the AF coordinates all tasks related to the AF. He 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. In exercising his function, the responsible owner of the AF receives support from several units within the risk management department and from other departments of the company.

Furthermore, it is the common understanding of AF and Risk Management Function (RMF) that a broad exchange of information and a competent support of each other's function is useful to fulfil their individual tasks in an effective and efficient way.

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

## Tasks

The tasks of the AF are inter alia:

- Coordination and validation of the calculation of the Solvency II technical provisions (TP)
- Ensure the appropriateness of the applied methods, the underlying models and assumptions

- used for the calculation of the TP for solvency as well as for accounting purposes
- 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
- External validation and quality checks by actuarial consulting companies in addition to the internal validation of the TP
- 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 including the delivery and validation of models, data, parameters)
  - Monitoring of the reserve level within the scope of the system of limits and thresholds
  - Analysis of 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, which 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 and vice versa. Any requests of these two bodies were directed to the responsible owner of the AF. 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, the Board member responsible for the risk management coordination of worldwide Property & Casualty reinsurance, the Board member responsible for the risk management coordination of the worldwide Life & Health reinsurance, the head of the AF and the head of reserving for Property & Casualty reinsurance business.

## B.7 Outsourcing

Hannover Rück has a guideline in place, which governs third party provisions and outsourcing. Among others, the guideline details all requirements imposed on the outsourcing of (re-)insurance activities and functions. Here, the entire management process is described, which consists of the following four process steps:

- Initial analysis, incl. materiality assessment and initial risk assessment and due diligence
- Initial contracting, incl. notification
- Continuous steering and monitoring

- Renewal and termination

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

Among others, Hannover Re has currently outsourced the asset and investment management to Ampega Asset Management GmbH, located in Cologne (Germany). This matter concerns the only outsourcing classified as *important outsourcing* of the Group.

## **B.8 Any other information**

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

On an annual basis, the Executive Board receives an opinion from the System of Governance Assessment Committee regarding the past financial year. This opinion presented by the committee dated 18 February 2022 was assessed and approved by the Executive Board.

The committee is made up of the Heads of the key functions, the Head of Human Resources and the Head of Operations Performance, and usually convenes twice 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 conducted by the committee, the Executive Board has reached the conclusion that the system of governance of Hannover Rück is appropriate considering the scope and complexity of its business activities and the inherent risks.

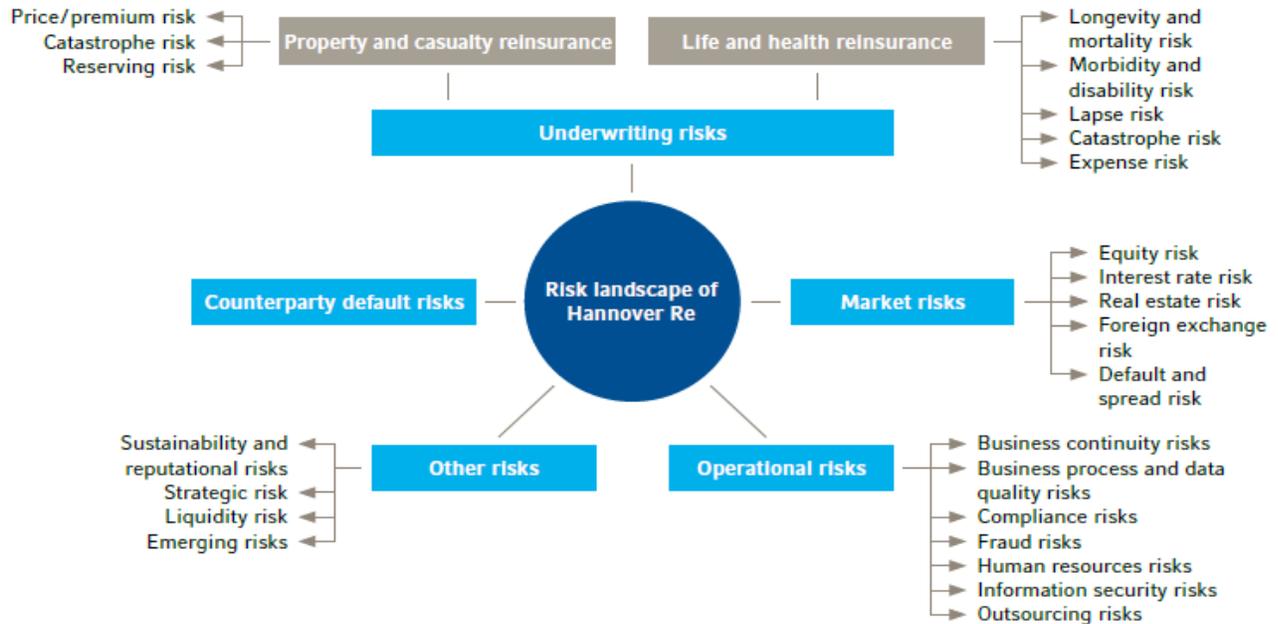
### **B.8.2 Other information**

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

## C. Risk Profile

The risk landscape is presented in Section B.3.1.6 and displayed in the following graph.

### Risk landscape of Hannover Re



In the context of its business operations Hannover Rück is confronted with a broad variety of risks. These risks are deliberately accepted, steered and monitored in order to be able to act on the associated opportunities. The parameters and decisions of the Executive Board with respect to the risk appetite of Hannover Rück, which are based on the calculations of risk-bearing capacity, are fundamental to the acceptance of risks.

At the present time our most significant individual risks are the default and spread risks within the market risks, the reserving and catastrophe risks within the underwriting risks of Property & Casualty reinsurance and the longevity risks within the underwriting risks of Life & Health reinsurance.

Retrocession has a particular significance within risk appetite and risk reduction. It is used 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, its branches and its subsidiaries is determined by the responsible Board member and overseen by the Board as a whole.

In the course of the mid-term planning, we monitor the business 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. This also includes different impacts related to business growth and performance. Under the assumptions within the mid-term business plan, the risk profile and the capitalisation of Hannover Re Group remains comfortable. It is worthwhile to notice that the forecast of the capital requirements is based on various assumptions for the future economic and business environment and is therefore to be handled carefully.

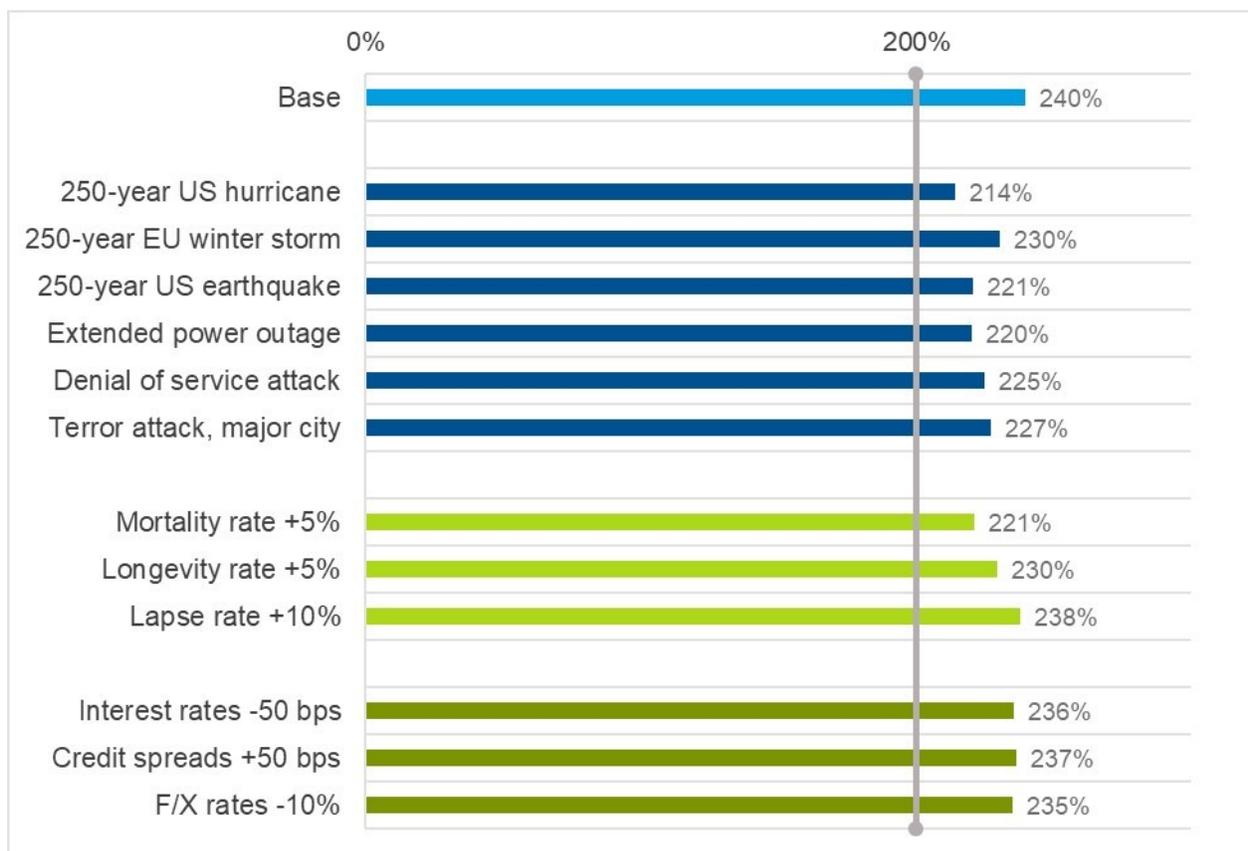
Large transactions are assessed with regards to their influence on the risk profile, capitalisation and the defined thresholds for different risk categories. Therewith, we ensure that the risks develop in line with our risk appetite.

New reinsurance and investment products are analysed under a dedicated process, namely the New Products Process (NPP). In addition to analysing the risk profile, integration into all internal processes, such as accounting and risk monitoring, is defined.

In addition to stochastic modelling, we perform stress tests, scenario and sensitivity analyses on a regular basis. This represents a central element of our risk management. The main stress tests and analyses have to be performed at least annually. They include analyses regarding natural catastrophes, terror events, equity and fixed-income securities as well as real estate. Selected scenarios and stress tests are presented in the following graph.

**Sensitivities of the Solvency II ratio YE 2020**

Values in percent



Hannover Rück is the legal entity heading Hannover Re Group. It holds a number of participations, which are included into management applications in a look-through manner, i.e. based on the underlying risk and return profile. Look-through means that the underlying risks are analysed instead of purely looking at the risk of a change in the participation values as e.g. per Solvency II standard formula. This look-through perspective corresponds to a modelling approach of Hannover Rück as the entire Hannover Re Group after, i.e. excluding minorities. This means that the perception of the key risk indicators shown in the following sections (Look-through) differs from that of the exposures or volumes (no Look-through for participations) in Section D, but corresponds to the internal model view approved by the supervisory authority.

In the following section, we present the current risk situation per risk category.

## 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 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 Rück and to steer the acceptance of risks systematically through the existing central and local underwriting guidelines. Our conservative reserving level is a key factor in our risk management.

For risk management purposes we make a fundamental distinction between risks that result from business operations of past years (reserve risk) and those stemming from activities in the current or future years (price / premium risk). Particularly in the latter case, special importance attaches to the catastrophe risk.

Diversification within the Property & Casualty reinsurance business is actively managed through allocation of the cost of capital according to the contribution made to diversification. A high diversification effect arises out of the underwriting of business in different lines and different regions with different business partners. In addition, the active limitation of individual risks – such as natural catastrophes – enhances the diversification effect.

The risk capital with a confidence level of 99.5 % within underwriting risks in Property & Casualty reinsurance is as follows:

#### Solvency Capital Requirement for underwriting risks in Property & Casualty reinsurance

in TEUR	2021	2020
Premium risk (including catastrophe risk)	3,746,100	3,197,889
Reserve risk	3,087,605	2,448,238
Diversification	-1,582,466	-1,293,528
<b>Underwriting risk property and casualty</b>	<b>5,251,239</b>	<b>4,352,598</b>

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

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

A large share of the required risk capital for the premium risk (including catastrophe risk) is attributable to risks from natural disasters. They constitute the main concentration risk in Property & Casualty reinsurance. The following table shows the required risk capital for five of our largest natural hazards scenarios:

**Solvency Capital Requirement for five of our largest natural hazards scenarios**

in TEUR	2021	2020
Hurricane US	2,298,474	1,967,988
Earthquake US West Coast	1,739,357	1,347,593
Winter storm Europe	1,087,621	718,836
Earthquake Japan	1,441,183	844,836
Earthquake Chile	1,329,944	907,988

The higher capital requirements compared to last year are due to new and expansion of established business, reduction of retrocessions and exchange rate effects. The scenario Japan Earthquake increased additionally due to a model update.

For the purpose of assessing our material catastrophe risks from natural hazards (especially earthquake, windstorm and flood) we use licensed scientific simulation models, supplemented by the experience of our own specialist departments. The monitoring of the risks resulting from natural hazards is rounded out by scenario analyses. Major scenarios and stress tests are shown in the following table:

**Stress tests for natural catastrophes**

Effect on forecasted net income

in TEUR	2021	2020
<b>Hurricane US</b>		
100-year loss	-1,401,332	-1,146,905
250-year loss	-1,899,406	-1,625,542
<b>Earthquake US West Coast</b>		
100-year loss	-812,261	-599,504
250-year loss	-1,581,982	-1,229,544
<b>Winter storm Europe</b>		
100-year loss	-616,482	-422,883
250-year loss	-907,289	-645,361
<b>Earthquake Japan</b>		
100-year loss	-736,961	-401,245
250-year loss	-1,181,209	-794,501
<b>Earthquake Chile</b>		
100-year loss	-471,203	-274,400
250-year loss	-1,233,812	-821,590

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

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

For the purposes of risk limitation, maximum amounts are also stipulated for various extreme loss scenarios and return periods; the limits set take into account the profitability of the business in question. Risk management ensures adherence to these maximum amounts. The Executive Board,

Risk Committee and P&C Executive Committee are kept regularly updated on the degree of capacity utilisation.

### **C.1.2 Reserve risk**

The reserve risk, i.e. the risk of under-reserving already incurred or foreseeable losses and the resulting strain on the underwriting result, is a high priority in our risk management. We attach importance to maintaining a conservative reserving level. In order to counter the risk of under-reserving we calculate our loss reserves based on our own actuarial estimations and establish, where necessary, additional reserves supplementary to those posted by our cedants as well as the segment reserve for losses that have already occurred but have not yet been reported to us. Liability claims have a major influence on the segment reserve. Reserves are calculated on a differentiated basis according to line of business and region.

In calculating the reserves, we use actuarial methods based on run-off triangles. Run-off triangles show the changes in the reserve over time due to paid claims and in the recalculation of the reserves to be established at each balance sheet date. Their adequacy is monitored using actuarial methods.

Our own actuarial calculations regarding the adequacy of the reserves are also subject to annual quality assurance reviews in the form of an external analysis.

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

### **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 and the responsible 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 main types of cover against natural perils**

In the event of a claim, Hannover Re Group shall receive relief from its various protections. Further details on the individual forms of reinsurance covers are described in the text below. The following mentioned natural protections also protect the Hannover Rück.

##### **Whole Account Protection 2021**

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.

### Large Loss Aggregate XL 2021

The Large Loss Aggregate XL is an aggregate protection and covers all Natural Catastrophe Perils for the Hannover Re Group on a net basis.

### K-Quota share 2021

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

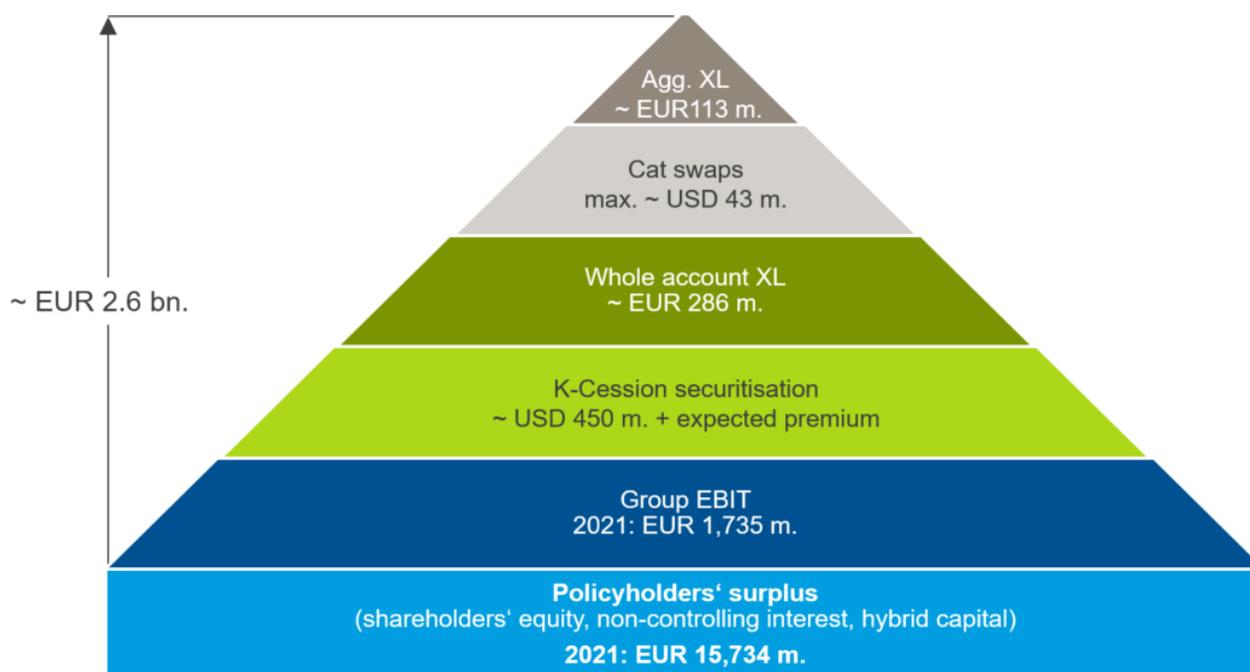
- Natural perils in Australia, Japan, Canada and USA (mainly wind and earthquakes)
- Natural perils in northern Europe (mainly wind, earthquakes, hail and floods)
- Natural perils in New Zealand, Chile (mainly earthquakes)
- Aviation (all XL contracts) and Marine & Energy (all XL contracts)

### Description of the K-Transactions 2021

By way of its “K-transactions”, Hannover Rück has raised underwriting capacity for catastrophe risks in 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. A large part of the total volume of the K-Cession was securitised via structured entities. The transaction has an indefinite term and can be cancelled annually by investors. Segregated accounts of Kaith Re Ltd. and other structured entities outside the Group are used for transformer purposes for part of this transaction. The structured entities are fully funded by contractually defined investments in the form of cash and equivalent liquid assets and therefore there exists no default risk for Hannover Rück.

#### C.1.3.3 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.



Additional retrocession for Marine, Aviation and facultative reinsurance is in place.

#### C.1.3.4 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 per scenario and treaty department are derived from the global and local risk tolerances. The capacity matrix forms the operational control tool and ensures a consistent top-down approach.

During the planning phase starting in June every year, the Executive Board decides on the capacities for the following year. The planning process includes an assessment of the utilisation of all risk tolerances. An overutilization would be inconsistent with the risk appetite and an underutilisation would result in under-deployment of 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 & 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 & Health reinsurance. Our goal is to strike a balance between biometric risks. Furthermore, we are exposed to lapse risks because the cash flows resulting from our reinsurance treaties are in part dependent on lapse rates among policyholders. Counterparty default risks are also material since we partly prefinance our cedants' new business acquisition costs. Furthermore, we are exposed to

catastrophe risks, especially events involving a high number of fatalities in our insured portfolio such as the Covid-19 pandemic in 2021.

The reserves are determined on the basis of secure biometric actuarial bases in light of the information provided by our clients. The biometric actuarial bases used and the lapse assumptions are continuously reviewed with an eye to their adequacy and if necessary adjusted. This is done using the company's own empirical data as well as market-specific insights. Our current risk profile in Life & Health reinsurance is dominated by mortality and longevity risks. This is due to the fact that under some of our contracts we pay death benefits, while under others we pay survival benefits. The volume of our annuity portfolio contributes to diversification within Life & Health reinsurance. We calculate the diversification effect between mortality and longevity risks prudently in view of the fact that the contracts are normally taken out for different regions, age groups and individuals. Morbidity risks are also playing an increasingly significant role. The required risk capital with a confidence level of 99.5% for underwriting risks in Life & Health reinsurance breaks down as follows:

#### Required risk capital for underwriting risks Life & Health reinsurance

Required risk capital at a confidence level of 99.5%

in TEUR	2021	2020
Mortality risk (incl. catastrophe risk)	2,116,164	2,175,650
Longevity risk	2,502,396	2,299,972
Morbidity and disability risk	1,669,791	1,487,725
Lapse risk	353,451	396,015
Expense risk	162,785	222,008
Diversification	-3,480,161	-3,441,452
<b>Underwriting risk life and health</b>	<b>3,324,426</b>	<b>3,139,919</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.

The underwriting risks in Life & Health reinsurance increased primarily due to the business expansion in the areas of longevity and morbidity risks as well as the appreciation of foreign currencies.

A risk concentration in Life & Health reinsurance business arises from longevity and mortality risks, followed by morbidity risks. Concerning mortality risks, the risk of a pandemic event represents a main driver for our solvency capital requirement for Life & Health business with regard to concentration risks. To govern our risks we regularly monitor our exposure regarding potential pandemic events in the context of internal model runs. A systematic validation of the internal model with regard to the findings from the Covid-19 pandemic was carried out in 2021 and will be followed-up 2022. More information is available in Section D.2.2.3.

Through our quality assurance measures we ensure that the reserves established by ceding companies in accordance with local accounting principles satisfy all requirements with respect to the calculation methods used and assumptions made (e.g. use of mortality and morbidity tables, assumptions regarding the lapse rate). In addition, the assumptions are continuously reviewed on the basis of empirical data and modified if necessary. New business is written in all regions in compliance with applicable worldwide underwriting guidelines, which set out detailed rules governing the type, quality, level and origin of risks and how these considerations are factored into the pricing. These global guidelines are revised annually and approved by the Executive Board.

Special underwriting guidelines give due consideration to the particular features of individual markets. By monitoring compliance with these underwriting guidelines we minimise the risk of an inability to pay or of deterioration in the financial status of cedants. Regular reviews and holistic analyses (e. g. with an eye to lapse risks) are carried out with respect to new business activities and the assumption of international portfolios. Large transactions are also examined by our risk management department. Individual actuarial reports and documentation ensure that regular scrutiny also takes place at the subsidiary level. The interest rate risk, which in the primary sector is important in life business owing to the guarantees that are given, is of only minimal relevance to our company thanks to the design of our reinsurance treaties. We have confidence in the entrepreneurial abilities of our underwriters and grant them the most extensive possible authorities. 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 & Health reinsurance. Our global underwriting guidelines provide underwriters with an appropriate framework for this purpose.

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

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. The Life & Health business group did not receive a payment for this cover in 2021.

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 that 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 the Hannover Re Group. For risk reduction reasons, they are no longer necessary and have been placed in run off.

Some non-European branches use inter-company retrocessions 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 inward business or are placed with affiliates and non-affiliates in order to reduce the HGB strain from large financing transactions.

The effectiveness of the retrocessions is closely linked to 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 Section 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 Re's portfolio is therefore guided by the principles of a balanced risk / return profile and broad diversification. Based on a risk-averse asset mix, the investments reflect both the currencies and durations of our liabilities. Market price risks include equity risks, interest rate risks, foreign exchange risks, real estate risks, spread and default risks. Our portfolio currently consists in large part of fixed-income securities, and hence default and spread risks account for the bulk of the market risk. We minimise interest rate and foreign exchange risks through the greatest possible matching of payments from fixed-income securities with the projected future payment obligations from our insurance contracts. Market risks derive from the investments managed by Hannover Re itself and from investment risks of ceding companies that we assume in connection with insurance contracts. The following table shows the risk capital with a confidence level of 99.5 % for the market risks from investments under own and third-party management.

### Required risk capital for market risks

Including Private Equity

in TEUR	2021	2020
Credit and spread risk	2,686,343	2,767,399
Interest rate risk	1,023,441	722,368
Foreign exchange risk	1,599,113	1,038,209
Equity risk	1,899,606	1,495,420
Real estate risk	694,116	595,688
Diversification	-3,290,128	-2,475,847
<b>Market risk</b>	<b>4,612,492</b>	<b>4,143,238</b>

The increase in the market risk reflects first and foremost the larger volume due to higher market values and new investments in the areas of private equity and real estate. The increased volumes of fixed-income securities as a result of business growth are a further factor here.

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

Interest rate markets were again highly volatile over the course of the year under review. In contrast to the previous years, which had seen continued declines in the rate level, rates moved higher in the year under review across virtually all maturities in our main currency areas. While the increases in euro rates were on the modest side, they were in some instances appreciable on the US dollar and pound sterling markets. After the very sharp rises and highest-ever level of volatility recorded in the previous year, risk premiums on corporate bonds remained relatively stable throughout the entire period under review on the low level seen prior to the coronavirus. Overall, a substantial decrease in the hidden reserves for fixed-income securities was booked over the year as a whole.

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

The short-term loss probability measured as the Value at Risk (VaR) is another vital tool used for operational monitoring and management of the market price risks associated with our securities positions. It is calculated on the basis of historical data, e. g. the volatility of the securities positions under own management and the correlation between these risks. As part of these calculations the decline in the fair value of our securities portfolio is simulated with a certain probability and within a certain period. The VaR of the Hannover Re Group determined in accordance with these principles specifies the decrease in the fair value of our securities portfolio under own management that with a probability of 95% will not be exceeded within ten trading days. A standard market model is used to calculate the VaR indicators for the Hannover Re Group. It is based on historical time series of relevant market parameters (equity prices, yield curves, spread curves and exchange rates). Against the backdrop of a very turbulent capital market and interest rate environment, volatilities – especially of fixed-income assets – again reached a high level at times in the year under review. Based on continued broad risk diversification and the orientation of our investment portfolio, our VaR was nevertheless clearly below the VaR upper limit defined in our investment guidelines. It amounted to 0.8 % (previous year: 0.8 %) as at the end of the reporting period.

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	
		2021	2020
Equity securities and equity funds	Share prices -10%	-22,806	-27,481
	Share prices -20%	-45,612	-54,963
	Share prices +10%	22,806	27,481
	Share prices +20%	45,612	54,963
Fixed-income securities	Yield increase +50 basis points	-658,740	-562,738
	Yield increase +100 basis points	-1,285,348	-1,098,861
	Yield decrease -50 basis points	690,873	589,354
	Yield decrease -100 basis points	1,413,879	1,205,324
Real Estate	Real estate market values -10%	-5,284	-5,371
	Real estate market values +10%	5,284	5,371

Further significant risk management tools – along with the various stress tests used to estimate the loss potential under extreme market conditions – include sensitivity and duration analyses and our asset / liability management (ALM). The internal capital model provides us with quantitative support

for the investment strategy as well as a broad diversity of VaR calculations. In addition, tactical duration ranges are in place, within which the portfolio can be positioned opportunistically according to market expectations. The parameters for these ranges are directly linked to our calculated risk-bearing capacity. It should be borne in mind that the issued subordinated bonds and resulting induced interest rate exposure are actively factored into our ALM. Please note, that also the subordinated liabilities considered in Section D.5 and the resulting interest rate risk are actively managed in the ALM process.

Equity risks derive from the possibility of unfavourable changes in the value of equities, equity derivatives or equity index derivatives in our portfolio. Their relevance to our investments was, however, very slight because we acted on market opportunities to dispose of equity funds in what was already our minimal portfolio of equities and equity funds going into the year under review. Our exposure to the private equity market remains unchanged. Changes in fair value here tend to be prompted less by general market conditions and more by entity-specific assessments. The risks are associated principally with the business model and profitability and less so with the interest rate component in the consideration of cash flow forecasts.

By far the largest part of our assets under own management is invested in fixed-income securities. They are 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 riskfree bond with the same maturity. Changes in these risk premiums, which are observable on the market, result – analogously to changes in pure market yields – in changes in the fair values of the corresponding securities. We minimise interest rate risks by matching the durations of payments from fixed-income securities as closely as possible with the projected future payment obligations under our insurance contracts.

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

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 worldwide; each investment is preceded by detailed analyses of the property, manager and market concerned.

The Covid-19 pandemic also has implications for real estate markets. Against a backdrop of travel restrictions and business closures, the hardest hit areas have been the restaurant, hotel and retail industries, and to some extent the office sector. In our real estate portfolio, we are seeing concrete impacts on directly held properties, above all in the retail sector and especially in relation to lessees in the restaurant industry. Overall, though, an increase in the vacancy rate was not observed in this connection. Hannover Re is not directly invested in the hotel sector. Exposures are solely through diversified funds and account for a very small share of the total real estate portfolio only.

The realities and dynamics of real estate markets are indirectly subject to another influencing factor as a consequence of the pandemic. If the economic softness (temporarily) reduces demand for

space, this could result in flat or even declining rental price trends or indeed a rising vacancy rate. In combination with modified expectations as regards contract conditions and the likelihood of lease extensions or new leases, these changes in parameters will be reflected in adjusted fair values of the properties. Pandemic-related developments have therefore been factored into the real estate valuations. This applies to both the directly held portfolio and – with the usual slight time delay – the portfolio of real estate funds.

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

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

Insurance derivatives connected with the technical account do not play any decisive role in our investment portfolio as for the most part they are directly included in the underlying technical positions.

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.

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

### C.3 Credit risk

The counterparty default risk consists primarily of the risk of complete or partial failure of the counterparty and the associated default on payment. The following table shows the required risk

capital for counterparty defaults as at 31 December. This includes counterparty risk from retrocessionaires, cedants and short-term money held at banks but not credit risk from investments. The latter is covered under market risk, see previous section.

**Required risk capital (confidence level 99.5%)**

in TEUR	2021	2020
Counterparty default risk	462,029	445,380

The increase in counterparty default risks can be attributed principally to a higher volume of receivables due from retrocessionaires.

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

**Gross written premium retained**

in %	2021	2020
Total	69.0	68.3
Property and casualty reinsurance	66.9	65.3
Life and health reinsurance	73.9	75.1

Alongside traditional retrocessions in Property & Casualty reinsurance we also transfer risks to the capital market. Please refer also to Section C.1.3.

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

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

As the parent company, Hannover Re provides a guarantee to clients for the small number of low-risk structured transactions. In this context, it guarantees the payment of liabilities by Hannover Re under these specific transactions in the event that the subsidiary is unable to meet its assumed

obligations. Since each of these guarantees is associated with a specific transaction and formulated in such a way that each potential payment can only arise once per corporate entity of Hannover Re (i.e. either at the subsidiary itself as part of the transaction or at Hannover Re as a consequence of the guarantee), the existence of the guarantee on the part of Hannover Re has no effect on the underwriting risk from Hannover Re's Property & Casualty or Life & Health reinsurance business.

## 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. Our holdings of unrestricted German, UK and US government bonds as well as cash during the year under review were larger than possible disbursements for assumed extreme events, which means that our liquidity is assured even in the unlikely case of financial crises coinciding with an extreme event that needs to be paid out quickly. In addition, we manage the liquidity of the portfolio by checking on each trading day the liquidity of the instruments contained therein. These measures serve to effectively reduce the liquidity risk.

The “total amount of the expected profit included in future premiums” required by Art. 295 (5) of the Delegated Regulation 2015 / 35 amounts to TEUR 3,854,339 as at 31 December. This value is also available at the Quantitative Reporting Template S.23.01.01, item R0790. We do not use this figure for our liquidity management. However, it has to be stated in this section according to regulatory requirements.

## C.5 Operational risk

Operational risks refer to the risk that arises from inadequate or failed internal processes, or from personnel and systems, or from external events. Within the overall framework of operational risks, we pay particularly close attention to business continuity risks, business process and data quality risks, compliance risks, fraud risks, human resources risks, information security risks and outsourcing risks.

In contrast to underwriting risks (e. g. the reserve risk), which we enter into in a deliberate and controlled manner in the context of our business activities, operational risks are an indivisible part of our business activities. The focus is therefore on risk minimisation. With the aid of half-yearly Group-wide self-assessments, in which all relevant corporate operations are actively involved, we determine the maturity level of our risk management system for operational risks and define action fields for improvements. The assessment is carried out by evaluating the maturity level of the corporate governance, the risk management function and the respective risk identification, analysis,

evaluation, steering, monitoring and reporting. The assessment of the maturity level enables us, among other things, to prioritise operational risks. In order to calculate the capital commitment in our internal capital model we perform extensive scenario analyses and take the findings as a basis for specifying the parameters for the stochastic model. In this context, experts across all disciplines establish assumptions for the loss frequency and losses in joint workshops. In addition, internal loss events and near-losses are systematically recorded and examined with an eye to possible measures for improving the control system. The internal data are enhanced with insights gained from external events, which either become known through public channels or were reported through a loss data consortium of which we are a member.

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

The following table shows the required risk capital for operational risk as at 31 December.

**Required risk capital (confidence level 99.5%)**

in TEUR	2021	2020
Operational risk	610,163	529,608

The increase in operational risk can be attributed to an increase in those scenarios which are driven by the overall business volume and thus increase as business grows.

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

Business continuity risks arise from natural or man-made hazards that threaten or disrupt the business operations. The risk also includes IT service continuity risks. Our Business Continuity Management (BCM) system reduces the risk through preventive measures, such as an emergency power supply, alternative infrastructures and contingency plans that are regularly tested. A special organisational and operational structure has been set up to deal reactively with a crisis event. This has proven itself, inter alia in connection with the current Covid-19 pandemic, and there were no material impacts on our business operations. Overall, our focus in BCM is on the following five scenarios: non-availability / shortage of personnel, e. g. as a consequence of a pandemic, loss of the workplace environment, failure of local / central IT, failure of external infrastructures / service providers, security incidents (life and limb of employees at risk).

Business process risks are associated with the risk of inadequate or failed internal processes, which can arise inter alia as a consequence of an inadequate process organisation. We have defined criteria for managing the risk that result in a high process quality. Data quality is similarly a very critical success factor, especially in risk management, because for example the validity of the internal model is largely based on the data provided. As part of our data quality management, we have defined extensive automatic routines that continuously determine data quality in central systems.

Compliance risks 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 Hannover Rück. Compliance with regulatory standards, the company's Code of Conduct, tax regulations, data privacy requirements as well as the stipulations of anti-trust and competition law have been defined as issues of particular

relevance. In conformity with a risk-based approach, sanctions screening software is used on the relevant parts of the Hannover Rück's portfolio as well as on loss advices to filter out individuals who are subject to sanctions. Suitable steps are taken if such individuals are identified. Business partners are also screened in this way. Responsibilities within the compliance organisation are regulated and documented and interfaces with risk management have been put in place. The set of tools is rounded off with regular compliance training programmes.

Fraud risks refer to the risk that results from intentional violations of laws or rules from own employees and / or from third parties in order to gain an advantage. This risk is reduced by the internal control system as well as by the audits conducted by Group Auditing on a Group-wide and line-independent basis. Should an instance of fraud nevertheless occur, established escalation processes to involve all relevant functions are in place and a risk-specific analysis (e. g. forensic investigation) is conducted including determination of appropriate measures.

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. These measures are supported by ongoing talent management and regular employee surveys. Hannover Rück has at its disposal specific indicators for the early detection and monitoring of material risks. Along with a determination of the weighted level of maturity, this also encompasses continuous succession planning, ensuring the timely (re)staffing of vacant positions and monitoring turnover rates based on industry benchmarks.

Information security risks arise, inter alia, out of the risk of inadequate integrity, confidentiality or availability of information as well as impacts from or on other assets such as systems, processes, buildings / premises or persons. By way of example, losses and damage resulting from the unauthorized passing on of confidential information, the malicious overloading of important IT systems or from computer viruses / ransomware are material to Hannover Rück. Given the broad spectrum of such risks, a diverse range of technical steering and monitoring measures and organisational standards, including for example the requirement to conclude confidentiality agreements with service providers, have been put in place. In addition, our employees are made aware of such security risks through practically oriented tools provided online in the intranet, by way of training opportunities and through targeted information. Hannover Re has implemented an Information Security Management System (ISMS) that is closely aligned with international standards – principally ISO 27001 – and harmonised with other management systems such as data protection or outsourcing management. The central document is the "Information Security Policy", which is valid for all locations worldwide. Together with specific guidelines and standards, it regulates all technical and organisational measures including those relating to the confidentiality, integrity and availability of information assets. Consideration is given to all types of digital and physical information assets. The Executive Board bears overall responsibility for information security. It is supported by the Risk Committee. The Information Risk & Security Committee (IRSC) is a sub-committee of the Risk Committee and is comprised of the Head of Risk Management, the Chief Information Security Officer (CISO) and the Head of IT. The IRSC evaluates and monitors the corresponding risks and steers any conflicts of interest in relation to information and IT security. It acts – in common with the risk management function and the CRO – independently of any instructions. The full Executive Board is provided with information at least annually by way of an information security report and also within the year if necessary. The Risk Committee receives information on a quarterly basis.

Outsourcing risks can result from the outsourcing of functions, services and / or organisational units to third parties. They also include intra-group outsourcings. Mandatory rules have been put in place

to limit this risk; among other things, they stipulate that a risk analysis and partner assessment are to be performed prior to outsourcing. In the context of these analyses a check is carried out to determine, inter alia, which specific risks are associated with the outsourcing and what risk management measures need to be taken. The results of the analyses are subject to regular review.

## C.6 Other material risks

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

Furthermore we monitor the contagion risk of Hannover Rück being part of the Hannover Re Group and therefore of the HDI Group.

### 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 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). Examples of emerging risks include cyber risks, climate-related disasters, pandemics, supply chain and environmental risks. We monitor 20 emerging risks closely with in-depth analyses. The working group creates internal position papers and compact risk briefings, which advise staff on handling analysed emerging risks. These analyses were made up, beside many others, for topics like disruption of critical infrastructure, resource scarcity, urbanization and different health issues as side effect from climate change, drug abuse, pollution, nanotech, resource scarcity and obesity. Emerging risks may entail business opportunities, which are derived from our emerging risk approach.

### 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. 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 and sustainability risks

Sustainability risks are all risks involving environmental, social, and governance (ESG) issues. It has become common practice to distinguish the risks a company faces (outside-in view) caused by ESG issues and the impact a company has on people and the environment (inside-outview).

- Sustainability risks corresponding to the outside-in view are financial risks due to the potential financial impacts on Hannover Rück of environmental, social or governance (ESG) issues. These financial risks include market, underwriting, counterparty and operational risks, and are integrated in the risk management processes for these risks.
- The inside-out perspective refers to situations where Hannover Rück's activities damage the environment, social norms or reflect failures of governance.
- Reputational risks represent the bridge between the outside-in and the inside-out perspective. Due to an inside-out impact – perceived or real – of the company, reputational risk arises for the company as an inside-out risk.

The distinction is very important and we will label activities and processes accordingly. As a principle, we embed sustainability risks (outside-in) in our regular (risk management) processes. While reputational risks from the inside-out perspective are related to violations against environmental and social concerns, we define failures of governance as the failure to comply with internal guidelines, codes of conduct and other internal rules.

### C.6.4 Important developments

In this section, we describe external developments in 2021 with particular relevance for risk management.

#### C.6.4.1 Covid-19 pandemic

The Crisis Management Team set up in 2020 continued to manage operations prudently in 2021. Business travel remained constrained. Working from home – which applied to large parts of the workforce – went smoothly, in part thanks to the use of videoconferencing and extensively digitalised business processes. Consequently, in 2021 we once again did not identify any material impacts of the Covid-19 pandemic on our operations. After an initial, gradual return to the company's business premises in the second half of the year, employees were, once again, urged to work from home in the fourth quarter – depending on their location – due to the accelerating spread of infections around the world. We continue to evaluate our financial strength and profitability on a regular basis using stress tests and sensitivity analyses and will take measures as needed to reduce risks or strengthen our equity resources. In this regard, the largest reserves on the reinsurance side were for coverage of business interruption, excess mortality, credit insurance and event cancellations. With the pandemic still ongoing, any forecasts are still subject to considerable uncertainty. It remains to be seen how well the vaccines and boosters currently available will work against new variants of the virus. We are also monitoring the long-term post-infection effects. The so-called “post-Covid syndrome” would have negative implications for the coverage of sickness costs and disability. Early study results suggest that these patients suffer not only from fatigue and a general loss of energy, but also increasingly from anxiety disorders and depression. The

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

#### C.6.4.2 Regulatory developments

The recommendations of the European Insurance and Occupational Pensions Authority (EIOPA) for the overhaul of the European prudential regime Solvency II were submitted to the European Commission, which then published its proposals in September 2021. In some instances the Commission diverged from EIOPA's recommendations. The European Parliament and the member states in the Council will now negotiate the final legislative texts based on the Commission's proposals. The proposals include, among other things, new macroprudential supervisory powers as well as changes to yield curves and revisions to the calculation of the risk margin. Depending on the final outcome of the ongoing legislative process, these proposals could have considerable implications for the European insurance industry. EIOPA has also proposed extensive changes to reporting rules for insurance undertakings, namely the revision of the Quantitative Reporting Templates (QRTs) and changes to the Implementing Technical Standards (ITS). In the year under review the European Financial Reporting Advisory Group (EFRAG) also endorsed the IFRS 17 standard, with European insurers now making preparations for its implementation.

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

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

Turning to new and upcoming regulatory requirements and expectations, compliance risks are taking on ever greater significance at both the national and international level. Especially in the context of IT regulation, more exacting supervisory standards have been adopted on the security and governance of Information and Communication Technology. Furthermore, at the end of 2021 the Federal Financial Supervisory Authority (BaFin) began to work on a revision of the Supervisory Requirements for IT in Insurance Undertakings (VAIT) in order to harmonise them with European laws and regulations. Market access risks continue to emerge worldwide. Growing protectionism is a particularly unfortunate trend at a time when, a global, large and persistent gap exists between the level of economic losses (especially following catastrophic events) and the level of insured losses.

In its work programme for 2022, EIOPA announced its intention to assess harmonisation of the rules for EU market access regarding third-country reinsurers as part of its mission to bring about convergence of international supervisory standards. Should Europe decide to impose more

exacting restrictions, there is a risk that this may lead to reciprocal actions by international jurisdictions.

#### **C.6.4.3 Corporate taxes**

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

#### **C.6.4.4 Risks from the processing of electronic data**

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

#### **C.6.4.5 Natural catastrophe risks and climate change**

In 2021 Hannover Rück was again impacted by natural catastrophe events in various parts of the world (Europe, the United States, Australia). Particularly noteworthy in the year under review were winter storm Uri, intense rainfall event Bernd, Hurricane Ida and a series of tornados in the US. Natural disasters should be viewed as inextricably linked to climate change. The associated impacts present a major challenge for risk management. We use both external and internal risk models to simulate the impacts of catastrophic events. The monitoring of risks resulting from natural perils is complemented by stress tests as well as scenario and sensitivity analyses.

#### **C.6.4.6 Capital market environment**

The persistently low level of interest rates is a major external factor influencing the return that can be generated on our investments. Interest rate increases – which in some instances were very marked – were recorded not only for euro-denominated bonds but also in the US dollar and sterling markets in the first quarter of the year. Despite renewed modest declines subsequently seen in the area of the US dollar and British pound, we benefit from the higher rate level overall when making new investments and in our reinvesting activities. Yields on euro area government bonds were negative well beyond the 10-year maturity point. Credit spreads also retreated from the beginning of the year onwards for bonds issued by developing countries and in the case of lower-quality issuers, while in other sectors they remained very largely stable or showed at most modest declines over a long period.

Here, too, however, emerging nervousness on financial markets in connection with new variants of the coronavirus was reflected in slightly higher risk premiums by year-end. All in all, the economic

repercussions of the Covid-19 pandemic on financial markets continued to be extensively cushioned by fiscal and monetary backstopping. This was reinforced by the vaccination progress made worldwide and a slow easing in the consumption backlog. This impressive development is also reflected in rising raw materials and transport costs. These, in turn, are passed on in the form of generally higher prices. The systematic inflation concerns of other market participants currently still appear fragile when it comes to their potential longevity. It is still too soon to make any definitive judgement on the indications of structural and protracted higher inflation. As growth normalises and the kinks in the supply chain are ironed out again, it is our expectation that inflation may fade and secondary effects such as wage pressures can be curbed. We are nevertheless keeping close track of the situation with an eye to any opportunities that may arise. The economy continues to enjoy strong support from central banks in our main currency areas, which largely pressed ahead with their expansionary interest rate policy adopted in the prior year. Both the Federal Reserve and the European Central Bank left their key rates on the previous year's low level. The Bank of England, on the other hand, was the first major central bank to modestly increase its key lending rate in December – primarily in response to inflationary tendencies. The ECB – in common with the Fed and the Bank of England – continued its extensive asset purchase programme for bonds issued by governments and corporate entities in order to support them in this time of crisis. Overall, then, the policies pursued by central banks in our main currency areas were essentially consistent – supplemented by significant fiscal interventions –, although they varied in scale and the measures taken. We view these worldwide interventions by governments and central banks with their enormous money supply as a not inconsiderable challenge because in some ways they divorce the financial world from the natural, reciprocal control mechanisms of the financial markets and it is unclear to what extent the current or future valuation levels are supported by fundamentals. The worldwide progress of vaccination campaigns and their effectiveness will be pivotal to economic development going forward. In conjunction with continued catch-up effects and higher inflation, this may still lead to very high – but potentially unstable – valuation levels on credit and equity markets.

We continue to have exposure to the private equity market. Fair value changes here tend to be less influenced by general market conditions and more by company-specific evaluations. The risks are therefore primarily associated with the business model and profitability and to a lesser extent with the interest rate component in a consideration of cash flow forecasts. Thus, for example, we also view the need to take higher write-downs in the previous year on isolated assets in response to the Covid-19 pandemic not as a reflection of a generally elevated risk in the market, but rather in the context of the risk profile specific to this asset class and set of company characteristics. The write-downs taken in the period under review were already back to the average level of previous years.

The significance of real estate risks remains substantial for us owing to our consistent participation in this sector. We spread these risks through broadly diversified investments in high-quality markets around the world, with each investment decision being preceded by extensive analyses of the relevant property, manager and market. The pandemic has proven to be an additional factor directly affecting the conditions and dynamics on real estate markets. If the economic weakness results (temporarily) in reduced demand for space, this could give rise to flat or declining rental income or rising vacancy rates. Taken in combination with modified expectations for contractual conditions as well as probabilities of lease extensions or new leases, these changed market parameters are reflected in adjusted fair values for real estate. Pandemic-related developments are therefore factored into the real estate valuations. This is true not only of the directly held portfolio but also – with the usual slight time delay – of the real estate fund holdings.

As far as our investments are concerned, we anticipate continuing elevated volatility on global capital markets in the immediate future, although we also see this as an opportunity and believe that we are appropriately prepared with our current investment posture.

#### C.6.4.7 Inflation on the underwriting side

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

#### C.6.4.8 Supply chain risks

It has become clear over the course of the current pandemic that global supply chains – especially in combination with lower inventories – pose risks to the continuity of operations in many sectors. This can result in higher claims expenditures on account of increased procurement costs or business interruptions. Increasingly exacting regulatory requirements governing corporate responsibility for human rights and other sustainability concerns, especially as they relate to supply chains, will continue to grow in importance for the international business community over the coming years.

#### C.6.4.9 Biometric risks

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

#### C.6.4.10 War in Ukraine

In line with regulatory requirements, this report has a focus on the financial year 2021. Developments since year-end 2021 include the Russian invasion on the territory of Ukraine starting in February 2022. The impact of this war and its consequences cannot be assessed at the present in full detail. Major geopolitical shifts are to be expected. Substantial volatilities at the financial markets including high commodity prices have been observed. Most reinsurance treaties have some form of coverage exclusion for losses from war. However, specialty lines provide these covers under certain circumstance. Apart from risk of losses from these lines, increasing inflation and cyber activities pose additional risks. Investments are affected by the developments at the financial markets. The full scope of implications is currently not known. Hannover Rück has set up a continuous monitoring of the situation and has implemented the imposed sanctions.

### **C.6.5 Contagion risks**

Contagion risk refers to the risks originated by interactions between individual entities owned by Hannover Rück, or related to Hannover Rück's affiliation to the HDI Group. More precisely, contagion risk is the propagation of the effect of a failure or financial distress of an organisation in a sequential manner to other organisations, markets or systems, or to other parts of a financial group or financial conglomerate.

Hannover Rück manages this risk by a strict look-through approach in its management systems.

### **C.7 Any other information**

There is no other information to be reported.

## 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 time value of money should be reflected, i.e. cash flows have to be discounted. The discount rate should take the long-term asset management strategy into account, i.e. whether the company acts as held-to-maturity investor or not.
- When valuing liabilities, no value adjustments are made in order to account for the creditworthiness of the respective 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 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.

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.

As per 31 December 2018, Hannover Rück used the volatility adjustment for the first time. The impact of the application of the volatility adjustment is displayed in Section D.2.

### 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.

### Solvency II balance sheet

We show our Solvency II balance sheet as of 31 December 2021 on the following two pages. The individual items are explained in the following subsections.

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 subsections to the corresponding items in the Solvency II balance sheet.

in TEUR	Item	2021	2020
<b>Assets</b>			
Intangible assets	R0030		
Deferred tax assets	R0040	265,688	251,215
Pension benefit surplus	R0050		
Property, plant & equipment held for own use	R0060	73,134	73,785
Investments (other than assets held for index-linked and unit-linked contracts)	R0070	42,125,619	36,354,766
Property (other than for own use)	R0080	17,279	16,359
Holdings in related undertakings, including participations	R0090	12,073,723	10,909,245
Equities	R0100	175	0
Equities - listed	R0110		
Equities - unlisted	R0120	175	0
Bonds	R0130	26,813,737	22,538,498
Government Bonds	R0140	14,544,353	12,490,720
Corporate Bonds	R0150	11,524,881	9,534,402
Structured notes	R0160		
Collateralised securities	R0170	744,503	513,375
Collective Investments Undertakings	R0180	2,059,082	2,208,467
Derivatives	R0190	49,315	49,253
Deposits other than cash equivalents	R0200	1,112,307	632,944
Other investments	R0210		
Assets held for index-linked and unit-linked contracts	R0220		
Loans and mortgages	R0230	72,138	2,947
Loans and mortgages to individuals	R0250	2,619	2,947
Reinsurance recoverables from:	R0270	5,538,389	4,751,919
Non-life and health similar to non-life	R0280	6,133,089	4,970,819
Non-life excluding health	R0290	5,847,520	4,703,172
Health similar to non-life	R0300	285,568	267,647
Life and health similar to life, excluding health and index-linked and unit-linked	R0310	-594,700	-218,900
Health similar to life	R0320	278,300	537,058
Life excluding health and index-linked and unit-linked	R0330	-873,000	-755,958
Life index-linked and unit-linked	R0340		
Deposits to cedants	R0350	6,688,528	6,061,865
Insurance and intermediaries receivables	R0360	1,146,534	956,882
Reinsurance receivables	R0370	249,552	383,802
Receivables (trade, not insurance)	R0380	1,058,437	1,091,642
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	560,490	519,577
Any other assets, not elsewhere shown	R0420	85,206	82,817
<b>Total assets</b>	<b>R0500</b>	<b>57,863,715</b>	<b>50,531,217</b>

in TEUR	Item	2021	2020
<b>Liabilities</b>			
Technical provisions – non-life	R0510	26,394,517	22,906,658
Technical provisions – non-life (excluding health)	R0520	24,701,710	21,362,216
Technical provisions calculated as a whole	R0530		
Best Estimate	R0540	24,241,748	20,883,697
Risk margin	R0550	459,962	478,519
Technical provisions - health (similar to non-life)	R0560	1,692,808	1,544,442
Technical provisions calculated as a whole	R0570		
Best Estimate	R0580	1,621,924	1,511,197
Risk margin	R0590	70,884	33,245
Technical provisions - life (excluding index-linked and unit-linked)	R0600	4,970,680	4,234,020
Technical provisions - health (similar to life)	R0610	1,721,593	1,172,955
Technical provisions calculated as a whole	R0620		
Best Estimate	R0630	1,346,924	904,030
Risk margin	R0640	374,669	268,924
Technical provisions – life (excluding health and index-linked and unit-linked)	R0650	3,249,087	3,061,065
Technical provisions calculated as a whole	R0660		
Best Estimate	R0670	2,022,132	1,893,739
Risk margin	R0680	1,226,955	1,167,326
Technical provisions – index-linked and unit-linked	R0690	324,991	282,530
Technical provisions calculated as a whole	R0700		
Best Estimate	R0710	320,058	277,736
Risk margin	R0720	4,933	4,794
Contingent liabilities	R0740		1,777
Provisions other than technical provisions	R0750	107,122	108,349
Pension benefit obligations	R0760	152,490	165,291
Deposits from reinsurers	R0770	3,647,895	3,281,818
Deferred tax liabilities	R0780	2,792,199	2,395,992
Derivatives	R0790	55,916	47,949
Debts owed to credit institutions	R0800		
Financial liabilities other than debts owed to credit institutions	R0810	1,204,405	1,260,484
Insurance & intermediaries payables	R0820	718,630	686,702
Reinsurance payables	R0830	157,174	196,677
Payables (trade, not insurance)	R0840	53,400	97,202
Subordinated liabilities	R0850	3,036,826	2,381,960
Subordinated liabilities in Basic Own Funds	R0870	3,036,826	2,381,960
Any other liabilities, not elsewhere shown	R0880	141,065	54,090
<b>Total liabilities</b>	<b>R0900</b>	<b>43,757,309</b>	<b>38,101,498</b>
<b>Excess of assets over liabilities</b>	<b>R1000</b>	<b>14,106,406</b>	<b>12,429,719</b>

## D.1 Assets

### D.1.1 Intangible assets R0030

#### Differences in valuation

Values as of 31.12.2021 in TEUR	Solvency II	HGB
Intangible assets		61,356

Intangible assets are stated at zero in accordance with Art. 12 No. 2 of the Delegated Regulation under Solvency II. The exceptional circumstances listed under Art. 12 No. 2 of the Delegated Regulation do not apply, due to the fact that intangible assets can neither be disposed of individually nor traded on an active market for similar or identical intangible assets.

In accordance with the HGB a differentiation must be made as to whether it concerns purchased or internally generated intangible assets. While mandatory capitalisation applies for purchased intangible assets, a right to capitalisation exists pursuant to Art. 248 (2) clause 1 of the 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 HGB. They are valued at acquisition cost less scheduled depreciation in line with the average useful life.

The valuation base in the commercial annual accounts stands at TEUR 61,356. 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.

#### Comparison to prior year

in TEUR	Solvency II 2021	Solvency II 2020
Intangible assets		

In the financial year 2021 this balance sheet item did not change.

In comparison to the previous year, assumptions regarding the calculation of this balance sheet item were the same.

### D.1.2 Deferred tax assets R0040

#### Differences in valuation

Values as of 31.12.2021 in TEUR	Solvency II	HGB
Deferred tax assets	265,688	

In the Solvency II balance sheet, a deferred tax asset totalling TEUR 265,688 is stated as well as a deferred tax liability with the amount of TEUR 2,792,199. Consequently, a liability surplus has been created, the calculation of which is explained in more detail under the item "Deferred tax liabilities R0780".

With existing differences between the commercial and tax valuation for assets, liabilities and deferred / prepaid 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 Art. 274 (1) s. 2 HGB, no deferred tax claims have been stated for a resulting over-funding in the trade balance of Hannover Rück.

### Comparison to prior year

in TEUR	Solvency II 2021	Solvency II 2020
Deferred tax assets	265,688	251,215

The increase in deferred tax claims amounting to TEUR 14,473 is predominantly the result of changes to the underwriting balance sheet items and capital investments. For more detailed explanatory notes, please consult the respective sections.

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

#### Differences in valuation

Values as of 31.12.2021 in TEUR	Solvency II	HGB
Property, plant & equipment held for own use	73,134	44,779

Under Solvency II a differentiation is to be made for property regarding the extent to which it is intended for own use or a third party. The proportion subject to own use is to be categorised under property held for own use, the proportion subject to third-party use is recognised under the balance sheet item “Property (other than for own use)”. The HGB values for property were also proportionally divided in accordance with their respectively applicable use (held for own use or third-party use) for the purposes of comparison.

Property values are to be set at their fair value (market value) pursuant to Solvency II – irrespective of how the property is to be used. This 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 Section “D.4 Alternative methods for valuation”.

In line with commercial law, real estate is valued in principle at its cost of procurement or construction, less scheduled and, when necessary, unscheduled depreciation pursuant to Art. 253 (3) 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 and, if necessary, unscheduled depreciation. Low-value assets are fully depreciated in the year of acquisition. With regard to the fixtures, fittings and equipment the valuation pursuant to the Solvency II balance sheet is considered as identical with the valuation used in HGB annual accounts totalling TEUR 23,600. A revaluation is not conducted for reasons of materiality.

The difference between the valuation found in the Solvency II balance sheet and the HGB annual accounts totalling TEUR 28,355 is attributable to the valuation of shares in the business facilities located in Hannover.

#### Comparison to prior year

in TEUR	Solvency II 2021	Solvency II 2020
Property, plant & equipment held for own use	73,134	73,785

The underlying assumptions for the balance sheet item did not change in the reporting period.

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

#### Differences in valuation

Values as of 31.12.2021 in TEUR	Solvency II	HGB
Property (other than for own use)	17,279	9,939

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

The difference between the Solvency II value and the value presented in the HGB annual accounts as at the balance sheet date amounts to TEUR 7,339 and it is exclusively attributable to the difference between the valuation methods under HGB and Solvency II. While under HGB, amortised acquisition costs are applied less scheduled depreciation, under Solvency II market values are used. Thus, the entire difference concerns hidden reserves.

#### Comparison to prior year

in TEUR	Solvency II 2021	Solvency II 2020
Property (other than for own use)	17,279	16,359

The increase in the item value in the year under review is mainly due to the recognition of higher market values as the result of updated valuation reports.

### D.1.5 Participations and related undertakings R0090

#### Differences in valuation

Values as of 31.12.2021 in TEUR	Solvency II	HGB
Holdings in related undertakings, including participations	12,073,723	8,211,630

Participations are stated at market values under Solvency II. There are no stock market prices available for the valuation of affiliated companies of Hannover Rück. The market values of affiliated companies or participating interests are determined on the basis of Solcency II balance sheets or with the proportional Fair Value as defined in Art. 13 Delegated Regulation. Liabilities are deducted from assets in order to determine the balance sheet equity surplus per affiliated company. All equity surpluses of affiliated companies, including participating interests, are shown in the balance sheet item. For reasons of materiality, some investments are stated at their IFRS investment value.

Participations and related undertakings are recognised pursuant to Art. 255 (1) HGB at their historical cost less any depreciation to the lower fair value pursuant to Art. 341 (1) clause (2) HGB in conjunction with Art. 253 (3) clause (4) HGB.

A difference in the valuation to the amount of TEUR 3,862,093 is predominantly attributable to participations held by the Hannover Re Group in domestic and foreign reinsurers.

### Comparison to prior year

in TEUR	Solvency II 2021	Solvency II 2020
Holdings in related undertakings, including participations	12,073,723	10,909,245

In the financial year 2021 Hannover Rück Beteiligung Verwaltungs-GmbH, a wholly owned subsidiary of Hannover Rück received an increase in equity of TEUR 493,177.

Hannover Rück sold its participation in HDI Global Specialty SE, Hannover, to the majority shareholder HDI Global Specialty Holding GmbH, Hannover.

In comparison to previous year, the assumptions for the calculation of this balance sheet item remain unchanged.

## D.1.6 Equities R0100

### Differences in valuation

Values as of 31.12.2021 in TEUR	Solvency II	HGB
Equities	175	

Listed equities are valued on the basis of current, publicly available share prices. Publicly available pricing is available for 100% of the portfolio items reported here.

The valuation of listed equity is performed fundamentally on an item-by-item basis. The price quoted 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 stock exchange a hierarchy of quotation types is applied. The 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. Currently, no listed equities are held in the portfolio.

Unlisted equities are valued on the basis of the Capitalised earnings method, the discounted cash flow method and multiples-based approaches. The difference between Solvency II and HGB is based on differences in classification.

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

### Comparison to prior year

in TEUR	Solvency II 2021	Solvency II 2020
Equities	175	0

### 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

##### Differences in valuation

Values as of 31.12.2021 in TEUR	Solvency II	HGB
Government Bonds	14,544,353	13,773,708

Under Solvency II, investments listed under the following balance sheet items pursuant to the 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”.

Publicly available prices are available for 98% of the portfolio items reported here, 1% are valued using the cash value method and for 1%, prices from external sources are used.

The difference between the Solvency II value of these positions and their value stated within the annual accounts pursuant to the HGB comes to an overall total of TEUR 770,646.

In essence, approximately TEUR 692,121 are attributable to hidden reserves arising from the different valuations and TEUR 78,524 to the different approaches of stating accrued interest.

Pursuant to Solvency II these are aggregated to the market value while in line with the HGB the accrued interest of a balance sheet item is allocated separately from investments – to deferred / prepaid items.

### Comparison to prior year

in TEUR	Solvency II 2021	Solvency II 2020
Government Bonds	14,544,353	12,490,720

The increase in portfolio size compared to the previous year is predominantly attributable to the operating cash flow, the overall decline in interest rates and exchange rate effects, in particular from the US Dollar and the British Pound.

### D.1.7.2 Corporate Bonds R0150

#### Differences in valuation

Values as of 31.12.2021 in TEUR	Solvency II	HGB
Corporate Bonds	11,524,881	11,223,115

Under Solvency II, investments listed under the following balance sheet items pursuant to the 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”.

Publicly available prices are available for 92% of the portfolio items reported here, 5% are valued using the cash value method and 3% are valued using book values.

The difference between the Solvency II value of these positions and their value stated within the annual accounts pursuant to the HGB comes to an overall total of TEUR 301,765.

In essence, approximately TEUR 188,272 are attributable to hidden reserves arising from the different valuations and TEUR 113,493 to the different approaches of stating accrued interest. Pursuant to Solvency II these are aggregated to the market value (dirty value), while in line with the HGB the accrued interest of a balance sheet item is allocated separately from investments – to deferred / prepaid items.

### Comparison to prior year

in TEUR	Solvency II 2021	Solvency II 2020
Corporate Bonds	11,524,881	9,534,402

The increase in portfolio size compared to the previous year is predominantly attributable to the operating cash flow, the overall decline in interest rates and exchange rate effects, in particular from the US Dollar and the British Pound.

### D.1.1.7.3 Collateralised securities R0170

#### Differences in valuation

Values as of 31.12.2021 in TEUR	Solvency II	HGB
Collateralised securities	744,503	743,850

Under Solvency II, investments listed under the following balance sheet items pursuant to the 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 CLO’s 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 CLO’s assumptions are made regarding the speed of repayment and recovery rates.

82% of the portfolios reported here are valued using the present value method (taking into account information on the composition of the receivables pool obtained from a database of the specialist data provider “Intex”). Publicly available prices are available for the remaining 18%.

The difference between the Solvency II value of these investments and their value stated within the annual accounts pursuant to the HGB totals TEUR 653.

Here, approximately TEUR 2,805 are attributable to hidden burdens arising from the different valuation bases and TEUR 3,458 to the different approaches of stating accrued interest. Pursuant to Solvency II, these are aggregated to the market value, while in line with the HGB the accrued interest of a balance sheet item is allocated separately from investments – to accrued items.

#### Comparison to prior year

in TEUR	Solvency II 2021	Solvency II 2020
Collateralised securities	744,503	513,375

The increase in portfolio size compared to the previous year is predominantly attributable to the overall decline in interest rates, the build-up of this asset class over the reporting period as well as exchange rate effects, in particular from the US Dollar and the British Pound.

## D.1.8 Collective Investments Undertakings R0180

### Differences in valuation

Values as of 31.12.2021 in TEUR	Solvency II	HGB
Collective Investments Undertakings	2,059,082	1,710,239

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) less potential liabilities.

Publicly available prices are available for 87% of the positions covered here, 12% are valued using the present value method and for 1%, prices from external sources are used.

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

The difference between the Solvency II value and the value stated in the annual accounts totals TEUR 348,843 for investment trust shares.

Pursuant to the 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 348,843. This exclusively concerns hidden reserves.

### Comparison to prior year

in TEUR	Solvency II 2021	Solvency II 2020
Collective Investments Undertakings	2,059,082	2,208,467

The underlying assumptions did not change in the reporting period.

## D.1.9 Derivatives R0190

### Differences in valuation

Values as of 31.12.2021 in TEUR	Solvency II	HGB
Derivatives	49,315	

Derivative financial instruments include financial derivatives, derivatives which are separated 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 (e.g. 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 HGB the valuation of financial derivatives and derivatives on biometric indices is done on a fair value basis. Derivatives which are part of an insurance contract are valued as part of technical liabilities, and are not stated separately.

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 at the balance sheet date.

Pursuant to the HGB the company had summarised, as at the reporting date, reciprocal forward foreign-exchange contracts into valuation units with offsetting effect under the application of the net hedge presentation method. 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 nearly equalised. Thus, TEUR 47,491 of the difference in valuation are traced back to the different reporting of the hedging transactions under Solvency II and the HGB.

Unbundled derivatives and derivatives on biometric indices are stated in the Solvency II balance sheet pursuant to IFRS 4 and IAS 39 as derivative assets and – with regard to item R0790 – are recognised as obligations 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 cash value method, which is described in Section “D.4 Alternative methods for valuation”.

In order to hedge the risk of share price changes in connection with the stock appreciation rights granted under the share award plan, Hannover Rück has taken out hedges in the form of so-called equity swaps. The hedge is effected at the level of tranches and on a rolling basis with a maturity of three to four months until the share awards are paid out after five years.

According to Solvency II equity swaps are marked-to-market. At date of balance, the fair value was TEUR 1,824 and is recognized on the asset side of the balance sheet. Pursuant to § 254 of the Commercial Code (HGB), the underlying and the hedge were combined in a single valuation unit.

### Comparison to prior year

in TEUR	Solvency II 2021	Solvency II 2020
Derivatives	49,315	49,253

In comparison to the previous year, assumptions regarding the calculation of this balance sheet item were the same.



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

#### Differences in valuation

Values as of 31.12.2021 in TEUR	Solvency II	HGB
Deposits other than cash equivalents	1,112,307	1,071,430

Deposits other than cash equivalents comprise fixed-term deposits. Deposits are valued to 100% at their redemption rate.

The difference between the Solvency II value of these investments and their value stated within the annual accounts pursuant to the HGB totals TEUR 40,878

The difference is attributable to two effects: on the one hand to different valuations in the amount of TEUR 7,482, and on the other hand to the different methods of stating accrued interest to an amount of TEUR 33,395. The accrued interest is allocated in accordance with the HGB to deferred / prepaid items, while under Solvency II it is allocated to the respective balance sheet item (dirty value).

#### Comparison to prior year

in TEUR	Solvency II 2021	Solvency II 2020
Deposits other than cash equivalents	1,112,307	632,944

Inventories under this balance sheet item are an important instrument used to manage current liquidity at Hannover Rück. The change compared to the previous year was within the typical margin for fluctuation as part of this approach. There were no valuation adjustments during the period under review.

### D.1.11 Other investments R0210

#### Differences in valuation

Values as of 31.12.2021 in TEUR	Solvency II	HGB
Other investments		229,898

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 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 HGB and in connection with Section 253 Para 3 of the 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.

The value stated in the annual accounts pursuant to commercial law, which stands at TEUR 229,898 comprises accrued interest and rental payments. These are listed in the Solvency II

balance sheet in the respective investment item, therefore no value is listed under other investments.

### Comparison to prior year

in TEUR	Solvency II 2021	Solvency II 2020
Other investments		

In comparison to the previous year, assumptions regarding the calculation of this balance sheet item were the same.

## D.1.12 Loans and mortgages R0230

### Differences in valuation

Values as of 31.12.2021 in TEUR	Solvency II	HGB
Loans and mortgages	72,138	70,978

Loans and mortgages are stated at fair values under Solvency II. In addition to collateralised financial assets, this balance sheet item also includes non-collateralised financial assets.

Under German Commercial Code (HGB) the valuation of fixed assets considers the diluted lowest value principle.

Loans are stated at their book value or are recognised using a theoretical calculation. The present value method is applied in the absence of any particular structural characteristics. For structured loans, valuation is based on the interest rate model, cf. also “D.4 Alternative methods for valuation”.

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

The difference between the valuation in the Solvency II balance sheet and in the HGB annual accounts totalling TEUR 1,160 is attributable to the different valuation principles.

### Comparison to prior year

in TEUR	Solvency II 2021	Solvency II 2020
Loans and mortgages	72,138	2,947

The underlying assumptions of loans and mortgages did not change in the financial year 2021.

## D.1.13 Reinsurance recoverables R0270

### Differences in valuation

Values as of 31.12.2021 in TEUR	Solvency II	HGB
Property & Casualty reinsurance	6,133,089	7,600,292
Life & Health reinsurance	-594,700	720,569
<b>Total</b>	<b>5,538,389</b>	<b>8,320,862</b>

The approach used for the calculation of the reinsurance recoverables under Solvency II is identical to the approach used for the best estimate liability (BEL) calculation. For the retrocessions, separate projections are generated. All future cash flows are projected into the future using the same methods and assumptions as for the inward business. However, the projection period can differ depending on the structure of the retrocession contract. For the reinsurance recoverables, a risk margin is not taken into account, because the risk mitigating effects of the retrocession are taken into account under the position technical provisions. More precisely, under the position technical provisions the risk margin is determined on a net basis, whereas the BEL is given on a gross basis. More details regarding the calculation of the technical provisions are provided in Section D.2 (general), Section D.2.1 (Property & Casualty) and Section D.2.2 (Life & Health).

The business is segmented based on the structure of the reinsurance agreements. A counterparty default adjustment is taken into account.

Under Solvency II, the not due balances of accounts payables and receivables were allocated to reinsurance recoverables.

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“ subsection “Comparison to HGB-provisions” and Section „D.2.2.4 Comparison of the Technical Provision with the HGB Liability“ for the Life & Health segment.

### Comparison to prior year

in TEUR	Solvency II 2021	Solvency II 2020
Property & Casualty reinsurance	6,133,089	4,970,819
Life & Health reinsurance	-594,700	-218,900
<b>Total</b>	<b>5,538,389</b>	<b>4,751,919</b>

For Property & Casualty reinsurance, the development of reinsurance recoverables under Solvency II follows corresponding IFRS movements.

For Life & Health reinsurance, the changes in the amount of reinsurance recoverables are mainly due to a reclassification between the not due balances of accounts payables and receivables and deposits. This reclassification does not impact own funds.

## D.1.14 Deposits to cedants R0350

### Differences in valuation

Values as of 31.12.2021 in TEUR	Solvency II	HGB
Deposits to cedants	6,688,528	8,669,329

The economic value of the deposits of the asset side is determined as the balance sheet item “Deposits to cedants”.

For the majority of treaties (risk accounted under IFRS / US GAAP), the gross presentation is pursued. For business with very limited risk transfer, Hannover Rück follows the IFRS presentation since the gross presentation (as, e.g., under HGB) would not be in line with the substance over form principle and would misstate the nature and intent of the transactions.

The market value of any “gross” deposits will be determined on a mark-to-model basis; especially the value of any “fixed investment income over risk free” is part of the value of the deposits.

### Comparison to prior year

in TEUR	Solvency II 2021	Solvency II 2020
Deposits to cedants	6,688,528	6,061,865

Changes in comparison to the previous reporting period in the amount of deposits to cedants are due to market value adjustments as well as the planned termination of some material treaties. Additionally, there was a reclassification between the not due balances of accounts payables and receivables and deposits for Life & Health reinsurance which does not impact own funds.

### D.1.15 Insurance and intermediaries receivables R0360

#### Differences in valuation

Values as of 31.12.2021 in TEUR	Solvency II	HGB
Insurance and intermediaries receivables	1,146,534	4,950,869

Solvency II 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 counterparty 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 HGB.

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 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 -3,554,783. The majority of the differences result from the fact of different valuation measures regarding the due date of the receivables.

### Comparison to prior year

in TEUR	Solvency II 2021	Solvency II 2020
Insurance and intermediaries receivables	1,146,534	956,882

From Closing 2019 on, only the current balances due are included in the respective positions, non-current future balances are part of the contractual cash flows shown within the best estimate of the technical provisions or reinsurance recoverables.

Compared to the previous period, the assumptions regarding the calculation of this item did not change.

#### D.1.16 Reinsurance receivables R0370

##### Differences in valuation

Values as of 31.12.2021 in TEUR	Solvency II	HGB
Reinsurance receivables	249,552	

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 HGB. Valuation reserves have been formed for default risks.

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

##### Comparison to prior year

in TEUR	Solvency II 2021	Solvency II 2020
Reinsurance receivables	249,552	383,802

Compared to the previous period, the assumptions regarding the calculation of this item did not change.

#### D.1.17 Receivables (trade, not insurance) R0380

##### Differences in valuation

Values as of 31.12.2021 in TEUR	Solvency II	HGB
Receivables (trade, not insurance)	1,058,437	1,058,827

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 HGB. Valuation reserves have been recognized for default risks.

The difference between the items in the solvency statement and in the financial statements prepared in accordance with German commercial law results from various reclassifications.

### Comparison to prior year

in TEUR	Solvency II 2021	Solvency II 2020
Receivables (trade, not insurance)	1,058,437	1,091,642

In the reporting year, receivables from profit absorption from affiliated companies decreased by TEUR 241,145 and tax receivables decreased by TEUR 61,422. In the same period, dividends receivables increased by TEUR 121,320 as well as receivables from investment activities which increased by TEUR 160,514. Smaller changes in receivables totaled TEUR -12,472.

Compared to the previous period, the assumptions regarding the calculation of this item did not change.

### D.1.18 Cash and cash equivalents R0410

#### Differences in valuation

Values as of 31.12.2021 in TEUR	Solvency II	HGB
Cash and cash equivalents	560,490	560,490

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 HGB.

### Comparison to prior year

in TEUR	Solvency II 2021	Solvency II 2020
Cash and cash equivalents	560,490	519,577

Cash and cash equivalents increased by TEUR 40,913 during the reporting period.

## D.1.19 Any other assets, not elsewhere shown R0420

### Differences in valuation

Values as of 31.12.2021 in TEUR	Solvency II	HGB
Any other assets, not elsewhere shown	85,206	84,923

The balance sheet item “Any other assets, not elsewhere shown” comprises the following items:

- Pension insurance claims stemming from pension obligations
- Other deferred / prepaid items in relation to service contracts, licences and maintenance
- Settlement accounts with representatives of Hannover Rück

Deferred / prepaid items and settlement accounts are recognised at their nominal amount under Solvency II and in accordance with German commercial law.

The pension insurance claims stemming from pension obligations are recognised at their fair value in accordance with German commercial law and under Solvency II. In accordance with the HGB components of commitments linked to securities are offset with the corresponding obligations. In accordance with Solvency II these commitments linked to securities are not offset, due to the fact that assets are guaranteed by a Group company of Talanx (IAS 19).

The difference between the items in the Solvency II balance sheet and the annual accounts in accordance with HGB predominantly results from the provisions regulating the offsetting of pension insurance claims stemming from pension obligations.

### Comparison to prior year

in TEUR	Solvency II 2021	Solvency II 2020
Any other assets, not elsewhere shown	85,206	82,817

In comparison to previous year, assumptions for the calculation of this balance sheet item remain unchanged.

## 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).

Cash flows are discounted with risk-free rates in line with EIOPA requirements. A matching adjustment is not applied. Furthermore, the risk-free yield curves are not adjusted as set out in Article 308c of the directives 2009/138/EC.

A temporary deduction according to Art. 308d of the directives 2009/138/EC is not applied. Furthermore, the concept of calculating the “TP as a whole” is currently not applied.

Hannover Rück applies the static volatility adjustment according to Article 77d of the Directive 2009/138/EC. This is intended to mitigate the effect of temporary value fluctuations due to credit spread movements on the bond market. In order to capture this effect adequately for the calculation

of the required capital Hannover Rück uses the dynamic volatility in its internal model. The following table shows the impact of a non-application of a volatility adjustment on the TP, the Solvency Capital Requirement (SCR), the Minimum Capital Requirement (MCR), the basic own funds and the amounts of own funds eligible to meet the MCR and the SCR.

Even under a non-application of a volatility adjustment, the solvency ratio is still comfortable.

**Impact of non-application of a volatility adjustment**

in TEUR	Amount with Long Term Guarantee measures and transitionals	Impact of volatility adjustment set to zero
Technical provisions	31,690,188	202,787
Basic own funds	16,449,798	-176,052
Eligible own funds to meet Solvency Capital Requirement	16,449,798	-176,052
Solvency Capital Requirement	6,634,037	214,169
Eligible own funds to meet Minimum Capital Requirement	14,478,853	-156,994
Minimum Capital Requirement	2,985,317	96,376

For Solvency II purposes, all contracts have to be evaluated over the whole lifetime within the individual contract boundaries (ultimate view). The contract boundary is defined as the future date on which at least one of the following criteria is met:

- The (re)insurance undertaking has an unilateral right to terminate the contract.
- The (re)insurance undertaking has an unilateral right to reject premiums payable under the contract.
- The (re)insurance undertaking has an 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 such condition is met, 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, if not stated otherwise. 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 including 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 ongoing operations.

Cash flows in connection with funds withheld (FWH) – increase, decrease or interest on FWH – of the underlying business are usually not netted against the liability cash flows. Any FWH shown as such in the IFRS balance sheet will need to be shown as a FWH in the Solvency II balance sheet. For very risk remote transactions a netted presentation is still proceeded in line with the IFRS presentation. For all other transactions the FWH are grossed up. The quantitative FWH information inclusive a comparison with the previous year is provided in Section “Deposits to cedants R0350” and “Deposits from reinsurers R0770” (in total for Property & Casualty and Life & Health reinsurance).

The not due balances of accounts payables and receivables were allocated to the best estimates of technical provisions (for assumed business) or reinsurance recoverables (for retroceded business).

For the Property & Casualty and Life & Health business, the TP does not include any financial options and guarantees (FOGs).

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

### Risk Margin (RM)

According to Art. 37 (1) Delegated Regulation, a uniform Cost of Capital (CoC) approach is used for calculating the risk margin.

The CoC factor is 6%. The required capital is the SCR under Solvency II according to Hannover Rück's internal model. The allocation of the SCR to the lines of business reflects the contribution to the SCR (Art. 37). The allocated SCR contributions are projected to future periods using appropriate risk drivers for each line of business.

Diversification between the Property & Casualty and Life & Health reinsurance business group within Hannover Rück is taken into account.

### Covid-19 pandemic

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

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

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

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

## D.2.1 Technical provisions Property & Casualty

### D.2.1.1 Value of technical provisions

Technical provisions of Property & Casualty reinsurance, split by lines of business  
in TEUR

Line of business	BEL	RM	TP	TP HGB	Difference SII and HGB
General liability insurance	3,566,077	58,844	3,624,921	5,189,713	-1,564,792
Workers' compensation insurance	184,457	376	184,833	143,227	41,605
Income protection insurance	262,179	7,377	269,556	338,710	-69,154
Fire and other damage to property insurance	4,957,768	65,101	5,022,869	6,978,135	-1,955,266
Motor vehicle liability insurance	1,322,497	14,018	1,336,515	1,755,229	-418,714
Credit and suretyship insurance	1,462,016	29,910	1,491,925	1,981,503	-489,578
Marine, aviation, transport	934,549	11,287	945,836	1,513,328	-567,492
Other motor insurance	1,047,839	12,556	1,060,396	1,443,899	-383,503
Other insurance	374,688	6,166	380,854	577,734	-196,880
Non-proportional health reinsurance	1,127,639	62,172	1,189,811	1,846,670	-656,860
Non-proportional property reinsurance	3,198,136	48,230	3,246,366	4,726,209	-1,479,843
Non-proportional marine, aviation and transport	740,951	16,822	757,772	1,429,902	-672,130
Non-proportional casualty reinsurance	6,684,875	197,988	6,882,863	9,366,887	-2,484,024
<b>Total Non-Life Obligation</b>	<b>25,863,672</b>	<b>530,845</b>	<b>26,394,517</b>	<b>37,291,147</b>	<b>-10,896,630</b>

The table above gives an overview of the technical provisions of Property & 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 & 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.

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 & 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 a default per counterparty over the whole lifetime – whether be it through insolvency or legal dispute – as well as the resulting change in cash flows due to loss per default at the respective time under consideration.

According to the 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 Section “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 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

##### Comparison to HGB-provisions

This section outlines the reconciliation of the technical provisions from HGB to Solvency II as at 31 December 2021.

##### Major revaluation effects in TEUR

Description	2021
<b>Technical provisions property and casualty reinsurance net under HGB</b>	<b>29,690,855</b>
Proportion of business that is ceded to reinsurer under HGB	7,600,292
Equalisation reserve	-4,317,044
Discounting of cash flows	-1,658,082
Risk margin	530,845
Other revaluation effects	-2,060,086
<b>Total revaluation effect from HGB to Solvency II</b>	<b>95,925</b>
Netting of accounts payables and receivables	-3,392,263
<b>Technical provisions property and casualty reinsurance under Solvency II</b>	<b>26,394,517</b>

The valuation methods described above hold for all lines of business of Property & 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 their lifetime.

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.

In addition, Solvency II cash flows are netted against the accounts payables and receivables.

## Comparison to BEL of last year

### Comparison to prior year

in TEUR	2021	2020
BEL gross	25,863,672	22,394,893
BEL net	19,730,583	17,424,074
RM	530,845	511,764

The BEL increases due to increased business volumes as well due to provisions for large losses.

## D.2.2 Technical provisions Life & Health

### D.2.2.1 Quantitative information on technical provisions Life & Health

In this section, quantitative information for the Life & Health business with respect to BEL, RM and 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 for Hannover Rück:

- Hannover Rück: business written in Hannover Rück and by branches of Hannover Rück
- Hannover Life Reassurance Company of America (Bermuda) Ltd., Hamilton \*
- Hannover Life Reassurance Company of America, Orlando
- Hannover Life Re of Australasia Ltd, Sydney
- Hannover Re South Africa Ltd, Johannesburg
- Hannover Re (Ireland) Designated Activity Company, Dublin.

\* This covers a stop loss treaty (for US mortality business) provided to the Hannover Life Reassurance Company of America (Bermuda) Ltd. as well as parental guarantees for certain underlying transactions.

The following table provides an overview of the liabilities of the segments. The index-linked and unit-linked business is contained in the life segment.

**Technical provisions Life & Health per line of business**  
in TEUR

Line of Business	BEL	RM	TP	HGB Liability	Comparison SII and HGB
Life	2,342,190	1,231,888	3,574,078	8,118,151	-4,544,073
Health	1,346,924	374,669	1,721,593	2,462,011	-740,418
<b>Total</b>	<b>3,689,115</b>	<b>1,606,557</b>	<b>5,295,671</b>	<b>10,580,163</b>	<b>-5,284,492</b>

Details regarding the treatment of funds withheld (FWH) as well as payables and receivables are provided in Section D.2. The segmentation into the Life and Health lines of business is slightly different under Solvency II and HGB. A reconciliation from the statutory liability net of reinsurance to the Solvency II TP net of reinsurance is provided in Section D.2.2.4.

### 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.

With only a few exceptions, the BEL is calculated individually per treaty. 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 and projected into the future. Usually the BEL is calculated in the respective treaty main currency and using currency specific interest rate curves.

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 are in turn adjusted, if necessary. The base mortality / morbidity table is usually the original one 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. The reinsurance conditions of the treaty are reflected in the calculation of the BEL.

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.

In addition, there is a provision for the short-term impact of the Covid-19 pandemic on future claims and for the UK market a provision for the impact of delays in the diagnosis of Critical Illness claims due to Covid-19.

Lapse rates are set from the original pricing basis of the treaty and adjusted for actual experience where credible data exists and for changes of the internal view of long-term lapse rates.

With the exception of mortality business in the North American markets and certain mortality and morbidity business in the UK market, no allowance for future mortality trends is made.

A few smaller treaties are modelled in an aggregate manner using more general assumptions. Base mortality / morbidity tables are chosen in order to be appropriate for the market of the respective treaties.

The assumptions are monitored based on the booked results from the past and adjusted if necessary.

For a portion of the business 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.

Generally, future management actions are only taken into account for the SCR calculation of certain American and Australian business. Therefore they affect only the RM via the SCR (determined with the internal model), but not the best estimate projections. There are some exceptions for our US business, most importantly, the US mortality business. A detailed future management action plan ("FMA Plan") has been implemented to address issues with parts of the US mortality portfolio. The expected cash flows from inforce management are reflected in the TP.

### 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 or by country. The assumptions are monitored when the accounts from the cedants are booked and are in turn adjusted, if necessary, or if other information indicates a need for change. Furthermore, detailed mortality studies are carried out to allow for a comparison between expectation and experience and to adjust if necessary.

### Assumptions changes in comparison to the previous reporting period

In the following material assumption changes in comparison to the previous reporting period are explained.

Adjustments to the morbidity assumptions for Critical Illness business of the Shanghai branch in the course of an assumption review and the introduction of a new model, for Critical Illness business of the UK branch as well as for Taiwan disability business led to an increase in BEL. The mortality

assumptions for a material life reinsurance treaty of both the Hong Kong branch and Australian subsidiary were revised causing a further increase in BEL.

An updated valuation of the stop loss treaty for US mortality business provided to the Hannover Life Reassurance Company of America (Bermuda) Ltd. resulted in a decrease in BEL.

### 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 negative (TEUR -594,700), i.e. it is to be seen as a liability for Hannover Rück and increases the net Solvency II reserves.

The respective statutory reinsurance recoverables amount to TEUR 720,569. Certain revaluation steps between HGB and Solvency II are provided in Section D.2.2.4.

### 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 key driver to the overall level of uncertainty comes in the form of the longevity, morbidity and mortality business. This also becomes evident from the capital requirements under Solvency II presented in Section E.2.

The longevity business is also very dependent on the appropriateness of the underlying mortality tables and mortality improvement assumptions, in particular due to its long-term nature. 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.

Morbidity risks are another driver of uncertainty in the modelling of business. Relevant morbidity risks are stemming from potential changes of incidence rates for Asian critical illness business as well as from Australian and Taiwanese disability business.

For the mortality 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 in available data. For longer tailed products, in particular in the US and UK market, mortality improvement and expert settings can also play an important role.

Significant mortality risk is stemming from US mortality business. The actual mortality experience for the portfolio in question was worse than expected due to the Covid-19 pandemic. Experience continues to be monitored on an ongoing basis.

The valuation of this business reflects the expected cash flows from inforce management activity, most notably rate increases pursuant to our contractual rights. Uncertainty results since it is expected that some cedants will seek arbitration proceedings with respect to the implemented rate increases. Based on information currently available to us, we take a favorable view of our legal position.

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. Pandemic risk is one of the key drivers of capital requirements and is therefore allowed for in the Risk Margin.

The TP include adjustments for already incurred as well as expected future claims of the Covid-19 pandemic. Nevertheless, there is a certain risk of higher claims in the near future and an adverse development in mortality and morbidity rates from long-term consequences for people suffering from Covid-19.

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. The figures are net of reinsurance recoverables.

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

Reconciliation Step	Explanation	2021
(1)	<b>Technical HGB liability net of reinsurance</b>	<b>9,859,593</b>
(2)	Risk Margin	1,606,557
(3)	Deposit cash flows for very risk remote transactions are included in TP under Solvency II	-2,348,971
(4)	Further differences in methods / assumptions	-3,164,788
(5)	Netting of accounts payables and receivables	-62,020
<b>(6)=(1)+...+(5)</b>	<b>Solvency II TP net of reinsurance</b>	<b>5,890,371</b>

The sources of the differences in methods and assumptions are:

(4a) 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.

(4b) 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.

(4c) The BEL reflects current best estimate assumptions (e.g., regarding mortality and lapse), whereas the statutory assumptions are based on the prudence principle.

(4d) The BEL is discounted with current risk free interest rates including the volatility adjustment, whereas the statutory liabilities are calculated using valuation interest rates.

(4e) For some treaties the Solvency II contract boundaries differ from the contract boundaries under statutory.

## D.3 Other Liabilities

### D.3.1 Contingent liabilities R0740

#### Difference in valuation

Values as of 31.12.2021 in TEUR	Solvency II	HGB
Contingent liabilities		

A contingent liability is a possible obligation arising from past events and whose existence will be confirmed only by the occurrence or non-occurrence of one or more uncertain future events. Obligations are to be reported as contingent liabilities if the probability of occurrence is less than 50% (IAS 37).

Contingent liabilities in Solvency II balance sheet are recognised according to criteria set out in Art. 11 of Delegated Regulation (EU) 2015/35. Accordingly, material contingent liabilities are to be reported if the information could influence the decision-making or judgement of the intended user of that information.

Pursuant to Section 251 and Section 268 Para 7 of the HGB, contingent liabilities have to be reported in the notes of the balance sheet.

At reporting date, there are no contingent liabilities to be recognized.

#### Comparison to prior year

in TEUR	Solvency II 2021	Solvency II 2020
Contingent liabilities		1,777

In 2021, the contingent liability was fully reversed under Solvency II, as due to a legislative change, potential reclaiming of capital gains tax in connection with securities lending transactions for the assessment periods 2010 and 2011 is no longer applicable.

In comparison to the previous year, assumptions regarding the calculation of this balance sheet item remained unchanged.

### D.3.2 Provisions other than technical provisions R0750

#### Difference in valuation

Values as of 31.12.2021 in TEUR	Solvency II	HGB
Provisions other than technical provisions	107,122	165,928

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

- Provisions for outstanding remuneration payments
- Provision for interest pursuant to § 233a AO (Fiscal Code)
- Provision for loss transfer
- Provisions for annual accounts costs
- Provisions for suppliers' invoices
- Provisions for costs of legal action
- Provision for partial retirement.

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 calculated according to the necessary settlement value based on sound judgement.

The difference of TEUR 58,806 between the amount in the Solvency II balance sheet and in the annual accounts pursuant to commercial law is caused by different valuation approaches and a different definition of this position respectively.

#### Comparison to prior year

in TEUR	Solvency II 2021	Solvency II 2020
Provisions other than technical provisions	107,122	108,349

In comparison to the previous year, the underlying assumptions for this position did not change.

### D.3.3 Pension benefit obligations R0760

#### Difference in valuation

Values as of 31.12.2021 in TEUR	Solvency II	HGB
Pension benefit obligations	152,490	127,081

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 Section "D4. Alternative methods for valuation".

The commitments to employees in Germany predominantly comprise benefit obligations financed by Hannover Rück. A large proportion of obligations are based on defined benefit obligations.

The provisions for pensions in Germany and abroad were calculated on the basis of uniform standards according to prevailing economic circumstances.

Pursuant to the 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 ten 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). 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.

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 Par 1 Sentence 3 of the HGB. For these commitments, the settlement value corresponds to the fair value of the actuarial reserve plus profit participation.

The difference between the valuation bases in the Solvency II balance sheet and in the annual accounts according to commercial law totalling TEUR 25,409 is particularly attributable to the different interest rates applied for discounting.

#### Comparison to prior year

in TEUR	Solvency II 2021	Solvency II 2020
Pension benefit obligations	152,490	165,291

In comparison to the previous year, assumptions regarding the calculation of this balance sheet item remained unchanged.

### D.3.4 Deposits from reinsurers R0770

#### Difference in valuation

Values as of 31.12.2021 in TEUR	Solvency II	HGB
Deposits from reinsurers	3,647,895	3,714,568

The deposits from reinsurers are determined analogously to the deposits to cedents. The respective methodology is described in Section “Deposits to Cedents R0350”.

#### Comparison to prior year

in TEUR	Solvency II 2021	Solvency II 2020
Deposits from reinsurers	3,647,895	3,281,818

Changes in the amount of deposits from reinsurers under Solvency II are due to changes in exchange rates and in the underlying business.

### D.3.5 Deferred tax liabilities R0780

#### Difference in valuation

Values as of 31.12.2021 in TEUR	Solvency II	HGB
Deferred tax liabilities	2,792,199	

The calculation of deferred taxes under Solvency II is carried out in accordance with Art. 15 of the Delegated Regulation. Deferred taxes are recognized and measured for all assets and liabilities, including technical provisions.

In the Solvency II balance sheet, a deferred tax asset totalling TEUR 265,688 is stated as well as a deferred tax liability to the amount of TEUR 2,792,199. This subsequently leads to an excess of tax liability over tax assets, that is calculated 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, if 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 if these differences will invert in future (temporary differences). Temporary differences basically result from valuation differences between the tax balance sheet, created in line with national standards, and the IFRS balance sheet as well as from consolidation procedures. Deferred taxes are not calculated on permanent differences.

Deferred tax assets are also calculated based on tax loss carry forwards and tax credits. Adjustments are made as soon as the realisation of the deferred tax assets appears no longer probable in future (refer to chapter E.1.2.5 for more details on the impairment test). Deferred taxes are valued using the ratified rates of tax in the respective country, which apply or have been decreed as at the reporting due date.

The second step consists of the calculation of deferred taxes based on the valuation differences between the Solvency II balance sheet and the IFRS balance sheet. The granularity of this calculation is in line with the granularity of the calculation of deferred tax under IFRS. Reclassifications are considered (e.g. referring to payables/receivables and intragroup loans) to reflect specific requirement under Solvency II. The calculation of the deferred tax asset and liability is carried out on the level of individual balance sheet items. According to Guideline 9 of the EIOPA guidelines, no discounting applies in the valuation of deferred taxes in the Solvency II balance sheet.

As result of these two steps the deferred taxes based on the valuation differences between the tax balance sheet and the Solvency II balance sheet are calculated.

With existing differences between the commercial and tax valuation for assets, liabilities and deferred / prepaid items, which are expected 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 annual accounts of Hannover Rück, in line with the commercial code, 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.

### Comparison to prior year

in TEUR	Solvency II 2021	Solvency II 2020
Deferred tax liabilities	2,792,199	2,395,992

The development of deferred tax liabilities is mainly attributable to changes in underwriting balance sheet items and capital investments. For more detailed explanatory notes please consult the respective sections.

### D.3.6 Derivatives R0790

#### Difference in valuation

Values as of 31.12.2021 in TEUR	Solvency II	HGB
Derivatives	55,916	

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 (e.g. interest and spread curves, volatilities, spot and forward rates) within the applied framework of suitable valuation models and methods.

In annual accounts pursuant to HGB the valuation of financial derivatives and derivatives on biometric indices is done on a fair value basis. Derivatives which are part of an insurance contract are valued as part of technical liabilities, and are not stated separately.

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 at the balance sheet date.

Pursuant to the HGB the company had summarised, as at the reporting date, reciprocal forward foreign-exchange contracts into valuation units with offsetting effect under the application of the net hedge presentation method. 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 nearly equalised. Thus, TEUR 55,916 of the difference in valuation are traced back to the different reporting of the hedging transactions under Solvency II and the HGB.

### Comparison to prior year

in TEUR	Solvency II 2021	Solvency II 2020
Derivatives	55,916	47,949

In comparison to the previous year, the assumptions regarding the calculation of this balance sheet item did not change.

### D.3.7 Financial liabilities other than debts owed to credit institutions R0810

#### Difference in valuation

Values as of 31.12.2021 in TEUR	Solvency II	HGB
Financial liabilities other than debts owed to credit institutions	1,204,405	1,146,112

Liabilities are 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.

The difference between the items in the Solvency II balance sheet and in the annual accounts pursuant to commercial law is in total TEUR 58,293. Of this amount, TEUR 47,809 relate to valuation differences of a senior bond issued in the financial year 2018. The remaining amount relates to valuation differences of loans with Group companies as well as recognition differences of lease liabilities. The reason for the difference in lease liabilities is that these are not shown in the balance sheet under German commercial law.

### Comparison to prior year

in TEUR	Solvency II 2021	Solvency II 2020
Financial liabilities other than debts owed to credit institutions	1,204,405	1,260,484

The decrease in the value in the year under review results predominantly from a decrease in loans with Group companies and changes in valuation of the senior bond.

In comparison to the previous year, the remaining assumptions regarding the calculation of this balance sheet item did not change.

### D.3.8 Insurance & intermediaries payable R0820

#### Difference in valuation

Values as of 31.12.2021 in TEUR	Solvency II	HGB
Insurance & intermediaries payables	718,630	

Solvency II 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 HGB and / or the Insurance Accounting Decree (RechVersV) no differentiation is made between active reinsurance and retrocession for accounts receivable / payable. The 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.

### Comparison to prior year

in TEUR	Solvency II 2021	Solvency II 2020
Insurance & intermediaries payables	718,630	686,702

Compared to the previous period, the assumptions regarding the calculation of this item did not change.

### D.3.9 Reinsurance payables R0830

#### Difference in valuation

Values as of 31.12.2021 in TEUR	Solvency II	HGB
Reinsurance payables	157,174	1,904,840

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 the commercial code.

The differences in valuation of items R0820 and R0830 are therefore taken together and amount to TEUR -1,029,036.

They result from the fact that only the part of the receivables, that was due before the balance sheet date, is considered here.

### Comparison to prior year

in TEUR	Solvency II 2021	Solvency II 2020
Reinsurance payables	157,174	196,677

From Closing 2019 on, only the current balances due are included in the respective positions, non-current future balances are part of the contractual cash flows shown within the best estimate of the technical provisions or reinsurance recoverables.

Compared to the previous period, the assumptions regarding the calculation of this item did not change.

### D.3.10 Payables (trade, not insurance) R0840

#### Difference in valuation

Values as of 31.12.2021 in TEUR	Solvency II	HGB
Payables (trade, not insurance)	53,400	48,925

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 the commercial code.

The difference of TEUR 4,474 between the items in the solvency statement and the financial statements prepared in accordance with the HGB results from reclassifications.

#### Comparison to prior year

in TEUR	Solvency II 2021	Solvency II 2020
Payables (trade, not insurance)	53,400	97,202

In comparison to the previous year, the assumptions regarding the calculation of this balance sheet item did not change.

The decrease in the year under review is mainly due to a reduction in income tax liabilities of TEUR 45,672. Other tax liabilities were slightly higher.

### D.3.11 Subordinated liabilities R0850

#### Difference in valuation

Values as of 31.12.2021 in TEUR	Solvency II	HGB
Subordinated liabilities	3,036,826	3,000,000

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 is 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 Section “E.1.3.5 Subordinated liabilities”.

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 36,826.

#### Comparison to prior year

in TEUR	Solvency II 2021	Solvency II 2020
Subordinated liabilities	3,036,826	2,381,960

In the reporting period, Hannover Rück issued subordinated debt in the amount of TEUR 750,000. The development compared with the previous year is based maturity difference and the resulting present values at the reporting date. General interest rate volatility also led to a change in the portfolio value.

The underlying valuation method did not change compared to the previous year.

#### D.3.12 Any other liabilities, not elsewhere shown R0880

##### Difference in valuation

Values as of 31.12.2021 in TEUR	Solvency II	HGB
Any other liabilities, not elsewhere shown	141,065	138,248

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 the commercial code.

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 2,817 is the result of reclassifications.

#### Comparison to prior year

in TEUR	Solvency II 2021	Solvency II 2020
Any other liabilities, not elsewhere shown	141,065	54,090

In comparison to the previous year, the assumptions regarding the calculation of this balance sheet item did not change.

In the financial year 2021 the development of this balance sheet item is based on the recognition of liabilities from securities lending.

## 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
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
Private equity funds, Private equity real estate funds	Audited net asset values (NAV)	Net asset value method
Unlisted fixed income, equity and real estate funds	Audited net asset values (NAV)	Net asset value method
Currency forwards and swaps	Interest rate curves, spot and forward rates	Interest rate parity model
OTC stock options, OTC stock index options	Quoted price of the underlying stock, implicit volatility, money market yields, dividend yield	Black-Scholes model
Insurance derivatives	Market values, actuarial parameters, interest rate curve	Present value method
Total Return Swaps, Equity Swaps	Quotation underlying, 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 one subordinated bond in the European capital market via its subsidiary Hannover Finance (Luxembourg) S.A. The bond from year 2012 has a nominal volume of TEUR 500,000, which benefits 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 1,481,008. 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 5,172,000. 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 3,213,762. Additionally guarantees are submitted totalling TGBP 10,000. 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 250,000 in total and payment obligations against subsidiaries in South Africa resulting from written primary insurance and reinsurance business as well as a contingent liability to our Australian subsidiary in connection with a financing instrument totalling TAUD 50,000.

Hannover Rück receives collateral from its retrocessionaires for the safeguarding of receivables from retroceded business. The provision of collateral by the retrocessionaires takes place 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 409,349 for special investments and shares in affiliate companies. Furthermore, there is a long-term compensation obligation of TEUR 9,587 to HDI Unterstützungskasse.

## E. Capital Management

This section presents the main elements of Hannover Rück's capital management.

### E.1 Own Funds

#### E.1.1 Management of own funds

Hannover Rück aims to maintain a capitalisation of at least 180% under Solvency II. In addition, a threshold of 200% is defined. Own funds are managed in such a way that the minimum capitalisation is not undercut in the planning. This is achieved through coordinated planning and management of all own funds components, dividend payments and the risk profile.

The capital management process comprises a classification of all own funds components with regard to the Solvency II tiering specifications, with regard to basic and ancillary own funds and an assessment of the availability of the different own funds components.

In general, it is our objective that our hybrid capital instruments correspond with tier 2 category requirements. 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 detailed replacement 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 items and ancillary own funds items 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. Tier 3 capital comprises deferred tax assets in accordance with Art. 76 of Delegated Regulation 2015/35. Deferred tax assets and liabilities against territorial authorities are offset and, in the case of a net receivable, reported as an own funds item.

#### E.1.3 Basic own funds

The following table displays the composition of basic own funds held by Hannover Rück as of 31. December 2021.

**Structure of basic own funds**

in TEUR	2021	2020
Tier 1 unrestricted	13,348,564	11,857,483
Ordinary share capital	120,597	120,597
Share premium account	880,608	880,608
Reconciliation reserve	12,347,359	10,856,278
Tier 1 restricted	533,225	548,243
Subordinated own funds	533,225	548,243
Tier 2	2,503,601	1,833,717
Subordinated own funds	2,503,601	1,833,717
Tier 3	64,408	29,549
An amount equal to the value of net deferred tax assets	64,408	29,549
<b>Total</b>	<b>16,449,798</b>	<b>14,268,992</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.

The change in basic own funds compared to previous year results from an increase of the excess of assets over liabilities, the issuance of a new subordinated bond and an increase in deferred taxes. Valuation changes in subordinated capital in the reporting year played a minor role.

The increase of the excess of assets over liabilities compared to reporting year 2020 also increases the reconciliation reserve. A higher dividend payout compared to previous reporting period reduces the overall effect.

**Available and eligible own funds**

in TEUR	2021	2020
Total available own funds	16,449,798	14,268,992
Total eligible own funds to meet SCR	16,449,798	14,268,992
Total eligible own funds to meet MCR	14,478,853	12,941,142

Based on the regulations on minimum capital requirement (MCR) with respect to quality requirements regarding loss-bearing capability of own funds, the available tier 2 own funds are taken into account according in proportion to the respective own funds component. Tier 3 basic own funds cannot be used to cover the minimum capital requirement.

### E.1.3.1 Reconciliation from HGB shareholders' capital to Solvency II own funds

The transition from HGB shareholders' capital to Solvency II own funds is presented in the table below.

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

in TEUR	2021	2020
Shareholders' capital (HGB)	5,889,716	4,981,716
Dividend	-693,434	-542,687
Differences in values and valuations Solvency II to HGB:	13,780,027	11,974,740
Equalisation reserve	4,317,044	3,771,372
Deferred acquisition costs and other intangible assets	-61,356	-61,439
Land, buildings and equipment	35,694	33,940
Shares / investments in affiliates and participations	3,862,093	3,189,109
Fixed-interest securities and other investments	1,283,537	1,613,788
Assets and liabilities from reinsurance business	4,431,223	3,569,388
Miscellaneous non-technical assets and liabilities	-88,209	-141,419
Deferred taxes on tax differences between Solvency II and HGB	-2,526,511	-2,144,777
<b>Available own funds (Solvency II)</b>	<b>16,449,798</b>	<b>14,268,992</b>

### E.1.3.2 Ordinary share capital

Ordinary capital of Hannover Rück stands at TEUR 120,597 at date of balance. 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.1.3.3 Share premium account

The share premium in relation to the share capital of Hannover Rück stands at TEUR 880,608 at date of balance.

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.1.3.4 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 12,347,359. The reconciliation increased by TEUR 1,491,081 during the reporting 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 HGB and the valuation pursuant to the Directive 2009/138/EC.

#### E.1.3.5 Subordinated liabilities

Hannover Rück holds four subordinated bonds and one subordinated loan 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.

##### Subordinated liabilities

in TEUR	2021	2020
Subordinated debt	2,501,436	1,823,465
Subordinated loans	535,390	558,495
<b>Total</b>	<b>3,036,826</b>	<b>2,381,960</b>

In the reporting period, a new subordinated bond was issued. The issue took place on 22 March 2021. The nominal value is TEUR 750,000 and the bond is classified as tier 2.

In addition, further subordinated liabilities with equity character exist as of the reporting date:

On 8 July 2020 raised a subordinated bond with a nominal value of TEUR 500,000 from capital markets. The bond issued is classified as tier 2.

On 9 October 2019 Hannover Rück raised a subordinated bond with a nominal value of TEUR 750,000 from capital markets. The bond issued is classified as tier 2.

On 15 September 2014 Hannover Rück raised a subordinated bond 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 a subordinated loan with a nominal value of TEUR 500,000 from capital markets in 2012 and subsequently granted a loan to Hannover Rück. The loan is classified under Solvency II as (grandfathered) tier 2 own funds of Hannover Rück.

On the basis of their tiering classes, the value of the subordinated debt can be fully used to cover the Solvency Capital Requirement when applying the limit on eligible own funds in accordance with Article 82 Delegated Regulation 2015/35.

### **E.1.3.6 An amount equal to the value of net deferred tax assets**

Please refer to Section D.3 under item “Deferred tax liabilities R0780” for a detailed description of the origination of deferred tax assets and liabilities.

For the determination of own funds in accordance with Solvency II, offsetting must be performed. Deferred tax assets and deferred tax liabilities are offset if they relate to the same type of tax levied by the same taxation authority (identical tax creditor) and there is a legally enforceable right to offset current tax assets against current tax liabilities. The netting is carried out at the level of individual taxable entities. Net deferred tax assets arise if the deferred tax assets exceed the deferred tax liabilities for each taxable entity.

The recoverability of deferred taxes in the Solvency II balance sheet is assessed at each balance sheet date in a multi-step process. In the first step, deferred tax liabilities reported in the Solvency II balance sheet are used as part of the recognition test for deferred tax assets. Any timing restrictions and the above-mentioned limits on offsetting are taken into account. In the second step, deferred tax assets can only be recognized over and above if it can be demonstrated that sufficient future taxable profit will be available.

To the extent that it is not probable that future taxable profit will be available, corresponding valuation allowances are created.

As at the balance sheet date, the accumulated net deferred tax assets amount to TEUR 64.408.

Recognition of net deferred tax assets as basic own funds items is possible as far as the taxable entity can achieve a full offset against taxes payable in the future. The offset can be achieved by conversion into current tax assets or liabilities. Alternatively, offsetting can be achieved through realization as part of the tax assessment.

For the recognized net deferred tax assets, there are corresponding profit expectations in an appropriate amount for each taxable entity. As a consequence, the amount can be recognized in full as a Tier 3 basic own fund item.

The value of net deferred tax assets can be used in full to cover the Solvency Capital Requirement by applying the limit on eligible own funds pursuant to Article 82 Delegated Regulation 2015/35.

### **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.

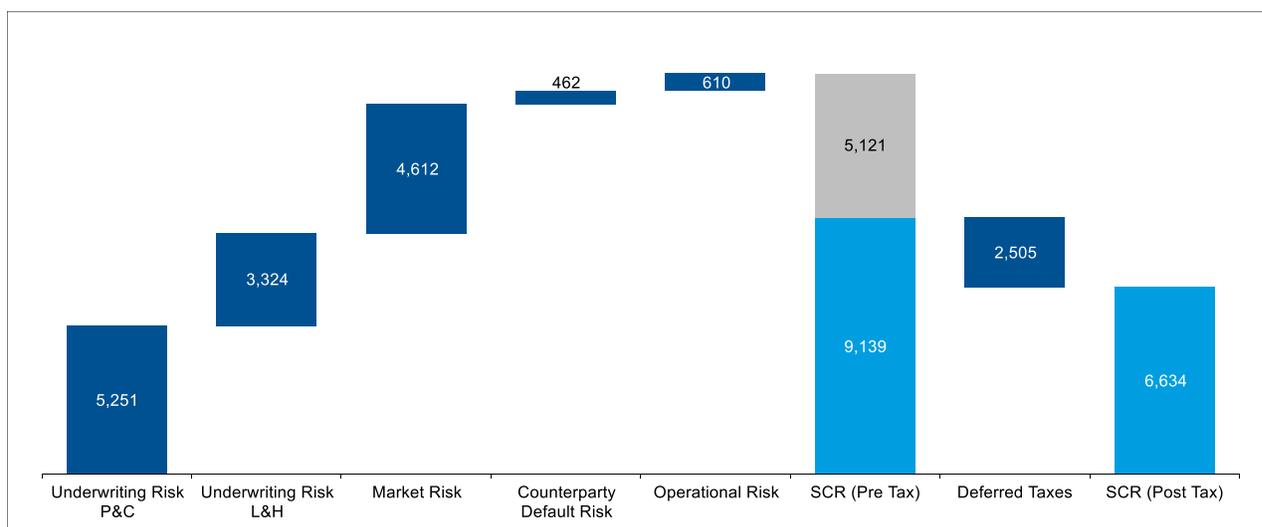
## **E.2 Solvency Capital Requirement and Minimum Capital Requirement**

### **E.2.1 Solvency Capital Requirement per Risk Category**

This section deals with the Solvency Capital Requirement and its sources. The risk categories of the internal model of Hannover Rück are defined in Section E.4.1.4. Capital requirements per risk category are shown in the following.

Hannover Rück is the legal entity heading Hannover Re Group. It holds a number of participations which are included into management applications in a look-through manner, i.e. based on the underlying risk and return profile. Look-through means that the underlying risks are analysed instead of purely looking at the change of the value of the participations. In particular, participations are not analysed as strategic equity investments – as e.g. per Solvency II standard formula.

### Solvency Capital Requirement – per risk category in EUR million



### Solvency Capital Requirement (SCR) in TEUR

Solvency Capital Requirement	2021	2020
Underwriting risk - Property & Casualty	5,251,239	4,352,598
Underwriting risk - Life & Health	3,324,426	3,139,919
Market risk	4,612,492	4,143,238
Counterparty default risk	462,029	445,380
Operational risk	610,163	529,608
<b>Diversification</b>	<b>-5,121,055</b>	<b>-4,457,794</b>
<b>Total risk (pre-tax)</b>	<b>9,139,293</b>	<b>8,152,948</b>
Deferred tax	2,505,256	2,203,876
<b>Total risk (post-tax)</b>	<b>6,634,037</b>	<b>5,949,073</b>

The required capital has been calculated based on the approved internal model. Hannover Rück applies the static volatility adjustment according to §82 of the Insurance Supervision Law VAG. This is intended to mitigate the effect of temporary value fluctuations due to credit spread movements on the bond market. In order to capture this effect adequately for the calculation of the required capital Hannover Rück uses the dynamic volatility in its internal model.

The model is subject to strict internal quality checks and extensive validation. Moreover, the continuous model supervision has not revealed any material limitations in the determination of capital requirements so far. In particular, there are no capital add-ons imposed by the regulator.

Overall, the required capital at the confidence level of 99.5% increased in the course of the year. This was principally driven by the larger business volumes, which have led to an increase in underwriting risks and market risks. The weaker euro against foreign currencies also contributed to this increase.

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

The business expansion in the areas of longevity and morbidity risks as well as the appreciation of foreign currencies lead to an increase in underwriting risks in life and health reinsurance.

The increase in the market risk reflects first and foremost the larger volume due to higher market values and new investments in the areas of private equity and real estate. The increased volumes of fixed-income securities as a result of business growth are a further factor here.

A higher volume of receivables due from retrocessionaires was the main driver for the increase in counterparty default risks.

The changes in operational risk can be attributed to an increase in those scenarios which are driven by the overall business volume and thus increase as business grows.

The loss-absorbing effect of taxes and the diversification effect remained relatively stable.

For the calculation of the loss-absorbing capacity of deferred taxes, the build-up of deferred tax assets is restricted by the amount of net deferred tax liabilities according to the IFRS balance sheet as well as future tax liabilities stemming from future profits. The net deferred tax liabilities under IFRS basically stem from temporary valuation differences between the tax balance sheet and the IFRS balance sheet. Taxable future profits are derived from the planned IFRS net income for the next financial year and projected to a time horizon, which corresponds to the average duration of liabilities.

The following table displays the Solvency Capital Requirement and the ratio of eligible own funds to SCR taking into account tiering restrictions.

#### Ratio of eligible own funds to Solvency Capital Requirement

in TEUR	2021	2020
Eligible own funds	16,449,798	14,268,992
SCR	6,634,037	5,949,073
<b>Ratio of eligible own funds to SCR</b>	<b>248%</b>	<b>240%</b>

## E.2.2 Minimum Capital Requirement

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

### Ratio of eligible own funds to Minimum Capital Requirement

in TEUR	2021	2020
Eligible own funds	14,478,853	12,941,142
MCR	2,985,317	2,677,083
<b>Ratio of eligible own funds to MCR</b>	<b>485%</b>	<b>483%</b>

The MCR increases due to the higher SCR (reasons are given above). In case of Hannover Rück, the MCR is capped at the upper limit of 45% of SCR. Both indicators develop uniformly at this limit.

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

Germany did not make use of the option to allow the use of a duration-based equity risk sub-module.

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

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

### E.4.1 The internal model

Hannover Re received approval from the regulatory authorities to calculate its solvency requirements using a full internal capital model. This section provides 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 the undertaking is exposed to and of our capital position. In this context, the internal model is our key instrument. It is a stochastic enterprise model, covering all subsidiaries and business areas of Hannover Rück.

The central key figure in risk and company management is the economic capital, which is evaluated according to market-consistent valuation principles and forms the basis for the calculation of the Solvency II capital.

The internal model of Hannover Rück reflects all risks influencing the development of the economic capital. These risks are classified into underwriting, market, counterparty default and operational risks. For each of these risk categories, we have determined a series of risk factors for which we define a probability distribution. Risk factors are, as for instance, economic indicators, like 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.

We use publicly accessible and historical data to specify the probability distributions of risk factors. In addition, we use industry specific and internal (re-)insurance data of Hannover Rück. The judgement of internal and external experts supplements this process. The suitability of probability distributions is subject to regular review by our specialist departments and verified in conjunction with the regular company-wide application of the capital model and allocation of costs of capital. Hannover Rück calculates the required capital using the Value at Risk (VaR) reflecting the changes in economic value over a period of one year with a confidence level of 99.97%. This is equivalent to the target to limit the ruin probability over a horizon of one year to 0.03%. The internal target capitalisation of Hannover Rück is significantly larger than that to a confidence level of 99.5% as required by Solvency II.

The internal capital model uses state-of-the-art techniques of insurance and financial mathematics. In case of underwriting risks, we draw on a comprehensive history of internal data to estimate probability distributions, e.g., for reserving risk. In the context of natural catastrophe risks, we use external models that we adjusted in the course of detailed internal reviews to represent our risk profile adequately. For Life & Health reinsurance we determine long-term cash flows 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., during financial crises, which affect several market segments at the same time. Furthermore, market phenomena such as pricing cycles can cause dependencies over time. We generally assume that extreme events do not all occur simultaneously. The absence of complete dependency is denoted as diversification. Hannover Rück's business model is based i.a. on establishing a preferably well-balanced portfolio such that a significant diversification effect is achieved and the capital can be used efficiently. Diversification effects exist between reinsurance contracts, divisions, business segments and risks. Given the capital needs of our business segments, divisions and on the basis of their contribution to the diversification effect, we determine the costs of capital that have to be achieved per single business unit.

#### **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 deviation of the net asset value (or own funds) from its expected value.
- 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-Risk (VaR) and the Expected Shortfall (ES).
- Ongoing business operations: We operate on the premise of existing business and a going-concern assumption.
- New business assumptions: We consider one year of new business 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. Deduction and aggregation as defined under Solvency II as an alternative method is not applied.

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

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

Hannover Rück's internal capital model is a key component of the risk management system. It serves to analyse its overall risk position, to quantify risks and to determine the economic capital required to assume those risks.

Main applications are:

- Analysis of the financial position
- Assessment of the overall required capital and monitoring of key risk metrics
- Capital consumption by each risk category
- Capital allocation for pricing and performance measurement
- Risk budgeting, limit allocation and monitoring
- Strategic asset allocation
- Assessment of risk mitigation strategies
- Assessment of new business

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

Hannover Rück's risk landscape comprises the main risk categories underwriting risks (life and non-life), market risks, counterparty default risks, operational risks and other risks (see Section "C. Risk Profile").

The risk categories addressed by the internal model 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. Concentration risk is taken into account in the calculations of required capital for each risk category.

Hannover Rück is the legal entity heading Hannover Re Group. It holds a number of participations, which are included into management applications in a look-through manner, i.e. based on the underlying risk and return profile. Regarding the structure of Hannover Re Group see Section "A.1.4 Group structure".

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

Hannover Re uses a full internal model. In consequence, there are no results of standard formula modules which have to be integrated in the internal model.

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

Hannover Rück has a comprehensive internal control system in place to ensure quality and timeliness of data. The specific data used in the internal model is documented in the data requirements for the different modules and interfaces. All data used in the internal model is subject to the data standards for the internal model. This set-up is appropriate to provide for timely data that is free of material 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 & 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.

The operational risk model is based on information retrieved from a self-assessment process with experts from all relevant units and departments. Wherever possible available data and additional information are used. Given the limited history of operational risk events as well as the low frequency and high severity character of some operational risks, Hannover Rück is convinced that input parameters for the SCR calculation cannot be solely derived by quantitative methods.

In general, Hannover Rück relies on data that is used in other business applications, too, as often as appropriate to ensure consistent use of information within the company. Examples are the technical provisions which are calculated as part of the Solvency II balance sheet process and data items used in the accounting process under IFRS, thereby providing an anchor to other established reporting processes. Thus, many data items are subject to multiple quality checks and internal as well as external review.

## **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 also has some influence on counterparty and market risk.

A further difference is caused by the fact that Hannover Rück has received approval for a dynamic modelling of the volatility adjustment from BaFin for year-end 2019. By this, the effect of the volatility adjustment is captured in the calculation of the required capital more adequately compared to the standard formula.

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 recognise 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 recognise all retrocession structures currently implemented by Hannover Rück.

In contrast to the standard formula, Hannover Re's internal model has capital requirements for all government bonds.

Technically, the internal model is a stochastic approach while the standard formula is a 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 – with and without application of the volatility adjustment - were complied with at all times during the period under consideration.

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

There is no other information that has a significant influence on capital management.

## Abbreviations and glossary

**Advanced Solutions:** Structured and tailor-made reinsurance solutions to assist our clients with their capital management, provide solvency relief or protection against strain of frequency losses.

**AF:** Actuarial function

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

**BEL:** Best Estimate Liability

**CDO:** Collateralised Debt Obligation

**CEO:** Chief Executive Officer

**CFO:** Chief Financial Officer

**CLO:** Collateralised Loan Obligation

**CMS:** Compliance Management System

**EBIT:** Earnings before interest and taxes

**EEA:** European Economic Area

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

**EPIFP:** Expected Profit included in Future Premiums

**ESG:** Environment Social Governance

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

**FWH:** Funds withheld

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

**GLS:** Group Legal Services, legal division of the Hannover Re

**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

**NGO:** Non-Governmental Organisation

**ORSA:** Own Risk and Solvency Assessment

**P&C:** Property and Casualty

**QRT:** Quantitative Reporting Template

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

**Risk appetite:** Indicates how much risk a company is willing to take to achieve the company's goals. The risk appetite is an important part of the risk strategy.

**RM:** Risk margin

**RMF:** Risk Management Function

**SCR:** Solvency Capital Requirement

**SII:** Solvency II

**Talanx:** Talanx AG, Hannover

**TP:** Technical provisions

**US GAAP:** United States Generally Accepted Accounting Principles

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

**VaR:** Value-at-Risk

**WHO:** World Health Organisation

## 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.

### **Additional disclosure according to Art. 192 (2) of the Delegated Regulation 2015/35**

Hannover Rück has collateral arrangements with a total value well below 60% of total assets. The threshold of 60% is defined in Art. 192 (2) of the Delegated Regulation 2015/35. This information is relevant to calculate the counterparty default risk with respect to Hannover Rück in the Solvency II standard formula.

## S.02.01.02: Balance sheet

S.02.01.02: Balance sheet, page 1		Solvency II
Assets		C0010
Intangible assets	R0030	
Deferred tax assets	R0040	265,688
Pension benefit surplus	R0050	
Property, plant & equipment held for own use	R0060	73,134
Investments (other than assets held for index-linked and unit-linked contracts)	R0070	42,125,619
Property (other than for own use)	R0080	17,279
Holdings in related undertakings, including participations	R0090	12,073,723
Equities	R0100	175
Equities - listed	R0110	
Equities - unlisted	R0120	175
Bonds	R0130	26,813,737
Government Bonds	R0140	14,544,353
Corporate Bonds	R0150	11,524,881
Structured notes	R0160	
Collateralised securities	R0170	744,503
Collective Investments Undertakings	R0180	2,059,082
Derivatives	R0190	49,315
Deposits other than cash equivalents	R0200	1,112,307
Other investments	R0210	
Assets held for index-linked and unit-linked contracts	R0220	
Loans and mortgages	R0230	72,138
Loans on policies	R0240	
Loans and mortgages to individuals	R0250	2,619
Other loans and mortgages	R0260	69,519
Reinsurance recoverables from:	R0270	5,538,389
Non-life and health similar to non-life	R0280	6,133,089
Non-life excluding health	R0290	5,847,520
Health similar to non-life	R0300	285,568
Life and health similar to life, excluding health and index-linked and unit-linked	R0310	-594,700
Health similar to life	R0320	278,300
Life excluding health and index-linked and unit-linked	R0330	-873,000
Life index-linked and unit-linked	R0340	
Deposits to cedants	R0350	6,688,528
Insurance and intermediaries receivables	R0360	1,146,534
Reinsurance receivables	R0370	249,552
Receivables (trade, not insurance)	R0380	1,058,437
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	560,490
Any other assets, not elsewhere shown	R0420	85,206
<b>Total assets</b>	<b>R0500</b>	<b>57,863,715</b>

S.02.01.02: Balance sheet, page 2		Solvency II
<b>Liabilities</b>		<b>C0010</b>
Technical provisions – non-life	<b>R0510</b>	26,394,517
Technical provisions – non-life (excluding health)	<b>R0520</b>	24,701,710
Technical provisions calculated as a whole	<b>R0530</b>	
Best Estimate	<b>R0540</b>	24,241,748
Risk margin	<b>R0550</b>	459,962
Technical provisions - health (similar to non-life)	<b>R0560</b>	1,692,808
Technical provisions calculated as a whole	<b>R0570</b>	
Best Estimate	<b>R0580</b>	1,621,924
Risk margin	<b>R0590</b>	70,884
Technical provisions - life (excluding index-linked and unit-linked)	<b>R0600</b>	4,970,680
Technical provisions - health (similar to life)	<b>R0610</b>	1,721,593
Technical provisions calculated as a whole	<b>R0620</b>	
Best Estimate	<b>R0630</b>	1,346,924
Risk margin	<b>R0640</b>	374,669
Technical provisions – life (excluding health and index-linked and unit-linked)	<b>R0650</b>	3,249,087
Technical provisions calculated as a whole	<b>R0660</b>	
Best Estimate	<b>R0670</b>	2,022,132
Risk margin	<b>R0680</b>	1,226,955
Technical provisions – index-linked and unit-linked	<b>R0690</b>	324,991
Technical provisions calculated as a whole	<b>R0700</b>	
Best Estimate	<b>R0710</b>	320,058
Risk margin	<b>R0720</b>	4,933
Contingent liabilities	<b>R0740</b>	
Provisions other than technical provisions	<b>R0750</b>	107,122
Pension benefit obligations	<b>R0760</b>	152,490
Deposits from reinsurers	<b>R0770</b>	3,647,895
Deferred tax liabilities	<b>R0780</b>	2,792,199
Derivatives	<b>R0790</b>	55,916
Debts owed to credit institutions	<b>R0800</b>	
Financial liabilities other than debts owed to credit institutions	<b>R0810</b>	1,204,405
Insurance & intermediaries payables	<b>R0820</b>	718,630
Reinsurance payables	<b>R0830</b>	157,174
Payables (trade, not insurance)	<b>R0840</b>	53,400
Subordinated liabilities	<b>R0850</b>	3,036,826
Subordinated liabilities not in Basic Own Funds	<b>R0860</b>	
Subordinated liabilities in Basic Own Funds	<b>R0870</b>	3,036,826
Any other liabilities, not elsewhere shown	<b>R0880</b>	141,065
<b>Total liabilities</b>	<b>R0900</b>	<b>43,757,309</b>
<b>Excess of assets over liabilities</b>	<b>R1000</b>	<b>14,106,406</b>

S.05.01.02: Premiums, claims and expenses by line of business (“Cover”)

S.05.01.02: Cover, page 1

		Line of Business for: non-life insurance and reinsurance obligations (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
		C0010	C0020	C0030	C0040	C0050	C0060	C0070	C0080	C0090
<b>Premiums written</b>										
Gross - Direct Business	<b>R0110</b>									
Gross - Proportional reinsurance accepted	<b>R0120</b>	75,102	233,506	96,385	1,223,618	1,493,436	627,188	4,734,908	1,770,168	756,092
Gross - Non-proportional reinsurance accepted	<b>R0130</b>									
Reinsurers' share	<b>R0140</b>	14,987	14,252	60,707	453,547	733,098	360,382	2,318,725	506,390	296,023
Net	<b>R0200</b>	60,115	219,254	35,678	770,072	760,338	266,807	2,416,184	1,263,778	460,068
<b>Premiums earned</b>										
Gross - Direct Business	<b>R0210</b>									
Gross - Proportional reinsurance accepted	<b>R0220</b>	67,274	230,191	91,229	1,225,995	1,469,935	623,066	4,650,315	1,672,672	737,573
Gross - Non-proportional reinsurance accepted	<b>R0230</b>									
Reinsurers' share	<b>R0240</b>	16,843	17,417	60,000	454,724	727,938	357,035	2,360,081	472,747	287,204
Net	<b>R0300</b>	50,431	212,774	31,229	771,270	741,998	266,032	2,290,234	1,199,925	450,369
<b>Claims incurred</b>										
Gross - Direct Business	<b>R0310</b>									
Gross - Proportional reinsurance accepted	<b>R0320</b>	64,303	157,253	58,689	856,207	1,040,159	366,779	3,386,215	1,195,523	445,747
Gross - Non-proportional reinsurance accepted	<b>R0330</b>									
Reinsurers' share	<b>R0340</b>	5,692	11,436	40,424	321,296	515,067	210,914	1,615,085	354,850	215,152
Net	<b>R0400</b>	58,611	145,816	18,265	534,910	525,091	155,865	1,771,130	840,673	230,595

S.05.01.02: Cover, page 2

Line of Business for: non-life insurance and reinsurance obligations (direct business and accepted proportional reinsurance)										
		Medical expense insurance <b>C0010</b>	Income protection insurance <b>C0020</b>	Workers' compen- sation insurance <b>C0030</b>	Motor vehicle liability insurance <b>C0040</b>	Other motor insurance <b>C0050</b>	Marine, aviation and transport insurance <b>C0060</b>	Fire and other damage to property insurance <b>C0070</b>	General liability insurance <b>C0080</b>	Credit and suretyship insurance <b>C0090</b>
<b>Changes in other technical provisions</b>										
Gross - Direct Business	<b>R0410</b>									
Gross - Proportional reinsurance accepted	<b>R0420</b>		-98				3	-5	2	
Gross - Non-proportional reinsurance accepted	<b>R0430</b>									
Reinsurers' share	<b>R0440</b>						0	-1	0	
Net	<b>R0500</b>		-98				3	-4	2	
<b>Expenses incurred</b>	<b>R0550</b>	25,889	102,392	12,840	224,912	224,422	79,286	886,538	435,486	201,620
<b>Other expenses</b>	<b>R1200</b>									
<b>Total expenses</b>	<b>R1300</b>									

S.05.01.02: Cover, page 3

		Line of Business for: non-life insurance and reinsurance obligations (direct business and accepted proportional reinsurance)			Line of Business for: accepted non-proportional reinsurance				Total
		Legal expenses insurance C0100	Assistance C0110	Miscellaneous financial loss C0120	Health C0130	Casualty C0140	Marine, aviation, transport C0150	Property C0160	
<b>Premiums written</b>									
Gross - Direct Business	<b>R0110</b>								
Gross - Proportional reinsurance accepted	<b>R0120</b>	32,954	8,606	157,226					11,209,191
Gross - Non-proportional reinsurance accepted	<b>R0130</b>				173,080	1,397,117	270,510	2,451,490	4,292,198
Reinsurers' share	<b>R0140</b>	4,873	1,157	22,482	2,411	7,130	37,266	290,279	5,123,708
Net	<b>R0200</b>	28,081	7,450	134,744	170,670	1,389,987	233,245	2,161,211	10,377,681
<b>Premiums earned</b>									
Gross - Direct Business	<b>R0210</b>								
Gross - Proportional reinsurance accepted	<b>R0220</b>	28,815	3,289	151,364					10,951,719
Gross - Non-proportional reinsurance accepted	<b>R0230</b>				171,855	1,322,389	262,339	2,425,589	4,182,172
Reinsurers' share	<b>R0240</b>	4,279	364	21,997	2,411	7,151	37,580	293,155	5,120,927
Net	<b>R0300</b>	24,535	2,925	129,366	169,444	1,315,238	224,759	2,132,434	10,012,964

S.05.01.02: Cover, page 4

		Line of Business for: non-life insurance and reinsurance obligations (direct business and accepted proportional reinsurance)			Line of Business for: accepted non-proportional reinsurance				Total C0200
		Legal expenses insurance C0100	Assistance C0110	Miscellaneous financial loss C0120	Health C0130	Casualty C0140	Marine, aviation, transport C0150	Property C0160	
<b>Claims incurred</b>									
Gross - Direct Business	<b>R0310</b>								
Gross - Proportional reinsurance accepted	<b>R0320</b>	16,552	1,095	146,137					7,734,659
Gross - Non-proportional reinsurance accepted	<b>R0330</b>				124,746	1,190,552	160,145	1,486,401	2,961,844
Reinsurers' share	<b>R0340</b>	2,680	119	12,504	2,272	958	10,136	244,983	3,563,570
Net	<b>R0400</b>	13,872	976	133,633	122,474	1,189,595	150,009	1,241,418	7,132,933
<b>Changes in other technical provisions</b>									
Gross - Direct Business	<b>R0410</b>								
Gross - Proportional reinsurance accepted	<b>R0420</b>								-97
Gross - Non-proportional reinsurance accepted	<b>R0430</b>								
Reinsurers' share	<b>R0440</b>								0
Net	<b>R0500</b>								-98
<b>Expenses incurred</b>	<b>R0550</b>	7,730	1,701	50,378	38,576	346,958	50,837	339,701	3,029,266
<b>Other expenses</b>	<b>R1200</b>								
<b>Total expenses</b>	<b>R1300</b>								3,029,266

S.05.01.02: Cover, page 5

	Line of Business for: life insurance obligations						Life reinsurance obligations		Total
	Health insurance C0210	Insurance with profit participation C0220	Index-linked and unit-linked insurance C0230	Other life insurance C0240	Insurance obligations and relating to health insurance C0250	Annuities stemming from non-life insurance contracts and relating to health insurance obligations other than health insurance C0260	Health reinsurance C0270	Life reinsurance C0280	
<b>Premiums written</b>									
Gross	R1410						2,264,563	4,175,501	6,440,064
Reinsurers' share	R1420						611,922	1,065,843	1,677,765
Net	R1500						1,652,642	3,109,658	4,762,299
<b>Premiums earned</b>									
Gross	R1510						2,260,526	4,182,501	6,443,027
Reinsurers' share	R1520						609,135	1,078,519	1,687,653
Net	R1600						1,651,392	3,103,983	4,755,374
<b>Claims incurred</b>									
Gross	R1610						1,789,969	3,634,369	5,424,339
Reinsurers' share	R1620						425,632	784,847	1,210,478
Net	R1700						1,364,338	2,849,523	4,213,860
<b>Changes in other technical provisions</b>									
Gross	R1710						-133,494	10,010	-123,484
Reinsurers' share	R1720						-24,080	3,860	-20,220
Net	R1800						-109,414	6,149	-103,264
<b>Expenses incurred</b>	R1900						307,732	442,583	750,316
<b>Other expenses</b>	R2500								
<b>Total expenses</b>	R2600								750,316

S.05.02.01: Premiums, claims and expenses by country (“Country”)

S.05.02.01: Country, page 1

	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		AU	CN	FR	GB	US	
	C0080	C0090	C0100	C0110	C0120	C0130	C0140
<b>Premiums written</b>							
Gross - Direct Business	R0110						
Gross - Proportional reinsurance accepted	R0120	416,320	494,808	1,010,037	362,404	1,349,440	3,457,276
Gross - Non-proportional reinsurance accepted	R0130	9,190	86,702	58,842	177,542	419,461	2,153,177
Reinsurers' share	R0140	1,337,957	5,508	8,415	45	18,868	14,330
Net	R0200	-912,448	576,002	1,060,464	539,901	1,750,033	5,596,124
<b>Premiums earned</b>							
Gross - Direct Business	R0210						
Gross - Proportional reinsurance accepted	R0220	396,886	480,760	1,043,047	355,807	1,306,038	3,405,209
Gross - Non-proportional reinsurance accepted	R0230	11,222	80,228	58,436	167,556	415,385	2,117,453
Reinsurers' share	R0240	1,306,126	7,849	8,419	47	19,506	15,146
Net	R0300	-898,019	553,139	1,093,063	523,316	1,701,917	5,507,516
<b>Claims incurred</b>							
Gross - Direct Business	R0310						
Gross - Proportional reinsurance accepted	R0320	358,180	372,935	837,182	257,328	884,208	2,437,854
Gross - Non-proportional reinsurance accepted	R0330	37,173	24,249	46,707	80,341	336,570	1,762,843
Reinsurers' share	R0340	915,920	621	9,685	345	42,820	23,167
Net	R0400	-520,567	396,562	874,204	337,325	1,177,958	4,177,530
<b>Changes in other technical provisions</b>							
Gross - Direct Business	R0410						
Gross - Proportional reinsurance accepted	R0420	-97					
Gross - Non-proportional reinsurance accepted	R0430						
Reinsurers' share	R0440	0					
Net	R0500	-98					
<b>Expenses incurred</b>	R0550	-267,290	148,555	251,264	177,548	486,753	1,570,495
<b>Other expenses</b>	R1200						
<b>Total expenses</b>	R1300						2,367,326

S.05.02.01: Country, page 2

	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	
R1400		AU	BB	CN	FR	GB		
	C0220	C0230	C0240	C0250	C0260	C0270	C0280	
<b>Premiums written</b>								
Gross	R1410	6,212	736,870	227,808	1,085,468	957,671	1,478,986	4,493,015
Reinsurers' share	R1420	4,095		396,384	16,968	0		417,447
Net	R1500	2,117	736,870	-168,576	1,068,500	957,671	1,478,986	4,075,568
<b>Premiums earned</b>								
Gross	R1510	6,212	736,870	227,809	1,106,969	959,163	1,478,986	4,516,009
Reinsurers' share	R1520	4,095		396,384	16,968	0		417,447
Net	R1600	2,117	736,870	-168,576	1,090,001	959,163	1,478,986	4,098,562
<b>Claims incurred</b>								
Gross	R1610	5,836	543,082	59,751	848,220	701,422	1,537,543	3,695,853
Reinsurers' share	R1620	2,712		370,859	20,019	0		393,591
Net	R1700	3,123	543,082	-311,109	828,202	701,422	1,537,543	3,302,263
<b>Changes in other technical provisions</b>								
Gross	R1710		-33,496		-875	-124,970	131,346	-27,994
Reinsurers' share	R1720	51		6	21			78
Net	R1800	-51	-33,496	-6	-895	-124,970	131,346	-28,072
Expenses incurred	R1900	98,294	3,308	142,325	157,647	161,072	16,324	578,970
Other expenses	R2500							
Total expenses	R2600							578,970

S.12.01.02: Life and Health SLT Technical Provisions (“TP Life”)

TP Life, page 1

		Insurance with profit participation	Index-linked and unit-linked insurance		
		C0020	C0030	Contracts without options and guarantees	Contracts with options or guarantees
				C0040	C0050
<b>Technical provisions calculated as a whole</b>	<b>R0010</b>				
<b>Total Recoverables from reinsurance/SPV and Finite Re after the adjustment for expected losses due to counterparty default associated to TP calculated as a whole</b>	<b>R0020</b>				
<b>Technical provisions calculated as a sum of BE and RM</b>					
<b>Best Estimate</b>					
<b>Gross Best Estimate</b>	<b>R0030</b>				
Total Recoverables from reinsurance/SPV and Finite Re after the adjustment for expected losses due to counterparty default	<b>R0080</b>				
Best estimate minus recoverables from reinsurance/SPV and Finite Re - total	<b>R0090</b>				
<b>Risk Margin</b>	<b>R0100</b>				
<b>Amount of the transitional on Technical Provisions</b>					
Technical Provisions calculated as a whole	<b>R0110</b>				
Best estimate	<b>R0120</b>				
Risk margin	<b>R0130</b>				
<b>Technical provisions - total</b>	<b>R0200</b>				

	Other life insurance		
	C0060	Contracts without options and guarantees C0070	Contracts with options or guarantees C0080
<b>Technical provisions calculated as a whole</b>	<b>R0010</b>		
<b>Total Recoverables from reinsurance/SPV and Finite Re after the adjustment for expected losses due to counterparty default associated to TP calculated as a whole</b>	<b>R0020</b>		
<b>Technical provisions calculated as a sum of BE and RM</b>			
<b>Best Estimate</b>			
<b>Gross Best Estimate</b>	<b>R0030</b>		
Total Recoverables from reinsurance/SPV and Finite Re after the adjustment for expected losses due to counterparty default	<b>R0080</b>		
Best estimate minus recoverables from reinsurance/SPV and Finite Re - total	<b>R0090</b>		
<b>Risk Margin</b>	<b>R0100</b>		
<b>Amount of the transitional on Technical Provisions</b>			
Technical Provisions calculated as a whole	<b>R0110</b>		
Best estimate	<b>R0120</b>		
Risk margin	<b>R0130</b>		
<b>Technical provisions - total</b>	<b>R0200</b>		

		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)
		C0090	C0100	C0150
<b>Technical provisions calculated as a whole</b>	<b>R0010</b>			
<b>Total Recoverables from reinsurance/SPV and Finite Re after the adjustment for expected losses due to counterparty default associated to TP calculated as a whole</b>	<b>R0020</b>			
<b>Technical provisions calculated as a sum of BE and RM</b>				
<b>Best Estimate</b>				
<b>Gross Best Estimate</b>	<b>R0030</b>		2,342,190	2,342,190
Total Recoverables from reinsurance/SPV and Finite Re after the adjustment for expected losses due to counterparty default	<b>R0080</b>		-873,000	-873,000
Best estimate minus recoverables from reinsurance/SPV and Finite Re - total	<b>R0090</b>		3,215,190	3,215,190
<b>Risk Margin</b>	<b>R0100</b>		1,231,888	1,231,888
<b>Amount of the transitional on Technical Provisions</b>				
Technical Provisions calculated as a whole	<b>R0110</b>			
Best estimate	<b>R0120</b>			
Risk margin	<b>R0130</b>			
<b>Technical provisions - total</b>	<b>R0200</b>		3,574,078	3,574,078

TP Life, page 4

	Health insurance (direct business)		
	C0160	Contracts without options and guarantees C0170	Contracts with options or guarantees C0180
<b>Technical provisions calculated as a whole</b>	<b>R0010</b>		
<b>Total Recoverables from reinsurance/SPV and Finite Re after the adjustment for expected losses due to counterparty default associated to TP calculated as a whole</b>	<b>R0020</b>		
<b>Technical provisions calculated as a sum of BE and RM</b>			
<b>Best Estimate</b>			
<b>Gross Best Estimate</b>	<b>R0030</b>		
Total Recoverables from reinsurance/SPV and Finite Re after the adjustment for expected losses due to counterparty default	<b>R0080</b>		
Best estimate minus recoverables from reinsurance/SPV and Finite Re - total	<b>R0090</b>		
<b>Risk Margin</b>	<b>R0100</b>		
<b>Amount of the transitional on Technical Provisions</b>			
Technical Provisions calculated as a whole	<b>R0110</b>		
Best estimate	<b>R0120</b>		
Risk margin	<b>R0130</b>		
<b>Technical provisions - total</b>	<b>R0200</b>		

	Annuities stemming from non-life insurance contracts and relating to health insurance obligations	Health reinsurance (reinsurance accepted)	Total (Health similar to life insurance)
	C0190	C0200	C0210
<b>Technical provisions calculated as a whole</b>	<b>R0010</b>		
<b>Total Recoverables from reinsurance/SPV and Finite Re after the adjustment for expected losses due to counterparty default associated to TP calculated as a whole</b>	<b>R0020</b>		
<b>Technical provisions calculated as a sum of BE and RM</b>			
<b>Best Estimate</b>			
<b>Gross Best Estimate</b>	<b>R0030</b>		
Total Recoverables from reinsurance/SPV and Finite Re after the adjustment for expected losses due to counterparty default	<b>R0080</b>	1,346,924	<b>1,346,924</b>
Best estimate minus recoverables from reinsurance/SPV and Finite Re - total	<b>R0090</b>	278,300	<b>278,300</b>
<b>Risk Margin</b>	<b>R0100</b>	1,068,624	<b>1,068,624</b>
<b>Amount of the transitional on Technical Provisions</b>		374,669	<b>374,669</b>
Technical Provisions calculated as a whole	<b>R0110</b>		
Best estimate	<b>R0120</b>		
Risk margin	<b>R0130</b>		
<b>Technical provisions - total</b>	<b>R0200</b>	<b>1,721,593</b>	<b>1,721,593</b>

S.17.01.02: Non-Life Technical Provisions

S.17.01.02: TP Non-Life, page

1

		Direct business and accepted proportional reinsurance								
		Medical expense insurance	Income protection insurance	Workers' compen- sation 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>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>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 calculated as a whole	<b>R0050</b>									
<b>Technical provisions calculated as a sum of BE and RM</b>										
<b>Best estimate</b>										
<b>Premium provisions</b>										
Gross	<b>R0060</b>	18,827	37,715	7,850	166,717	152,014	191,160	1,172,740	593,652	315,439
Total recoverable from reinsurance/SPV and Finite Re after the adjustment for expected losses due to counterparty default	<b>R0140</b>	6,573	3,717	4,153	14,788	60,672	30,909	81,255	135,518	72,605
Net Best Estimate of Premium Provisions	<b>R0150</b>	12,254	33,998	3,696	151,929	91,342	160,251	1,091,485	458,134	242,834

S.17.01.02: TP Non-Life, page 2

Direct business and accepted proportional reinsurance										
		Medical expense insurance <b>C0020</b>	Income protection insurance <b>C0030</b>	Workers' compen- sation insurance <b>C0040</b>	Motor vehicle liability insurance <b>C0050</b>	Other motor insurance <b>C0060</b>	Marine, aviation and transport insurance <b>C0070</b>	Fire and other damage to property insurance <b>C0080</b>	General liability insurance <b>C0090</b>	Credit and suretyship insurance <b>C0100</b>
<b>Claims provisions</b>										
Gross	<b>R0160</b>	28,822	224,464	176,607	1,155,780	895,826	743,389	3,785,028	2,972,425	1,146,576
Total recoverable from reinsurance/SPV and Finite Re after the adjustment for expected losses due to counterparty default	<b>R0240</b>	13,275	27,684	224,686	761,030	540,334	437,663	1,438,659	1,256,613	432,148
Net Best Estimate of Claims Provisions	<b>R0250</b>	15,548	196,780	-48,079	394,750	355,491	305,726	2,346,369	1,715,812	714,428
<b>Total Best estimate - gross</b>	<b>R0260</b>	47,649	262,179	184,457	1,322,497	1,047,839	934,549	4,957,768	3,566,077	1,462,016
<b>Total Best estimate - net</b>	<b>R0270</b>	27,802	230,779	-44,383	546,679	446,833	465,977	3,437,854	2,173,946	957,262
<b>Risk margin</b>	<b>R0280</b>	960	7,377	376	14,018	12,556	11,287	65,101	58,844	29,910
<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>									

S.17.01.02: TP Non-Life, page 3

Direct business and accepted proportional reinsurance										
		Medical expense insurance <b>C0020</b>	Income protection insurance <b>C0030</b>	Workers' compen- sation insurance <b>C0040</b>	Motor vehicle liability insurance <b>C0050</b>	Other motor insurance <b>C0060</b>	Marine, aviation and transport insurance <b>C0070</b>	Fire and other damage to property insurance <b>C0080</b>	General liability insurance <b>C0090</b>	Credit and suretyship insurance <b>C0100</b>
<b>Technical provisions - total</b>										
Technical provisions - total	<b>R0320</b>	48,609	269,556	184,833	1,336,515	1,060,396	945,836	5,022,869	3,624,921	1,491,925
Recoverable from reinsurance contract/SPV and Finite Re after the adjustment for expected losses due to counterparty default - total	<b>R0330</b>	19,847	31,400	228,840	775,818	601,006	468,573	1,519,914	1,392,131	504,753
Technical provisions minus recoverables from reinsurance/SPV and Finite Re - total	<b>R0340</b>	28,761	238,155	-44,007	560,697	459,389	477,263	3,502,955	2,232,790	987,172

QRS.17.01.02: TP Non-Life, page 4

		Direct business and accepted proportional reinsurance			Accepted non-proportional reinsurance			Total Non-Life obligation	
		Legal expenses insurance C0110	Assistance C0120	Miscellaneous financial loss C0130	Non-proportional health reinsurance C0140	Non-proportional casualty reinsurance C0150	Non-proportional marine, aviation and transport reinsurance C0160		Non-proportional property reinsurance C0170
<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>									
<b>Premium provisions</b>									
Gross	<b>R0060</b>	21,211	-18,377	52,046	37,201	577,875	45,115	292,610	<b>3,663,794</b>
Total recoverable from reinsurance/SPV and Finite Re after the adjustment for expected losses due to counterparty default	<b>R0140</b>	1,552	12	3,964	1	93	-737	8,483	<b>423,558</b>
Net Best Estimate of Premium Provisions	<b>R0150</b>	19,659	-18,389	48,082	37,200	577,782	45,851	284,127	<b>3,240,237</b>

S.17.01.02: TP Non-Life, page 5

		Direct business and accepted proportional reinsurance			Accepted non-proportional reinsurance				Total Non-Life obligation
		Legal expenses insurance C0110	Assistance C0120	Miscellaneous financial loss C0130	Non-proportional health reinsurance C0140	Non-proportional casualty reinsurance C0150	Non-proportional marine, aviation and transport reinsurance C0160	Non-proportional property reinsurance C0170	
<b>Claims provisions</b>									
Gross	<b>R0160</b>	58,013	-9,844	223,990	1,090,438	6,107,001	695,836	2,905,526	<b>22,199,878</b>
Total recoverable from reinsurance/SPV and Finite Re after the adjustment for expected losses due to counterparty default	<b>R0240</b>	12,019	116	62,841	5,480	23,201	117,395	356,385	<b>5,709,531</b>
Net Best Estimate of Claims Provisions	<b>R0250</b>	45,994	-9,960	161,149	1,084,958	6,083,799	578,441	2,549,141	<b>16,490,347</b>
<b>Total Best Estimate - gross</b>	<b>R0260</b>	79,224	-28,222	276,037	1,127,639	6,684,875	740,951	3,198,136	<b>25,863,672</b>
<b>Total Best Estimate - net</b>	<b>R0270</b>	65,653	-28,350	209,231	1,122,158	6,661,581	624,292	2,833,268	<b>19,730,583</b>
<b>Risk margin</b>	<b>R0280</b>	1,288	30	3,889	62,172	197,988	16,822	48,230	<b>530,845</b>
<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>	80,512	-28,192	279,926	1,189,811	6,882,863	757,772	3,246,366	<b>26,394,517</b>
Recoverable from reinsurance contract/SPV and Finite Re after the adjustment for expected losses due to counterparty default - total	<b>R0330</b>	13,571	128	66,805	5,481	23,295	116,659	364,868	<b>6,133,089</b>
Technical provisions minus recoverables from reinsurance/SPV and Finite Re - total	<b>R0340</b>	66,941	-28,320	213,121	1,184,330	6,859,569	641,114	2,881,498	<b>20,261,428</b>

S.19.01.21: Non-life insurance claims

Accident year / Underwriting year **Z0020** 1/2

**Gross Claims Paid (non-cumulative)**

(absolute amount)

S.19.01.21: page 1		Development year										
Year		0	1	2	3	4	5	6	7	8	9	10&+
		C0010	C0020	C0030	C0040	C0050	C0060	C0070	C0080	C0090	C0100	C0110
Prior	<b>R0100</b>											24,646,232
N-9	<b>R0160</b>	915,093	1,152,686	635,351	212,036	148,462	183,867	142,300	148,308	81,757	39,465	
N-8	<b>R0170</b>	824,892	1,084,610	551,222	241,604	176,127	154,010	106,277	73,858	45,872		
N-7	<b>R0180</b>	778,513	1,162,350	534,388	240,962	186,962	266,515	149,717	72,101			
N-6	<b>R0190</b>	1,108,496	1,141,240	596,839	300,266	186,081	174,982	112,123				
N-5	<b>R0200</b>	1,164,858	1,279,290	705,124	314,447	259,548	164,714					
N-4	<b>R0210</b>	1,341,221	1,898,466	693,078	566,603	347,741						
N-3	<b>R0220</b>	1,682,500	2,284,773	1,123,857	446,663							
N-2	<b>R0230</b>	2,246,907	2,794,034	989,322								
N-1	<b>R0240</b>	2,288,289	2,601,937									
N	<b>R0250</b>	2,643,969										

S.19.01.21: page 1

		In current year	Sum of years (cumulative)
		C0170	C0180
Prior	<b>R0100</b>	24,646,232	24,646,232
N-9	<b>R0160</b>	39,465	3,659,325
N-8	<b>R0170</b>	45,872	3,258,471
N-7	<b>R0180</b>	72,101	3,391,507
N-6	<b>R0190</b>	112,123	3,620,026
N-5	<b>R0200</b>	164,714	3,887,982
N-4	<b>R0210</b>	347,741	4,847,110
N-3	<b>R0220</b>	446,663	5,537,793
N-2	<b>R0230</b>	989,322	6,030,264
N-1	<b>R0240</b>	2,601,937	4,890,226
N	<b>R0250</b>	2,643,969	2,643,969
<b>Total</b>	<b>R0260</b>	<b>32,110,140</b>	<b>66,412,905</b>

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

S.19.01.21: page 2

		Development year										
Year		0	1	2	3	4	5	6	7	8	9	10&+
		C0200	C0210	C0220	C0230	C0240	C0250	C0260	C0270	C0280	C0290	C0300
Prior	<b>R0100</b>											15,247,153
N-9	<b>R0160</b>					253,761	1,362,907	1,090,571	938,448	744,278	654,934	
N-8	<b>R0170</b>				283,731	1,496,462	1,193,199	1,008,410	765,062	653,359		
N-7	<b>R0180</b>			308,969	1,860,739	1,411,435	1,176,732	887,475	721,649			
N-6	<b>R0190</b>		319,659	2,348,423	1,737,462	1,577,386	1,221,510	1,026,270				
N-5	<b>R0200</b>	223,040	3,053,209	2,175,479	1,990,194	1,543,141	1,368,327					
N-4	<b>R0210</b>	2,295,892	3,218,570	2,995,892	2,267,350	1,902,345						
N-3	<b>R0220</b>	3,112,943	4,331,948	3,309,370	2,685,548							
N-2	<b>R0230</b>	1,931,143	5,061,023	4,059,698								
N-1	<b>R0240</b>	2,281,691	6,024,827									
N	<b>R0250</b>	1,593,651										

S.19.01.21: page 2

		Year end (dis- counted data)
		C0360
Prior	<b>R0100</b>	2,612,335
N-9	<b>R0160</b>	617,153
N-8	<b>R0170</b>	614,037
N-7	<b>R0180</b>	679,124
N-6	<b>R0190</b>	968,147
N-5	<b>R0200</b>	1,285,035
N-4	<b>R0210</b>	1,800,724
N-3	<b>R0220</b>	2,549,642
N-2	<b>R0230</b>	3,866,366
N-1	<b>R0240</b>	5,778,414
N	<b>R0250</b>	1,439,829
<b>Total</b>	<b>R0260</b>	<b>22,210,804</b>

S.22.01.21: Impact of long term guarantees measures and transitionals

S.22.01.21: Impact of long term guarantees measures and transitionals

		Amount with Long Term Guarantee measures and transitionals	Impact of transitional on technical provisions	Impact of transitional on interest rate	Impact of volatility adjustment set to zero	Impact of matching adjustment set to zero
		C0010	C0030	C0050	C0070	C0090
Technical provisions	R0010	31,690,188			202,787	
Basic own funds	R0020	16,449,798			-176,052	
Eligible own funds to meet Solvency Capital Requirement	R0050	16,449,798			-176,052	
<b>Solvency Capital Requirement</b>	<b>R0090</b>	<b>6,634,037</b>			<b>214,169</b>	
Eligible own funds to meet Minimum Capital Requirement	R0100	14,478,853			-156,994	
<b>Minimum Capital Requirement</b>	<b>R0110</b>	<b>2,985,317</b>			<b>96,376</b>	

S.23.01.01: Own funds

S.23.01.01: Own funds, page 1

		Total	Tier 1 - unrestricted	Tier 1 - restricted	Tier 2	Tier 3
		C0010	C0020	C0030	C0040	C0050
<b>Basic own funds before deduction for participations in other financial sector as foreseen in article 68 of Delegated Regulation 2015/35</b>						
Ordinary share capital (gross of own shares)	R0010	120,597	120,597			
Share premium account related to ordinary share capital	R0030	880,608	880,608			
Initial funds, members' contributions or the equivalent basic own - fund item for mutual and mutual-type undertakings	R0040					
Subordinated mutual member accounts	R0050					
Surplus funds	R0070					
Preference shares	R0090					
Share premium account related to preference shares	R0110					
Reconciliation reserve	R0130	12,347,359	12,347,359			
Subordinated liabilities	R0140	3,036,826		533,225	2,503,601	
An amount equal to the value of net deferred tax assets	R0160	64,408				64,408
Other own fund items approved by the supervisory authority as basic own funds not specified above	R0180					
<b>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</b>						
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	R0220					
<b>Deductions</b>						
Deductions for participations in financial and credit institutions	R0230					
<b>Total basic own funds after deductions</b>	<b>R0290</b>	<b>16,449,798</b>	<b>13,348,564</b>	<b>533,225</b>	<b>2,503,601</b>	<b>64,408</b>

S.23.01.01: Own funds, page 2

		Total	Tier 1 - unrestricted	Tier 1 - restricted	Tier 2	Tier 3
		C0010	C0020	C0030	C0040	C0050
<b>Ancillary own funds</b>						
Unpaid and uncalled ordinary share capital callable on demand	R0300					
Unpaid and uncalled initial funds, members' contributions or the equivalent basic own fund item for mutual and mutual - type undertakings, callable on demand	R0310					
Unpaid and uncalled preference shares callable on demand	R0320					
A legally binding commitment to subscribe and pay for subordinated liabilities on demand	R0330					
Letters of credit and guarantees under Article 96(2) of the Directive 2009/138/EC	R0340					
Letters of credit and guarantees other than under Article 96(2) of the Directive 2009/138/EC	R0350					
Supplementary members calls under first subparagraph of Article 96(3) of the Directive 2009/138/EC	R0360					
Supplementary members calls - other than under first subparagraph of Article 96(3) of the Directive 2009/138/EC	R0370					
Other ancillary own funds	R0390					
<b>Total ancillary own funds</b>	<b>R0400</b>					
<b>Available and eligible own funds</b>						
Total available own funds to meet the SCR	R0500	16,449,798	13,348,564	533,225	2,503,601	64,408
Total available own funds to meet the MCR	R0510	16,385,390	13,348,564	533,225	2,503,601	
Total eligible own funds to meet the SCR	R0540	16,449,798	13,348,564	533,225	2,503,601	64,408
Total eligible own funds to meet the MCR	R0550	14,478,853	13,348,564	533,225	597,063	
<b>SCR</b>	<b>R0580</b>	<b>6,634,037</b>				
<b>MCR</b>	<b>R0600</b>	<b>2,985,317</b>				
<b>Ratio of Eligible own funds to SCR</b>	<b>R0620</b>	<b>2.4796</b>				
<b>Ratio of Eligible own funds to MCR</b>	<b>R0640</b>	<b>4.8500</b>				

S.23.01.01: Own funds, page 3 / Reconciliation reserve

		<b>C0060</b>
<b>Reconciliation reserve</b>		
Excess of assets over liabilities	<b>R0700</b>	14,106,406
Own shares (held directly and indirectly)	<b>R0710</b>	
Foreseeable dividends, distributions and charges	<b>R0720</b>	693,434
Other basic own fund items	<b>R0730</b>	1,065,613
Adjustment for restricted own fund items in respect of matching adjustment portfolios and ring fenced funds	<b>R0740</b>	
<b>Reconciliation reserve</b>	<b>R0760</b>	<b>12,347,359</b>
<b>Expected profits</b>		
Expected profits included in future premiums (EPIFP) - Life business	<b>R0770</b>	3,854,339
Expected profits included in future premiums (EPIFP) - Non-life business	<b>R0780</b>	
<b>Total Expected profits included in future premiums (EPIFP)</b>	<b>R0790</b>	<b>3,854,339</b>

## S.25.03.21: Solvency Capital Requirement – for undertakings on Full Internal Model

Unique number of component	Components description	Calculation of the Solvency Capital Requirement
<b>C0010</b>	<b>C0020</b>	<b>C0030</b>
101	Market risk according to IM	4,612,492
102	Counterparty default risk according to IM	462,029
103	Life underwriting risk according to IM	3,324,426
104	Non-life underwriting risk according to IM	5,251,239
105	Operational risk according to IM	610,163
107	LAC TP according to IM	
108	LAC DT according to IM	-2,505,256

Calculation of Solvency Capital Requirement		C0100
Total undiversified components	<b>R0110</b>	11,755,092
Diversification	<b>R0060</b>	-5,121,055
Capital requirement for business operated in accordance with Art. 4 of Directive 2003/41/EC (transitional)	<b>R0160</b>	
<b>Solvency capital requirement excluding capital add-on</b>	<b>R0200</b>	<b>6,634,037</b>
Capital add-ons already set	<b>R0210</b>	
<b>Solvency capital requirement</b>	<b>R0220</b>	<b>6,634,037</b>
<b>Other information on SCR</b>		
Amount/estimate of the overall loss-absorbing capacity of technical provisions	<b>R0300</b>	
Amount/estimate of the overall loss-absorbing capacity of deferred taxes	<b>R0310</b>	-2,505,256
Total amount of Notional Solvency Capital Requirements for remaining part	<b>R0410</b>	
Total amount of Notional Solvency Capital Requirements for ring fenced funds	<b>R0420</b>	
Total amount of Notional Solvency Capital Requirement for matching adjustment portfolios	<b>R0430</b>	
Diversification effects due to RFF nSCR aggregation for article 304	<b>R0440</b>	

Approach to tax rate		Yes/No
		<b>C0109</b>
Approach based on average tax rate	<b>R0590</b>	No

Calculation of loss absorbing capacity of deferred taxes		LAC DT
		<b>C0130</b>
Amount/estimate of LAC DT	<b>R0640</b>	-2,505,256
Amount/estimate of LAC DT justified by reversion of deferred tax liabilities	<b>R0650</b>	-2,422,664
Amount/estimate of LAC DT justified by reference to probable future taxable economic profit	<b>R0660</b>	-82,592
Amount/estimate of LAC DT justified by carry back, current year	<b>R0670</b>	
Amount/estimate of LAC DT justified by carry back, future years	<b>R0680</b>	
Amount/estimate of Maximum LAC DT	<b>R0690</b>	-2,571,134

**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	<b>R0010</b>	<b>C0010</b> 4,260,744
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S.28.01.01: MCR, page 1

		Net (of reinsurance / SPV) best estimate and TP calculated as a whole	Net (of reinsurance) written premiums in the last 12 months
		<b>C0020</b>	<b>C0030</b>
Medical expense insurance and proportional reinsurance	<b>R0020</b>	27,802	60,198
Income protection insurance and proportional reinsurance	<b>R0030</b>	230,779	221,551
Workers' compensation insurance and proportional reinsurance	<b>R0040</b>		35,515
Motor vehicle liability insurance and proportional reinsurance	<b>R0050</b>	546,679	762,150
Other motor insurance and proportional reinsurance	<b>R0060</b>	446,833	754,960
Marine, aviation and transport insurance and proportional reinsurance	<b>R0070</b>	465,977	264,364
Fire and other damage to property insurance and proportional reinsurance	<b>R0080</b>	3,437,854	2,409,805
General liability insurance and proportional reinsurance	<b>R0090</b>	2,173,946	1,262,615
Credit and suretyship insurance and proportional reinsurance	<b>R0100</b>	957,262	458,641
Legal expenses insurance and proportional reinsurance	<b>R0110</b>	65,653	28,129
Assistance and proportional reinsurance	<b>R0120</b>		7,451
Miscellaneous financial loss insurance and proportional reinsurance	<b>R0130</b>	209,231	134,616
Non-proportional health reinsurance	<b>R0140</b>	1,122,158	175,134
Non-proportional casualty reinsurance	<b>R0150</b>	6,661,581	1,401,053
Non-proportional marine, aviation and transport reinsurance	<b>R0160</b>	624,292	237,337
Non-proportional property reinsurance	<b>R0170</b>	2,833,268	2,218,075

Linear formula component for life insurance and reinsurance obligations

MCR <sub>L</sub> Result	<b>R0200</b>	<b>C0040</b> 1,304,881
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Total capital at risk for all life (re)insurance obligations

S.28.01.01: MCR, page 2

		Net (of reinsurance / SPV) best estimate and TP calculated as a whole <b>C0050</b>	Net (of reinsurance / SPV) total capital at risk <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>	320,058	
Other life (re)insurance and health (re)insurance obligations	<b>R0240</b>	3,963,756	
Total capital at risk for all life (re)insurance obligations	<b>R0250</b>		1,742,002,337

Overall MCR calculation

		<b>C0070</b>
Linear MCR	<b>R0300</b>	5,565,624
SCR	<b>R0310</b>	6,634,037
MCR cap	<b>R0320</b>	2,985,317
MCR floor	<b>R0330</b>	1,658,509
Combined MCR	<b>R0340</b>	2,985,317
Absolute floor of the MCR	<b>R0350</b>	3,600
<b>Minimum Capital Requirement</b>	<b>R0400</b>	2,985,317

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