somewhat different

Hannover Rück SE 2023

Solvency and Financial Condition Report

hannover re®

Contents

Executive Summary

Key figures

in TEUR	2023	2022
Solvency II Balance Sheet		
Assets	70,984,214	63,329,353
Technical Provisions	39,286,722	33,931,642
Other Liabilities	15,357,773	14,911,694
Excess of Assets over Liabilities	16,339,718	14,486,016
Eligible Own Funds		
Tier 1 Basic Own Funds (unrestricted)	15,428,355	13,723,099
Tier 1 Basic Own Funds (restricted)	496,435	486,034
Tier 2 Basic Own Funds	2,550,139	2,888,442
Tier 3 Basic Own Funds	43,064	39,335
Eligible Own Funds (SCR)	18,517,993	17,136,910
Capital requirements		
Solvency Capital Requirement	6,784,845	6,699,618
Minimum Capital Requirement	3,053,180	3,014,828
Coverage Ratio		
Ratio of Eligible Own Funds to SCR (Solvency Ratio)	273%	256%
Ratio of Eligible Own Funds to MCR	542%	491%

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 2023 and in the financial year 2023. 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.

Hannover Re has also published an SFCR for the Hannover Re Group on a full consolidation basis.

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 business groups. 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 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 gross premium in 2023 in total business fell by 1.1% to TEUR 27,321,291 (previous year: TEUR 27,621,123). The level of retained premium decreased to 64.3% (previous year: 65.4%). Net premium earned retreated by 2.9% to TEUR 17,406,565 (previous year: TEUR 17,923,625).

With technical income of TEUR 17,566,343 (previous year: TEUR 18,127,967) and technical expenses of TEUR 17,903,212 (previous year: TEUR 18,096,145), Hannover Re booked a total technical result in accordance with the German Commercial Code of TEUR -336,869 in the 2023 financial year after TEUR 31,822 in the previous year.

Measured in terms of premium volume and total technical result in the 2023 financial year, the following lines of business are most important: life reinsurance (TEUR 217,089), fire and other property insurance (TEUR 151,715) and conversely general liability insurance (TEUR -429,730), health reinsurance (TEUR -174,406) and motor vehicle liability insurance (TEUR -120.043).

The technical result in 2023 is driven by substantial increase in reserve prudency, mainly in longtail lines. The net major losses of TEUR 936,544 are within budget. The significant major losses in 2023 were thunderstorms and hail in Italy, earthquake in Turkey and hurricane in Mexico.

Our ordinary investment income, including interest on deposits, remained at the previous year's level. Gains from the disposal of investments mainly resulted from the sale of fixed-interest securities in the course of portfolio management. The exceptionally high result in the previous year was primarily due to the contribution of unlisted equity investments to a joint venture. Impairments on investments were mainly attributable to bearer bonds held as fixed assets. Overall, we therefore achieved a lower investment result than in the previous year.

The portfolio of our investments under own management increased in the reporting year, as did our portfolio of fixed-interest securities. The net unrealised losses contained therein decreased noticeably at the end of the year, primarily because of the decline in EUR interest rates in the medium and long-term maturity range and lower credit risk premiums on corporate bonds. Overall, we kept our asset allocation largely stable in the reporting year. Only in the emerging markets we slightly expanded our portfolio, while in China, we reduced it. In Latin America and the Asia-Pacific region, we were able to take advantage of market opportunities to further strengthen our property portfolio. There were only minor changes in other asset classes as part of regular portfolio management.

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.

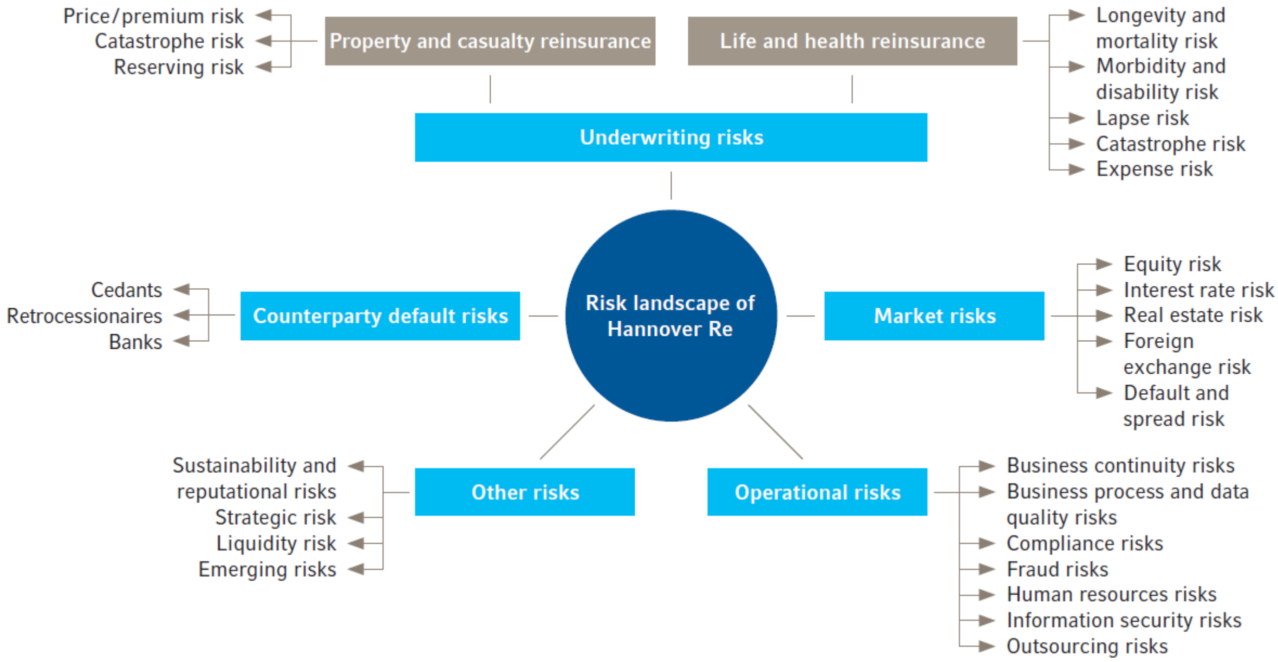
The Executive Board has established a committee, which supports the assessment of the system of governance. Based on the assessment conducted by the committee, the Executive Board has reached the conclusion that the system of governance of Hannover Rück is appropriate considering the scope and complexity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

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 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. 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.

The solvency capital requirements (SCR) as of 31 December 2023 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	2023	2022
Underwriting risk - Property & Casualty	5,799,022	5,445,473
Underwriting risk - Life & Health	2,735,684	2,507,694
Market risk	4,999,730	4,940,625
Counterparty default risk	428,956	426,917
Operational risk	640,138	607,039
Diversification	**-5,345,260**	**-4,739,894**
Total risk (pre-tax)	**9,258,271**	**9,187,854**
Deferred tax	2,473,426	2,488,237
Total risk (post-tax)	**6,784,845**	**6,699,618**

The required capital is calculated based on the approved internal model. Currently, 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.

Hannover Rück applies the volatility adjustment. The volatility adjustment partially mitigates the effect of temporary value fluctuations due to credit spread movements on the bond market. This effect is also captured in the calculation of the Solvency Capital Requirement i.e. Hannover Re applies the dynamic volatility adjustment in its internal model.

Overall, the required capital at the confidence level of 99.5% slightly increased in the course of the year. This is primarily a consequence of business growth, which has led to an increase in the underwriting risks of property and casualty reinsurance and life and health reinsurance. The decline in interest rates and the resulting increase in the market value of fixed-income securities contribute to the increase in risk. On the other hand, the stronger euro and improved diversification lead to a decline in the SCR.

The risk monitoring, control mechanisms and developments in 2023 are presented in Section C.

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.

In Section D.2 the valuation principles for technical provisions are described. 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 calculation considers the volatility adjustment. Further measures for long term debts or transition measures are not applied.

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 was to fall below this threshold value Hannover Rück will adopt capital measures aimed at either strengthening the company's equity or reducing the risk, or both. However, a fall below threshold would most of the time be avoided by proactive measures and thus has never occurred since introduction of the threshold.

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 2023, 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 18,517,993 as at 31 December 2023.The increase is due to an economically successful course of the business year.

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 more than 80 % of Tier 1 capital. The structure of own funds allows for full eligibility 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.

In addition, the potential outcomes of the ongoing Solvency II review are monitored.

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), based in Hannover, Germany. Our business model is focused on reinsurance, which we transact worldwide in the Property & Casualty and Life & Health reinsurance business groups.

In this way, we strive for the broadest possible diversification and hence an efficient risk balance. This is achieved by accepting reinsurance risks with mostly little or no correlation across all lines and regions of Property & Casualty and Life & Health reinsurance. In conjunction with efficient capital management, this is the key to our comparatively low cost of capital.

Guided by a clearly defined risk appetite, the Executive Board steers the company with the support of risk management with a view to acting on business opportunities while securing our financial strength on a lasting basis.

Our business operations are dedicated to our goal of being the preferred partner for our clients. It is for this reason that our clients and their concerns form the focus of our activities.

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

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. Particularly in the current market environment, we actively manage our portfolio to ensure long-term profitability on the underwriting side.

In the Life & Health reinsurance business group, we are recognised – as customer surveys confirm – as one of the top players for traditional covers and a leading provider of structured solutions. We achieve this standing by, among other things, anticipating the future needs of our customers through the early identification of trends.

With a view to assuring Hannover Re's lasting stability, our strategy is grounded on a solid foundation: sustainability and integrated corporate governance. Sustainability reflects our aspiration to economic, social and environmental accountability. Through integrated corporate governance we foster the trust placed in Hannover Re, especially by regulators and investors but also by our clients and employees.

Through its global presence and activities, Hannover Re is directly or via affiliates affected by various foreign economic and regulatory developments.

A.1.2 Income and key transactions

In this and the following sections of chapter 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.

Please note that Hannover Re publishes IFRS and Solvency II annual results on a fully consolidated group basis.

The gross premium in 2023 in total business fell by 1.1% to TEUR 27,321,291 compared to the previous year. The level of retained premium decreased to 64.3%. Net premium earned retreated by 2.9% to TEUR 17,406,565.

The underwriting result (before changes in the equalisation reserve) came in at TEUR -336,869 reflecting increased retrocession costs and commissions as well as the strengthening of the resilience of our loss reserves. This is also evident in the combined ratio, which stood at 102.0% An amount of TEUR 594,854 was withdrawn from the equalisation reserve and similar provisions in the year under review.

Numerous large losses were again recorded in the 2023 financial year. Particularly notable were major losses from the thunderstorms and hail in Italy, the earthquake in Turkey as well as the hurricane Otis in Mexico. The total net expenditure on major losses for Hannover Rück SE amounted to TEUR 936,544.

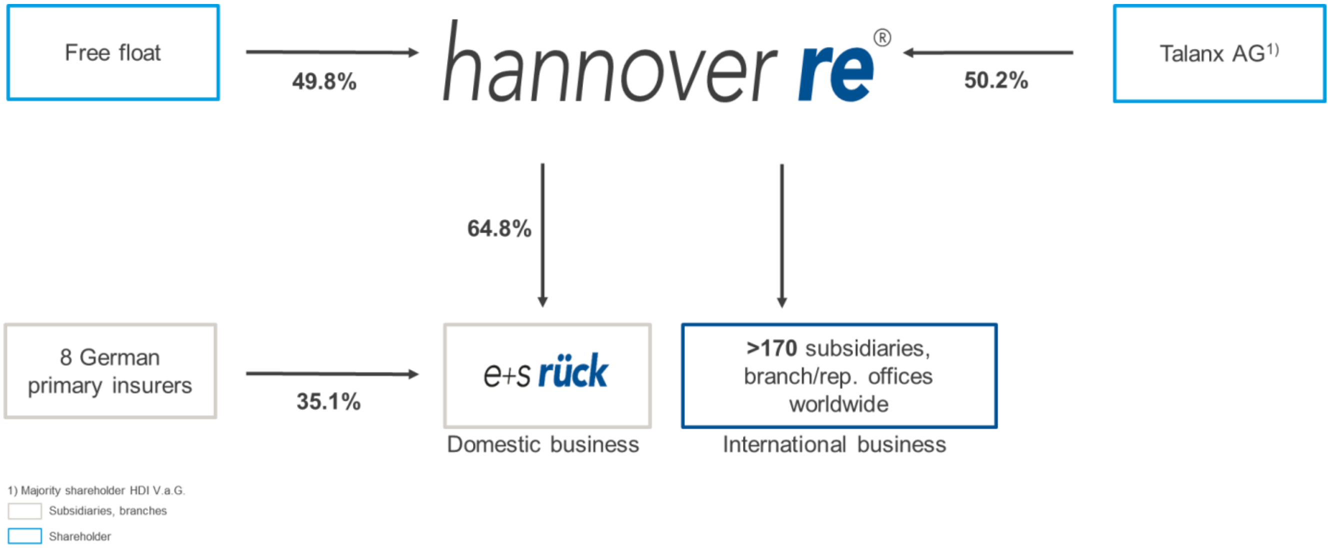
Ordinary income from our investments, including interest on deposits, amounted to TEUR 1,581,264. Gains from the disposal of investments were realised in the net amount of TEUR 8,399, principally due to sales of fixed-income securities as part of portfolio maintenance. The previous year's exceptionally high figure derived from the contribution of private equity participations to a joint venture. Write-downs of TEUR 41,681 were taken on investments, for the most part on bearer debt securities held as fixed assets. Overall, net investment income decreased to TEUR 1,453,079.

The profit on ordinary activities improved by 31.8% to TEUR 1,082,247. The year under review closed as forecast with a profit for the year that amounted to TEUR 892,261.

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 76.7% – 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)

Graurheindorfer Straße 108, 53117 Bonn, Germany
alternative: Postbox 1253, 53002 Bonn, Germany

Contact details of Federal Financial Supervisory Authority (BaFin)

Phone: +49 22 8 / 41 08 – 0, Fax: +49 22 8 / 41 08 – 15 50
E-mail: poststelle@bafin.de, De-mail: poststelle@bafin.de-mail.de

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.

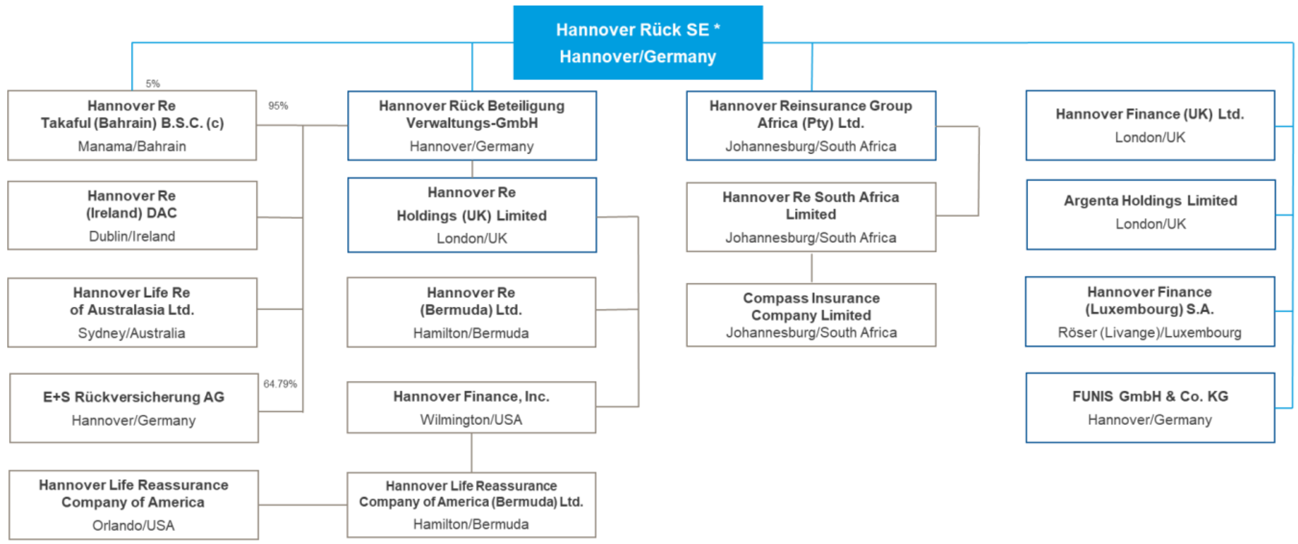
A.1.4 Group structure

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

The company's network consists of more than 170 subsidiaries, affiliates, branches and representative offices worldwide with 3,756 employees.

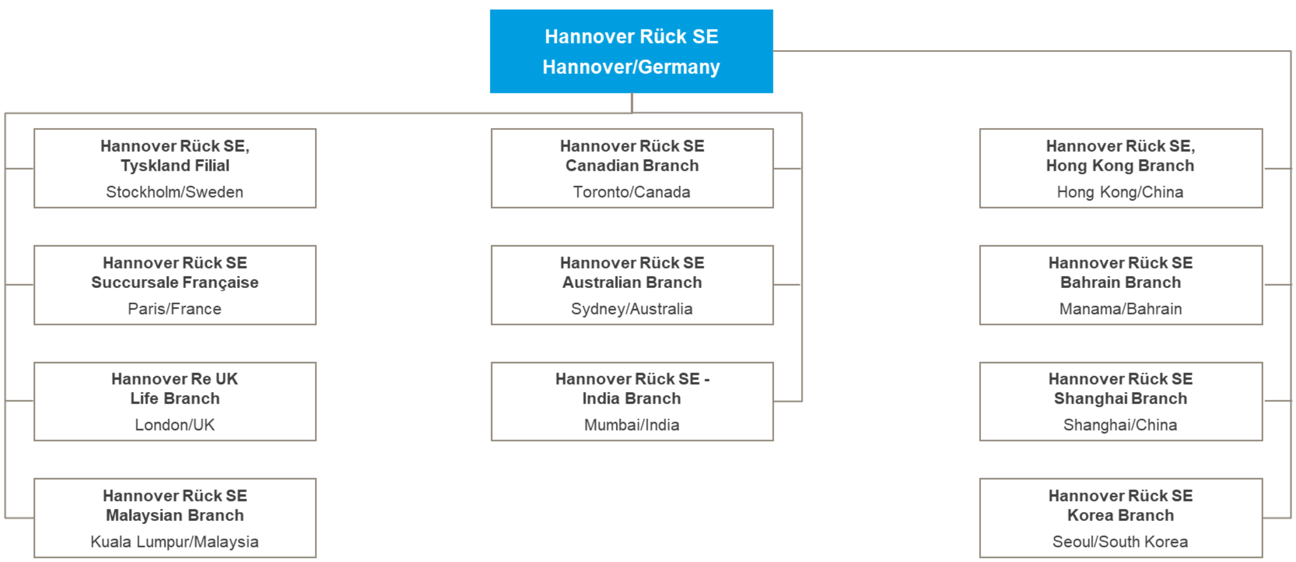
Subsidiaries and branches of Hannover Rück SE are presented in the following charts.

Subsidiaries of Hannover Rück SE



* Unless otherwise stated, the shareholding is 100%

Branches of Hannover Rück SE



A.1.5 Material related undertakings

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

List of major shareholdings

Companies resident in Germany:
Hannover Rück Beteiligung Verwaltungs-GmbH, Hannover/Germany
E+S Rückversicherung AG, Hannover/Germany
WeHaCo Unternehmensbeteiligungs-GmbH, Hannover/Germany

Hannover Re Holdings (UK) Limited, London/United Kingdom
Hannover Finance, Inc., Wilmington/USA
Hannover Life Reassurance Company of America (Bermuda) Ltd., Hamilton/Bermuda
Hannover Life Reassurance Company of America, Orlando/USA
Glencar Insurance Company, Orlando/USA
Glencar Underwriting Managers, Inc., Chicago/USA
Kubera Insurance (SAC) Ltd., Hamilton/Bermuda
Hannover Re (Bermuda) Ltd., Hamilton/Bermuda
Hannover Re (Ireland) Designated Activity Company, Dublin/Ireland
Hannover Life Re of Australasia Ltd, Sydney/Australia
Hannover ReTakaful B.S.C. (c), Manama/Bahrain
HILSP Komplementär GmbH, Hannover/Germany
FUNIS GmbH & Co. KG, Hannover/Germany
Integra Insurance Solutions Limited, Bradford/United Kingdom
Reaseguradora del Ecuador S.A., Guayaquil/Ecuador
Monument Insurance Group Limited, Hamilton/Bermuda
Trinity Underwriting Managers Ltd., Toronto/Canada
YOUPLUS Holding AG Holding (CH) AG, Freienbach/Switzerland
Hannover Re Global Alternatives GmbH & Co KG, Hannover/Germany
PAG Real Estate Asia Select Fund Limited, George Town/Cayman Islands
HR US Infra Debt LP, George Town/Cayman Islands
Hannover Re Euro RE Holdings GmbH, Hannover/Germany
HR GLL Central Europe GmbH & Co. KG, Munich/Germany
HAPEP II Komplementär GmbH, Hannover/Germany
Companies resident abroad:
Inter Hannover (No.1) Limited, London/United Kingdom
Hannover Finance (Luxembourg) S.A., Roeser/Luxembourg
Hannover Finance (UK) Limited, London/United Kingdom
Hannover Services (UK) Limited, London/United Kingdom
Hannover Reinsurance Group Africa (Pty) Ltd., Johannesburg/South Africa
Hannover Reinsurance Group Africa (Pty) Ltd prepares its own subgroup financial statements which includes the following companies:
Hannover Re South Africa Limited, Johannesburg/South Africa
Compass Insurance Company Limited, Johannesburg/South Africa
Lireas Holdings (Pty) Ltd., Johannesburg/South Africa
Leine Investment General Partner S.à.r.l., Luxembourg/Luxembourg
LI RE, Hamilton/Bermuda
Argenta Holdings Limited, London/United Kingdom
Argenta Holdings Limited prepares its own subgroup financial statements which includes the following companies:
Argenta Private Capital Limited, London/United Kingdom
Argenta Syndicate Management Limited, London/United Kingdom
Argenta Tax & Corporate Services Limited, London/United Kingdom
Argenta Underwriting Asia Pte. Ltd., Singapore/Singapore
Argenta Underwriting No.1 Limited, London/United Kingdom
Argenta Underwriting No.2 Limited, London/United Kingdom
Argenta Underwriting No.3 Limited, London/United Kingdom
Argenta Underwriting No.4 Limited, London/United Kingdom
Argenta Underwriting No.7 Limited, London/United Kingdom

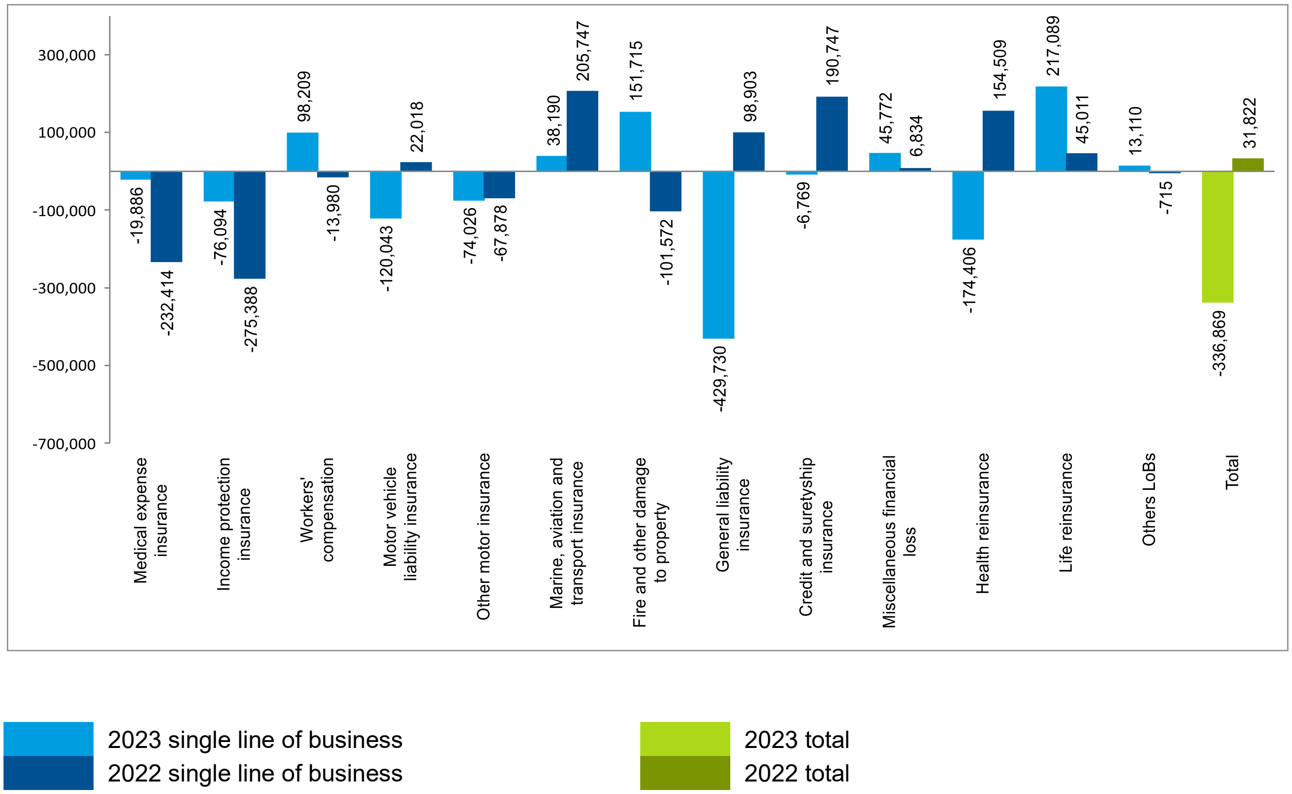
Argenta Underwriting No.9 Limited, London/United Kingdom
Argenta Underwriting No.10 Limited, London/United Kingdom
Argenta Underwriting No.11 Limited, London/United Kingdom
Residual Services Limited, London/United Kingdom
Leine Investment SICAV-SIF, Luxembourg/Luxembourg
Kaith Re Ltd., Hamilton/Bermuda
Hannover Re Real Estate Holdings, Inc., Orlando/USA
Hannover Re Real Estate Holdings, Inc. prepares its own subgroup financial statements which includes the following companies:
HR US Infra Equity LP, Wilmington/USA
GLL HRE CORE Properties, L.P., Wilmington/USA
Hannover ReTakaful B.S.C. (c), Manama/Bahrain
Participations:
Joint HR MR Private Equity GmbH, Munich/Germany
HANNOVER Finanz GmbH, Hannover/Germany
WeHaCo Unternehmensbeteiligungs-GmbH, Hannover/Germany
Meribel Mottaret Limited, St. Helier/Jersey
Mosaic Insurance Holdings Limited, Hamilton/Bermuda
FinLeap GmbH, Berlin/Germany
Somerset Holdings International Ltd., Hamilton/Bermuda

A.2 Underwriting performance

With technical income of TEUR 17,566,343 (previous year: TEUR 18,127,967) and technical expenses of TEUR 17,903,212 (previous year: TEUR 18,096,145), Hannover Re booked a total technical result in accordance with the German Commercial Code of TEUR -336,869 in the 2023 financial year after TEUR 31,822 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 2022 and 2023 is as follows:

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



Measured in terms of premium volume and total technical result in the 2023 financial year, the following lines of business are most important: life reinsurance (TEUR 217,089), fire and other property insurance (TEUR 151,715) and conversely general liability insurance (TEUR -429,730), health reinsurance (TEUR -174,406) and motor vehicle liability insurance (TEUR -120.043).

The life reinsurance business has a pronounced international focus. We write our business on all continents and, thanks to our good network, are often the local point of contact. In addition to traditional mortality-oriented life reinsurance business, we also write financial solutions business and longevity risks worldwide. Overall, net premiums earned of TEUR 3,239,707 decreased compared to previous year (TEUR 3,324,051). Claims incurred (net) amounted to TEUR 2,669,414 and operating expenses (net) were TEUR 488,484. Considering the change in other technical provisions (net) in the amount of TEUR -22,041 the technical result increased from TEUR 45,011 to TEUR 217,089.

The Latin America region is partly responsible for the improvement in earnings due to higher premium rates and lower claims expenses due to the absence of Covid-19 in the previous year.

US business and the Advanced Solutions business segment led to a moderate increase in net earned premiums in the fire and other property insurance segment. The expenses for insurance claims declined due to a lower allocation to the IBNR. The burden of major claims is characterised by the earthquake in Turkey and the hail damage in Italy. This results in a technical result of TEUR 151,715 after a loss of TEUR -101,572.

In 2023, net premiums earned in the general liability insurance line decrease to TEUR 2,066,364 after TEUR 2,657,386 in the previous year. In contrast, reserves only fell slightly compared to 2023.

This is due to a significant increase in IBNR compared to 2022. This leads to a loss in the technical result of TEUR -429,730 after to a profit of TEUR 98,903 in 2022.

The health reinsurance line of business shows a slight decline in premium volume for the reporting period (2023 TEUR 1,678,627/2022 TEUR 1,724,673). Expenses for claims and insurance benefits (net) amounted TEUR 1,475,836, the change in other technical provisions (net) amounted to TEUR -127,085 and operating expenses (net) to TEUR 250,112. This led to a significant decrease in the technical result of TEUR -174,406 for 2023, partly due to reserve strengthening in Asia.

Net premiums earned in motor third party liability insurance fell to TEUR 1,388,813. The technical result dropped by TEUR 142,061 and showed a loss of TEUR -120,043. This was due to the strengthening of reserves and a significant increase in operating costs.

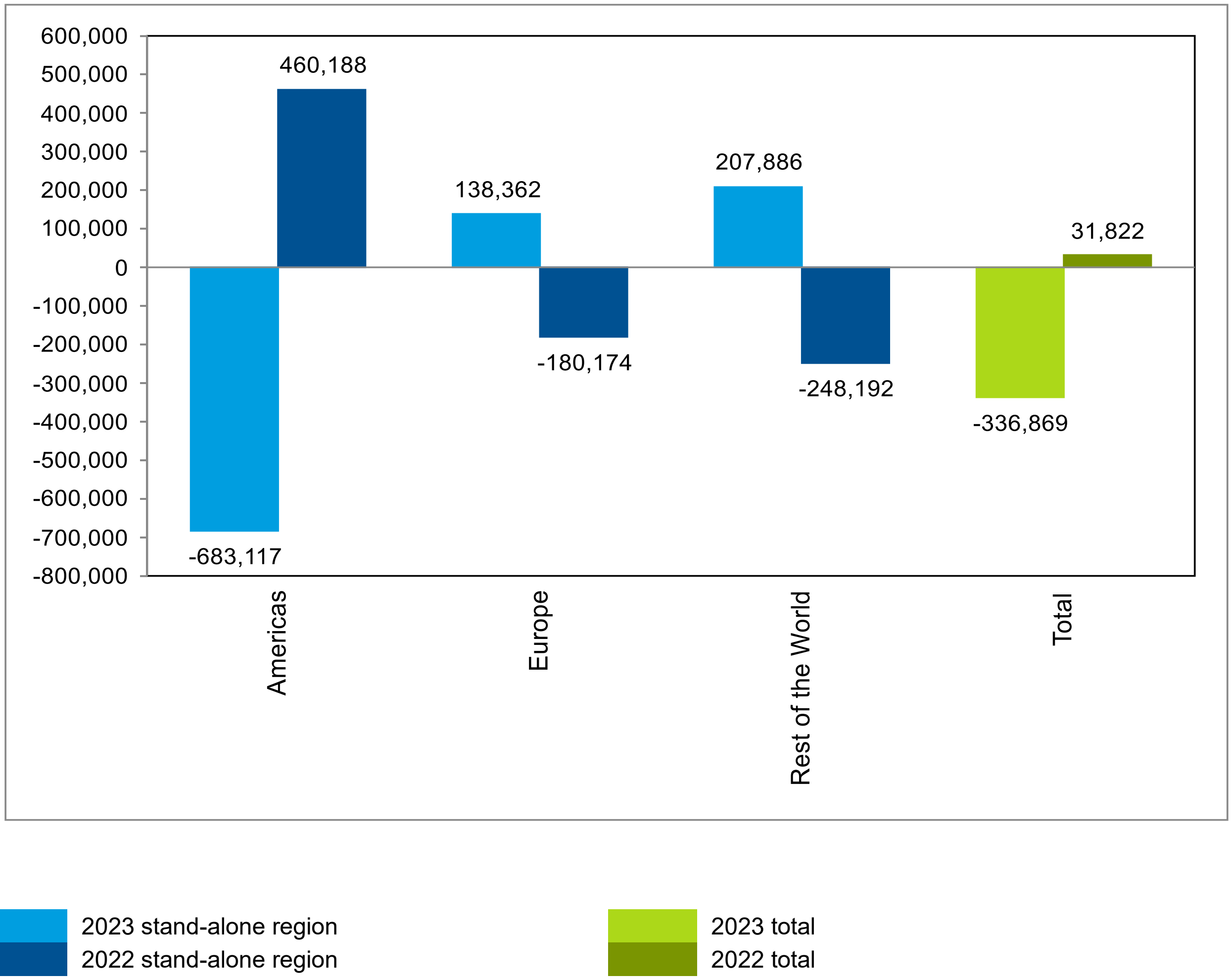
The medical expense insurance and income replacement insurance lines, with net premiums earned of TEUR 91,096 and TEUR 372,425 respectively, are recovering from the Covid-19 burdens from Thailand and Taiwan in the previous year. The technical result in both lines of business increased from TEUR -232,414 to TEUR -19,886 for medical expenses insurance and from TEUR -275,388 to TEUR -76,094 for income protection insurance.

Other financial losses and other business interruptions in particular are reported under the miscellaneous financial losses line. Net premiums earned are stable with a slight decrease of TEUR 2,079 to TEUR 201,384. In contrast, expenses for insurance claims decreased to TEUR 65,546 from TEUR 120,148 in 2022, resulting in an improved technical result of TEUR 45,722 after TEUR 6,834 in 2022.

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 decreased overall to TEUR -336,869 compared to TEUR 31,822 in the previous year. The Americas showed a massive deterioration from TEUR 460,188 to TEUR -683,117. The result in the rest of the world developed in the opposite direction TEUR 207,886 after TEUR -248,192 and there was also an improvement in the result in Europe to TEUR 138,362 after TEUR -180,174.

In the rest of the world, the result improved mainly in the medical expense and income replacement insurance line due to the elimination of the previous year's Covid-19 charges in Thailand and Taiwan. In America, the significant strengthening of reserves is reflected in the earnings trend.

A.3 Investment performance

As a reinsurance company, we naturally focus primarily on value preservation when managing our investments and attach great importance to the stability of the resulting return. We therefore base our investment portfolio on the principles of a balanced risk/return ratio and broad diversification. With an overall low-risk mix, our investments reflect both the currency and maturity composition of our liabilities. Our portfolio currently contains a high proportion of fixed-income securities, so that credit and spread risks account for the highest proportion of market risk.

In the reporting period, our investments performed largely satisfactorily and in line with our expectations, although numerous geopolitical and economic challenges continued to cause uncertainty. Following the very sharp increases in interest rates in the previous year, interest rates in our main currency areas fell at the end of the reporting period, particularly in medium and longer maturities, while short-term interest rates continued to rise, resulting in clearly inverted yield curves. Our investments benefited from the fact that we had already positioned ourselves more defensively at the beginning of the previous year in anticipation of the effects of central bank activities regarding credit risks.

At TEUR 1,581,264 (TEUR 1,525,453), our ordinary investment income including interest on deposits was at the previous year's level. While ordinary income from fixed-interest securities increased slightly compared to the previous year, income from shares in affiliated companies decreased. Gains from the disposal of investments were realised in the net amount of TEUR 8,399 (TEUR 745,076). The exceptionally high gains on disposal in the previous year resulted primarily from the contribution of unlisted equity investments to a joint venture with Münchener Rückversicherung-Gesellschaft AG. This year's activities focused primarily on regular portfolio maintenance and taking advantage of individual market opportunities.

Write-downs on investments were mainly attributable to bearer bonds held as fixed assets and totaled TEUR 41,681 (TEUR 157,046). We recognised write-downs on deposits retained on assumed reinsurance amounting to TEUR 654 (TEUR 50,742). The write-downs were offset by write-ups of TEUR 3,069 (TEUR 3,395) on investments written down in previous periods due to increased market values. Overall, the net investment result fell to TEUR 1,453,079 (TEUR 1,941,017)

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
Property, plant & equipment held for own use	2,798		
Property (other than for own use)	578		
Holdings in related undertakings, including participations	441,778		
Equities - listed			
Equities - unlisted			
Government Bonds	345,882	76,315	464
Corporate Bonds	359,381	2,520	123
Structured notes			

Collateralised securities	54,197	260	
Collective Investments Undertakings	45,998	4,112	2,487
Derivatives	23,188	56,064	
Loans	28,728	180	
Deposits other than cash equivalents	51,967	120	-5
Deposits to cedants	223,119		
Cash and cash equivalents	3,651		
Total	**1,581,264**	**139,571**	**3,069**

Investment expenses

in TEUR	Write-downs	Realised losses	Other expenses
Property, plant & equipment held for own use	-748		-2,852
Property (other than for own use)	-171		-446
Holdings in related undertakings, including participations	-11,382		
Equities - listed			
Equities - unlisted			
Government Bonds	-4,430	-59,927	-22,271
Corporate Bonds	-17,460	-65,894	-16,125
Structured notes			
Collateralised securities		-507	-1,098
Collective Investments Undertakings	-5,106	-1,255	-2,625
Derivatives		-616	-50,351
Loans	-1,730	-2,973	-727
Deposits other than cash equivalents			-1,431
Deposits to cedants	-654		
Cash and cash equivalents			-46
Total	**-41,681**	**-131,172**	**-97,972**

Other expenses include 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

	2023			2022		
in TEUR	Total investment income	Total investment expenses	Investment per-formance	Total investment income	Total investment expenses	Investment per-formance
Property, plant & equipment held for own use	2,798	-3,600	-802	2,698	-3,815	-1,117
Property (other than for own use)	578	-616	-38	2,883	-630	2,253
Holdings in related undertakings, including participations	441,778	-11,383	430,395	1,672,282	-501	1,671,781
Equities - listed						

Equities - unlisted						
Government Bonds	422,661	-86,628	336,033	280,508	-511,540	-231,032
Corporate Bonds	362,024	-99,479	262,545	328,413	-105,250	223,163
Structured notes						
Collateralised securities	54,457	-1,606	52,851	28,569	-2,233	26,336
Collective Investments Undertakings	52,596	-8,986	43,610	123,995	-6,653	117,342
Derivatives	79,252	-50,966	28,286	115,881	-152,185	-36,304
Loans	28,909	-5,430	23,478	8,495	-1,374	7,121
Deposits other than cash equivalents	52,082	-1,431	50,651	37,585	-3,391	34,194
Deposits to cedants	223,119	-654	222,465	176,786	-50,742	126,044
Cash and cash equivalents	3,651	-46	3,605	1,085	-97	988
Total	**1,723,904**	**-270,825**	**1,453,079**	**2,779,180**	**-838,411**	**1,940,769**

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	1.077.188
Total	**1.077.188**

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	2023	2022
Exchange rate gains	110,343	43,155
Income from sale of renewal rights		0
Profit from services	44,280	34,876
Income from guarantees given	6,781	7,062
Separate value adjustments on accounts receivable and retrocessions	10,217	41,214
Release of non-technical provisions	3,204	3,475
Interest pursuant to § 233 a AO (Fiscal Code)	19	15,166
Allocated investment return	8,838	8,742
Income from tax refunds	0	7,629
Income from reinsurance contracts	1,497	1,558
Profit from joint ventures		
Profit from clearing transactions	1,447	1,089
Amounts realised	13	54
Reimbursement of expenses	2,547	295
Income from discounting pursuant to § 277 (5) HGB (Commercial Code)	9	9
Other income	3,361	2,939
Total	**192,556**	**167,263**

Other expenses

in TEUR	2023	2022
Financing interest	118,839	86,500
Exchange rate losses	156,184	228,541
Deposit interest	165,168	93,136
Expenses for the company as a whole	82,929	80,461
Expenses from services	44,280	35,561
Separate value adjustments on accounts receivable and retrocessions	50,729	14,105
Expenses for joint ventures	13,331	11,250
Interest charges on old-age pension scheme	3,508	3,352
Expenses for letters of credit	2,734	2,955
Expenses from reinsurance contracts	194	462
Write-downs on accounts receivable	2,982	2,703
Interest charges from reinsurance transactions	349	532
Compounding of interest on provisions / expense from compounding pursuant to § 277 (5) HGB (Commercial Code)	8	9
Interest pursuant to § 233 a AO (Fiscal Code)	1,477	179
Interest for repo transactions	12,903	
Amortisation of intangible assets	1,469	
Interest for hedge accounting	1,031	
Other interest and expenses	3,481	6,564
	661,596	**566,310**
Less: Technical interest	1,641	1,507
Total	**659,955**	**564,803**

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 a five year 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			
Jean-Jacques Henchoz	**Clemens Jungsthöfel**	**Dr. Michael Pickel**	**Sven Althoff**	**Sharon Ooi**	**Silke Sehm**
Compliance IT and Facility Management Group Human Resources Internal Auditing Group Risk Management and Actuarial Function Group Operations and Strategy Corporate Communications	Asset Management Reinsurance Accounting and Valuation Group Finance Investor and Rating Agency Relations	Property & Casualty Reinsurance Regional responsibility for Germany, Austria, Switzerland, Italy, Latin America, Iberian Peninsula, Middle East Worldwide responsibility for Run-Off Solutions, Agricultural Risks Group Legal Services	Coordination of Property & Casualty Reinsurance Business Group Regional responsibility for North America, United Kingdom, Ireland and London Market Worldwide responsibility for Aviation and Marine, Credit, Surety and Political Risks, Facultative Reinsurance, Quotations	Property & Casualty Reinsurance Regional responsibility for Asia-Pacific and Africa	Property & Casualty Reinsurance Regional responsibilities for Continental Europe and North Africa Worldwide responsibility for Catastrophe XL (CAT XL), Structured Reinsurance, Insurance-Linked Securities, Retrocessions

Life & Health Reinsurance	
Claude Chèvre	**Dr. Klaus Miller**
Life & Health Reinsurance Regional responsibility for Africa, Asia, Australia, Latin America, Middle East, Western and Southern Europe Worldwide responsibility for Longevity Solutions	Life & Health Reinsurance Regional responsibility for North America, United Kingdom, Ireland, Northern, Eastern and Central Europe

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 Annual General Meeting (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.

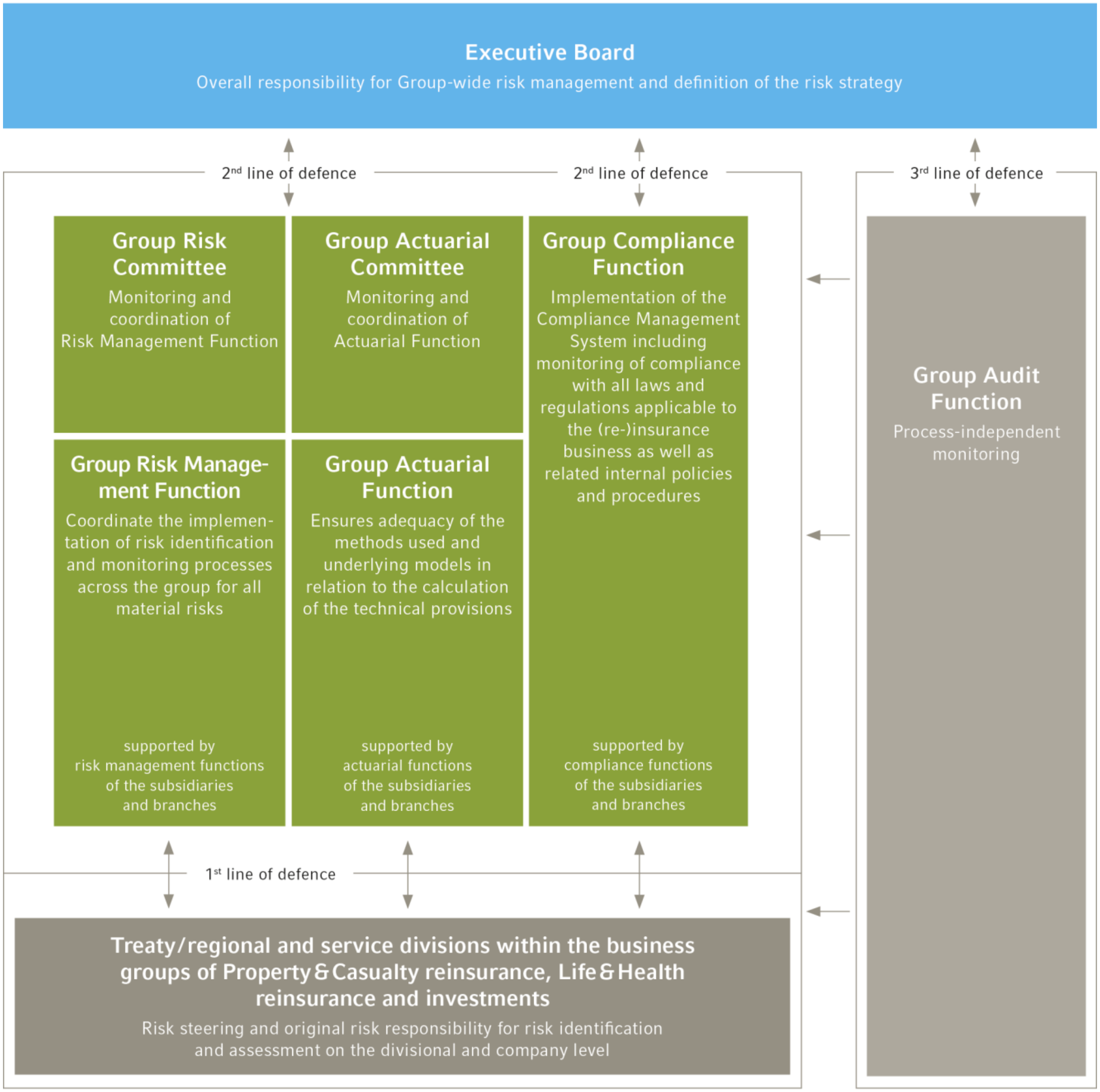
In the 2023 financial year the Supervisory Board again fulfilled its tasks and duties in accordance with the law, the Articles of Association and its Rules of Procedure. The Supervisory Board monitored the management of business based on regular written and verbal reporting by the Executive Board. The Executive Board informed the Supervisory Board in a regular, timely and comprehensive manner about all matters relevant to the company, especially concerning strategy, planning, business development, risk position, risk management and compliance. The Chairman of the Supervisory Board also stayed in touch with the Chief Executive Officer between meetings to discuss with him issues relating to the company's strategy, business development, risk position, risk management and compliance. As the Chairwoman of the Finance and Audit Committee, Dr. Lipowsky additionally engaged in a regular dialogue with the Chief Financial Officer and the independent auditor on matters of accounting, auditing and the internal control system. The full Supervisory Board was also informed in writing of important events outside the meetings.

It was concluded that there were no transactions in the reporting period that fall under the legal requirements governing mandatory approval (§ 111b Stock Corporation Act (AktG)) or compulsory disclosure (§ 111c Stock Corporation Act (AktG)).

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 at the end of the General Meeting that ratifies the acts of management for the 2023 financial year. There was one change in the composition of the Executive Board in 2023: with effect from 11 January 2023, Ms. Sharon Ooi is a member of the Executive Board of Hannover Rück, thereby expanding the body from seven to eight members.

B.1.1.2 Key functions

The following chart provides an overview of the central functions and bodies within the overall system as well as of their major tasks and powers:



Hannover Rück has set up Group-wide risk management functions to safeguard an efficient and effective risk management system. The individual elements of the risk management functions are closely interlinked and the roles, tasks and reporting channels are clearly defined and documented. We have implemented the three lines of defence model. The first line of defence consists of the risk steering and the original risk responsibility at divisional and company level. The second line of defence is made up of the core functions risk management, the actuarial function and the compliance function. These functions are responsible for process-integrated monitoring and control. The third line of defence is the process-independent monitoring performed by the internal audit function.

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 Executive Board remuneration is stated on the basis of the remuneration granted and owing. The total remuneration received by the Executive Board of Hannover Rück amounts to TEUR 10,181.

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 1,037.

B.1.2.3 Remuneration of staff and senior executives

The remuneration system for senior executives below the Executive Board (management levels 2 and 3) and for key function holders in Germany belonging as a matter of principle to the ranks of senior executives consists of a fixed annual salary and variable remuneration. This is comprised of short-term variable remuneration, the annual cash bonus and long-term share-based remuneration, the Share Award Plan.

Non-management employees can participate in a variable remuneration system through the Group Performance Bonus (GPB). The 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 50.2% in Hannover Rück. For its part, Haftpflichtverband der Deutschen Industrie Versicherungsverein auf Gegenseitigkeit (HDI), Hannover, holds a stake of 76.7% in Talanx AG.

The business relationship between Hannover Rück and its subsidiary E+S Rück is based on a cooperation agreement. A retrocession by Hannover Rück to E+S Rück exists in property and casualty reinsurance. E+S Rück and Hannover Rück 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 Re Group and the members of the governing bodies or their related parties in the year under review.

B.2 Fit and proper requirements

B.2.1 Requirements

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.

No key functions were outsourced in 2023.

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

Robust governance and strong risk management establish the foundation for our business operations. This is enshrined in our company strategy.

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.

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 capital 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. The internal capital model – a stochastic enterprise model - is a central tool in this context. It covers all subsidiaries and business groups of Hannover Rück. The core variable in risk and enterprise management is the economic equity, which is calculated according to market-consistent measurement principles and also constitutes the basis for calculating the own funds under Solvency II.

Hannover 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 capital requirements with a full internal model. This leads to desired capital requirements for market risks, underwriting risks, counterparty default risks and operational risks.

We strive for a rating from the rating agencies most relevant to our industry that facilitates and secures our access to all reinsurance business worldwide. Hannover Re is analysed by the rating agencies Standard & Poor’s (S & P) and A.M. Best as part of an interactive rating process. The current financial strength is assessed as “AA-” (Very Strong, stable outlook) by Standard & Poor’s and “A+” (Superior, stable outlook) by A.M. Best. In this context both Standard & Poor’s and A.M. Best consider Hannover Re’s risk management to be a very important aspect in the evaluation of financial strength and rate it as very good.

Against the backdrop of the planned growth of our business in property and casualty reinsurance and selected areas of life and health reinsurance, we continuously track the impacts on our capitalisation and rating. In order to safeguard an adequate level of capitalisation and our rating, we initiate measures promptly based on forecasts. Possible measures include, among others, adjusting the structure and scope of our retrocessions, adjusting the amount of debt capital and managing business growth through risk budgets.

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.

Regular reporting on geopolitical risks was expanded during the reporting period. This is a response to the emergence of more conflicts and tensions with regional and global repercussions. Numerous systems and processes were improved. This enables a more detailed and faster analysis of risk exposure. Internal model changes and improvements were made. Assessments of the impact of new products and capital were also carried out.

B.3.1.5 Key elements of our risk management system

Our Risk and Capital Management Guideline including our risk strategy 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 mostly 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 internal 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 within specific 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 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
- Sustainability and reputational, liquidity, strategic and emerging risks.

Currently, our most significant individual risks are the default and spread risks within the market risks, the reserving and catastrophe risks within the underwriting risks of property and casualty reinsurance and the longevity and mortality risks within the underwriting risks of life and health reinsurance.

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. Additionally, 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 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.

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) serves, among other purposes, 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 company. 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.

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 program, 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).

The Executive and Supervisory Boards adopted the CoC of Hannover Rück in 2022. The CoC is available in an English and a German version as well as published in Chines, French, Italian and Spanish on the website.

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 as well as the Compliance Officer (CO).

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 CO 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 subjects of particular compliance relevance 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 CO 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 subjects of particular compliance relevance 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).

Compliance programme

Every year, the CO prepares a compliance plan for the following year. This plan determines where the key areas of compliance activity should be in the subsequent year. The plan takes into account all relevant areas of activity of the company and the compliance risk situation. The CO implemented a compliance plan for 2023.

Hannover Rück has specified its compliance policy in writing in a manual bearing the title "Group Compliance Guideline". This manual is regularly assessed for its pertinence 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 CO 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 CO 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 CO maintains constant contact and exchange with the further members of the compliance function both in Germany and abroad.

As the holder of the key function compliance, the CO 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 CO and the compliance staff assess the monitoring plan of the Hannover Office as well as the compliance reports by 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. As part of the introduction of the revised CoC in 2022, a new compliance training course was set up on the topics addressed therein. All employees with participate in the training over the course of three years.

Compliance monitoring and improvement

By way of continuous monitoring, the CO 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 performed by the department Group Auditing (GA). GA provide independent objective audit services, including evaluations and recommendations, which help in particular to ensure external and internal compliance of processes, the internal control system (ICS) and other areas of the Company, identify potential scope for improvements and hence generate added value. Along with the auditing activity, GA provides value-adding inputs as an internal consultant in its interconnected cooperation with other units and functions of the Company.

The Executive Board guarantees that GA is not bound by any instructions in the planning of audits, conduct of audits, reporting and evaluation of audit results. In order to safeguard this independence, the Head of GA, who is at the same time the key function holder for the internal auditing of the Company pursuant to § 30 as well as § 47 No. 1 VAG, reports directly to the Executive Board. GA team members are not employed in other areas of the Company and only perform tasks that are in conformity with the GA "Internal Audit Charter". This charter, which has been approved by the Executive Board, also sets out the powers of the internal audit function.

The GA team encompasses staff with various areas of expertise, university degrees and supplementary vocational examinations in order to cover the wide specialist spectrum of (audit) tasks. The members of staff in GA have a broad mix of professional experience both internally (in specialist terms especially from the underwriting side) and externally (especially from external auditing and consulting). If a need for special capacity or expertise arises, GA can additionally involve internal peers and/or appropriate external resources.

Tasks

GA supports the Executive Board in the achievement of objectives by evaluating all business centres, processes and systems of the Company on a targeted, independent and objective basis through a systematic, risk-oriented approach in the planning and conduct of audits and by contributing to further development. Audit results are reported directly to the full Executive Board.

The evaluation of individual findings and the overall evaluation of the audit result are the exclusive responsibility of GA. The classification scheme defined by GA for this purpose ensures an objective basis for the evaluations made.

Reporting lines

The internal audit function reports its audit results and recommendations directly to the Executive Board on an ongoing basis through written audit reports, or immediately in the case of serious findings, as well as annually in the form of the GA Annual Report. Implementation of the recommendations/measures agreed in the audits is monitored by GA at the due dates.

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 resilience 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, a member of the Executive Board responsible for Property & Casualty reinsurance, a member of the Executive Board responsible for Life & Health reinsurance, the head of the AF, head of the department responsible for the valuation of technical provisions for Property & Casualty reinsurance, head of the department in risk management dealing with Life & Health reinsurance, and the head of the department in risk management dealing with Property & Casualty reinsurance business.

B.7 Outsourcing

Hannover Rück has a guideline in place approved by the Executive Board, 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. In future, the procurement process will be coordinated by a central organisational unit.

Among others, Hannover Rück has currently outsourced essential parts of the asset and investment management to Ampega Asset Management GmbH, located in Cologne (Germany), as well as cloud-based services such as M365 and Azure to Microsoft Ireland Operations Limited, located in Dublin (Ireland). This matter concerns the only outsourcings classified as important outsourcing.

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 on the adequacy of Hannover Rück's System of Governance (SoG) from the System of Governance Assessment Committee regarding the past financial year. This opinion presented by the committee dated 12 February 2024 was assessed and approved by the Executive Board.

Members of the committee are the Heads of Hannover Rück's key functions (Actuarial Function, Internal Audit, Risk Management, and Compliance), the Head of Global Human Resources and the Head of Group Operations & Strategy – Costs, Organisation, Processes & Procurement. It usually convenes twice a year. Guests are invited on an event-driven basis. The basis for the assessment of the SoG 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 SoG of Hannover Rück is appropriate considering the scope and complexity of its business activities and the inherent risks.

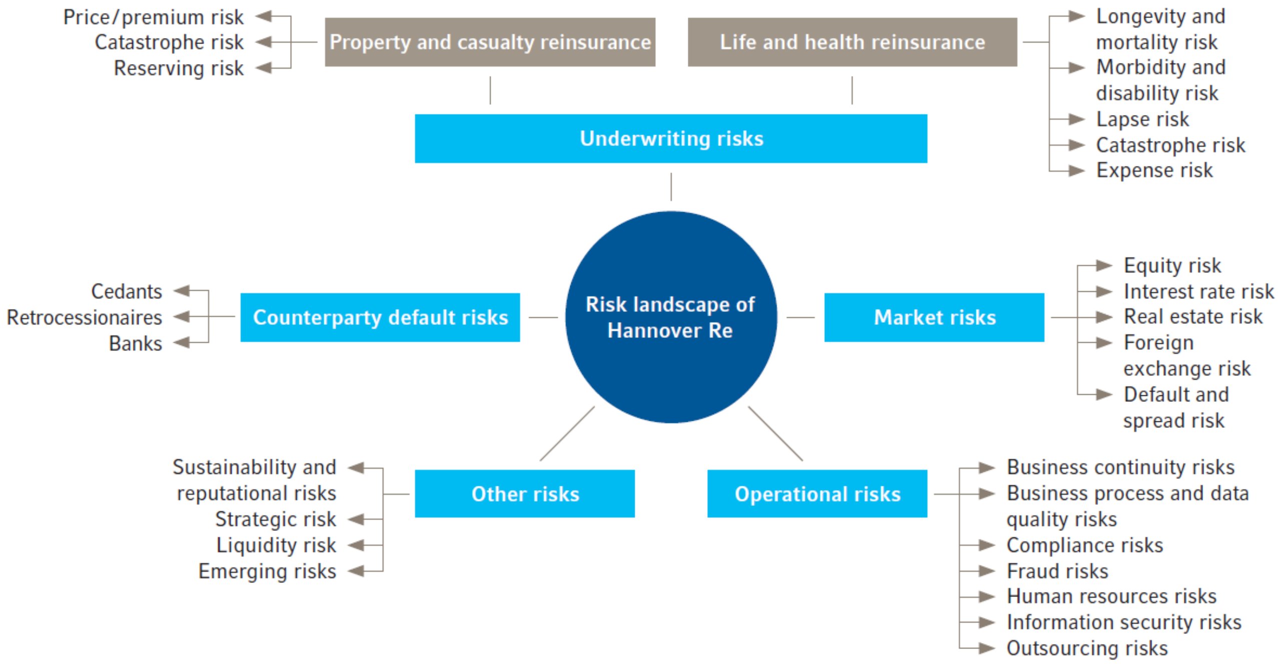
B.8.2 Other information

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 as appropriate to the actions taken on the associated opportunities. The parameters and decisions of the Executive Board with respect to the risk appetite of the Hannover Rück, which are based on the calculations of risk-bearing capacity, are fundamental to the acceptance of risks.

Currently, our most significant individual risks are the default and spread risks within the market risks, the reserving and catastrophe risks within the underwriting risks of property and casualty reinsurance and the longevity and mortality risks within the underwriting risks of life and 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.

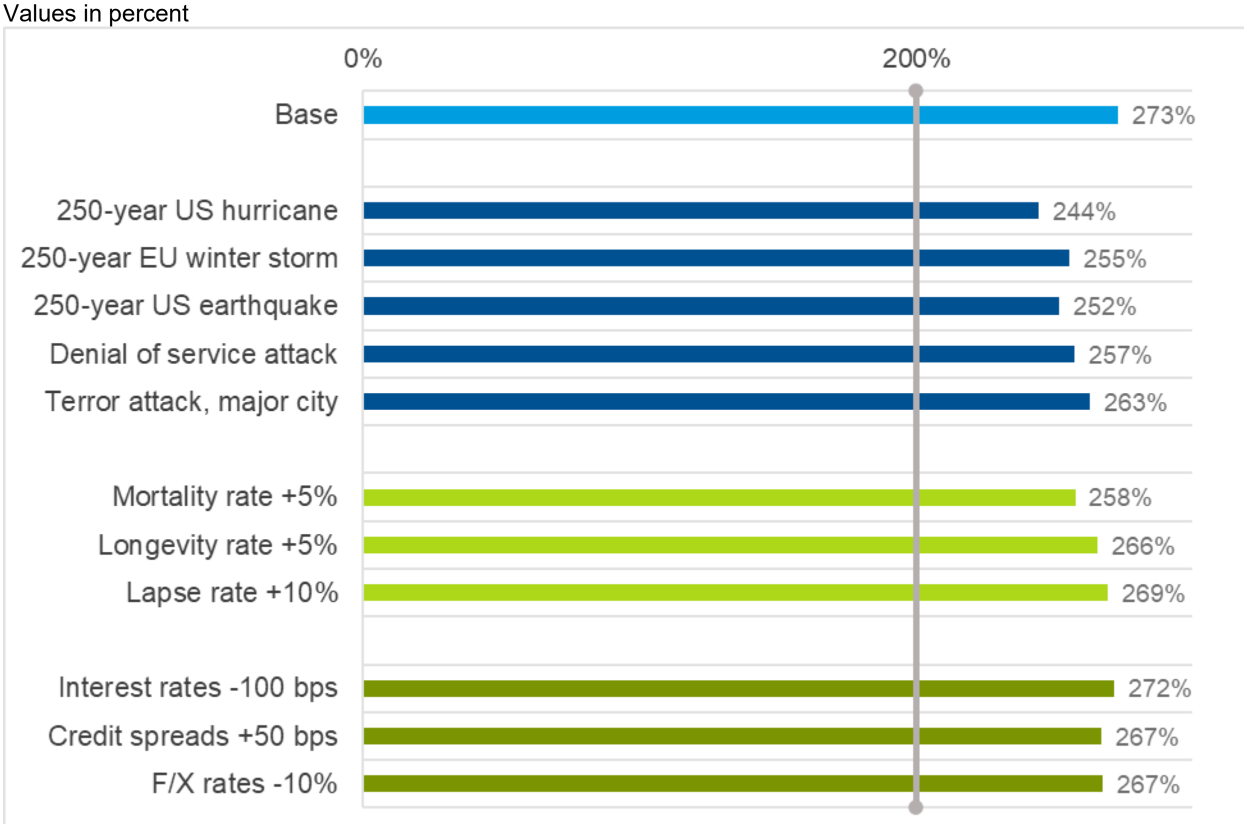
In the course of the mid-term planning, we monitor the business development over a time horizon of five years. Besides the basic scenario, we also behold alternative scenarios in respect of the evolution of (re)insurance markets including different impacts related to business growth and performance. Under the assumptions within the mid-term business plan, the risk profile, and the capitalisation of Hannover Rück remain 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 based on the Solvency II ratio for year-end 2023 are presented in the following graph.

Sensitivities of the Solvency II ratio YE 2023
Values in percent



As of year-end 2023 the Solvency II ratio is well protected against parallel downward shifts of interest rates, available and required capital move by similar amounts. However, this does not hold for nonparallel stress scenarios. A decrease in interest rates in combination with an interest rate twist – as could be observed in the past – can lead to a more notable decrease in the Solvency II ratio.

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 & 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. Furthermore, it is important to utilise the available risk budgets based on 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, too.

For risk steering 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 and 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 and casualty reinsurance breaks down as follows:

Solvency Capital Requirement for underwriting risks in property and casualty reinsurance

in TEUR	2023	2022
Premium risk (including catastrophe risk)	4,208,287	3,955,464
Reserve risk	3,389,389	3,147,743
Diversification	-1,798,655	-1,657,733
Underwriting risk property and casualty	**5,799,022**	**5,445,473**

The underwriting risks in property and casualty reinsurance have increased mainly as a result of higher premiums and reserves. The higher volumes result from business growth including higher capacities for natural catastrophe risks, claims development and the associated higher reserves.

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 and casualty reinsurance. The following table shows the required risk capital (with a confidence level of 99.5%) for five of our largest natural hazards scenarios:

Required risk capital for five of our largest natural hazards scenarios

in TEUR	2023	2022
Hurricane US	2,318,479	2,198,974
Earthquake US West Coast	1,663,685	1,578,537
Winter storm Europe	1,280,067	908,826
Earthquake Japan	1,182,064	1,199,039
Earthquake Chile	1,424,986	1,304,870

The capital requirement increases for almost all scenarios compared to last year, mainly due to planned capacities for 2024 and renewal of retrocessions. This is partially offset by exchange rate effects.

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.

As part of this process for managing risks connected with 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 respective business. 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 of incurred or foreseeable losses and the resulting burden 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 for reported claims. Liability claims have a major influence on the latter reserve. Reserves are calculated on a differentiated basis according to line of business and regions.

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 the recalculation of the reserves to be established as at the respective balance sheet date. Their adequacy is monitored by the actuarial departments.

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.

The price / premium risk lies in the possibility of a random claims realisation that diverges from the claims expectancy on which the premium calculation was based. Regular and independent reviews of the models used for treaty quotation as well as central and local underwriting guidelines are vital management components. We have put in place a quotation process to ensure the quality of our portfolios that considers the claims expectancy including anticipated rate of inflation, anticipated costs and cost of capital (volatility).

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 2023

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 2023

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

K-Quota share 2023

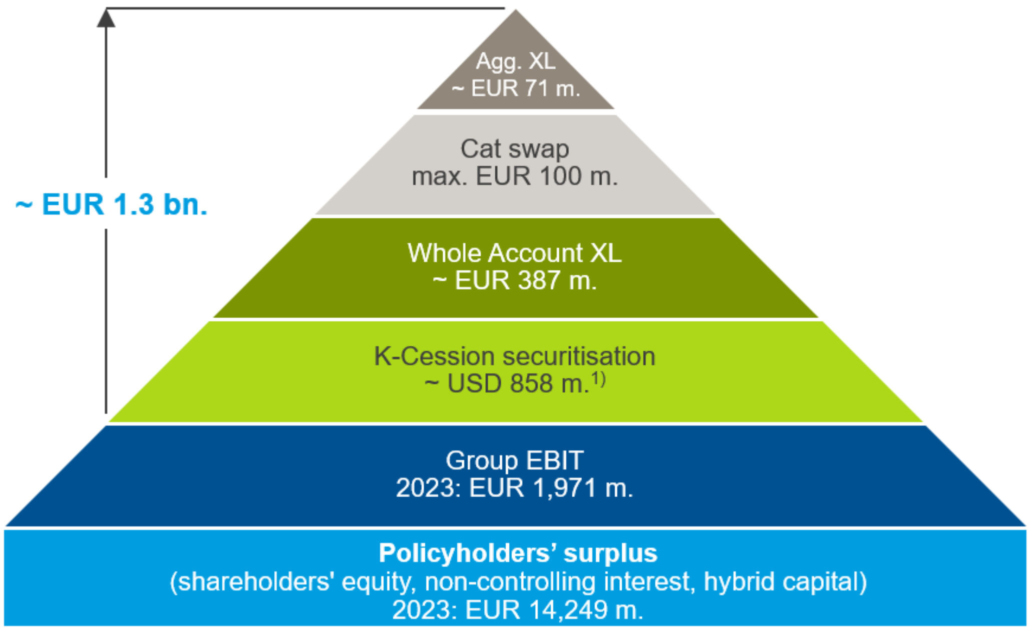
By way of its “K-transactions”, Hannover Rück has raised underwriting capacity for catastrophe risks in the capital market. The “K-Cession”, which was placed with investors in North and South America, Europe and Asia, involves a quota share cession on worldwide natural catastrophe business as well as 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.

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)

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.



1) Plus expected premium

Additional retrocessions for Marine, Aviation, Cyber and facultative reinsurance are 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.

C.1.4 Underwriting risk Life & Health

All risks directly connected with the life or health of an insured person are referred to as biometric risks. They include in particular the miscalculation of mortality, life expectancy, morbidity and occupational disability. Biometric risks are the material risks for our company in the area of life and health reinsurance. Our goal is to strike a balance between biometric risks. Furthermore, we are exposed to lapse risks because the cash flows resulting from our reinsurance treaties are in part dependent on lapse rates among policyholders. Counterparty default risks are also material since we partly prefinance our cedants' new business acquisition costs. Furthermore, we are exposed to catastrophe risks, especially events involving a high number of fatalities in our insured portfolio such as those recorded in recent years in connection with the Covid-19 pandemic.

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

Required risk capital for underwriting risks in life and health reinsurance
Required risk capital at a confidence level of 99.5%

in TEUR	2023	2022
Mortality risk (incl. catastrophe risk)	1,781,592	1,791,678
Longevity risk	1,820,589	1,445,755
Morbidity and disability risk	1,337,490	1,369,829
Lapse risk	395,096	379,592
Expense risk	419,607	157,569
Diversification	-3,018,690	-2,636,728
Underwriting risk life and health	**2,735,684**	**2,507,694**

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 and health reinsurance are increasing mainly due to the higher business volume and the decline in interest rates. The increase particularly affects longevity risk and pandemic risk.

A risk concentration in life and 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 and 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. 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 underwriting guidelines applicable worldwide, which set out detailed rules governing the type, quality, level and origin of risks and how these considerations are factored into the pricing. These global guidelines are revised annually and approved by the Executive Board. Special underwriting guidelines give due consideration to the particular features of individual markets. By monitoring compliance with these underwriting guidelines we minimise the potential implications of an inability to pay or of deterioration in the financial status of cedants. Regular reviews and holistic analyses (e.g., with an eye to lapse risks) are carried out with respect to new business activities and the assumption of international portfolios. Large transactions are also examined by our Risk Management Department. Individual actuarial reports and documentation ensure that regular scrutiny also takes place at the subsidiary level. The interest rate risk, which in the primary sector is important in life business owing to the guarantees that are given, is of only minimal relevance to our company thanks to the design of our reinsurance treaties. We have confidence in the entrepreneurial abilities of our underwriters and grant them the most extensive possible powers. In our decentralised organisation we manage risks where they arise using a consistent Group-wide approach in order to obtain an overall view of the risks in life and health reinsurance. Our global underwriting guidelines provide underwriters with an appropriate framework for this purpose.

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. Payments for Covid-19-claims from this cover were made in the reporting years 2022 and 2023 to the Life & Health business group.

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 standardised 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 Rück's portfolio is therefore guided by the principles of a balanced risk / return profile and broad diversification. Based on a risk-averse asset mix, the investments reflect both the currencies and durations of our liabilities. Market price risks include equity risks, interest rate risks, foreign exchange risks, real estate risks, 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 Rück itself and from investment risks of ceding companies that we assume in connection with insurance contracts. The following table shows the risk capital with a confidence level of 99.5% for the market risks from investments under own and third-party management.

Required risk capital for market risks

in TEUR	2023	2022
Default and spread risk	3,230,517	2,918,553
Interest rate risk	1,146,005	963,531
Foreign exchange risk	1,944,864	1,750,573
Equity risk (incl. Private Equity)	1,596,752	1,895,683
Real estate risk	946,842	866,944
Diversification	-3,865,250	-3,454,659
Market risk	**4,999,730**	**4,940,625**

Market risk increased slightly, primarily as a result of an increase in default and spread risk due to higher market values of fixed-income securities as well as an increase in exchange rate risk and new investments in real estate. An increase in interest rate risk only contributes insignificantly to the increase in market risk.

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 exceeded.

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 and spread volatility as well as 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. In addition, we had already taken a rather cautious stance since the beginning of the previous reporting period in view of expected central bank activities and inflation developments at the turn of the year.

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 Rück 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 Rück. 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 1.2% (1.3%) 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

		Portfolio change on a fair value basis	
in TEUR	Scenario	**2023**	2022
Equity securities and equity funds	Share prices -10%	-975	-1,036
	Share prices -20%	-1,949	-2,072
	Share prices +10%	975	1,036
	Share prices +20%	1,949	2,072
Fixed-income securities	Yield increase +50 basis points	-621,771	-593,207
	Yield increase +100 basis points	-1,209,104	-1,152,376
	Yield decrease -50 basis points	656,210	627,245
	Yield decrease -100 basis points	1,346,860	1,288,527
Real Estate	Real estate market values -10%	-4,878	-5,241
	Real estate market values +10%	4,878	5,241

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 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. However, their relevance for our investments was very low, as we had liquidated our equity fund portfolio at the beginning of the previous year. Our exposure therefore amounts 0.0% (0.0%). 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.

The portfolio of fixed-income securities is exposed to an interest rate risk. Declining market yields lead to increases and rising market yields to decreases in the fair value of the fixed-income securities portfolio. The credit spread risk should also be mentioned. The credit spread refers to the interest rate differential between a risk-entailing bond and risk-free bond with the same maturity. Changes in these risk premiums, which are observable on the market, result – analogously to changes in pure market yields – in changes in the fair values of the corresponding securities. We minimise interest rate risks by matching the durations of payments from fixed-income securities as closely as possible with the projected future payment obligations under our insurance contracts.

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

Real estate risks result from the possibility of unfavourable changes in the value of real estate held either directly or through fund units. They may be caused by a deterioration in particular qualities of a property or by a general downslide in market values. Real estate risks have grown in importance for our portfolio in recent years 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. In the reporting period, there was global pressure on market values in the commercial real estate segment, which is important to us. This was reflected by recognising property-specific impairments. We are not affected by the turmoils resulting from the insolvency of the Signa Group, which is primarily active in German-speaking countries. We do not currently consider any other significant parts of our exposure to be critical.

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 Rück holds further derivative financial instruments to hedge interest rate risks from loans taken out to finance real estate and to hedge inflation risks from the life reinsurance business written by our Australian branch. In addition, Hannover Rück 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 collateralized 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. Some insurance derivatives linked to insurance business are also recognised under the investments due to IFRS financial reporting requirements.

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 Rück 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 Counterparty default risk

The counterparty default risk consists primarily of the risk of complete or partial unwillingness or inability to pay of counterparties and the associated default on payment. Counterparty default risks exist with respect to cedants, retrocessionaires and in connection with short-term deposits at banks. We address credit risks from fixed-income investments in the preceding section under market risks.

Required risk capital (confidence level 99.5%)

in TEUR	**2023**	2022
Counterparty default risk	428,956	426,917

The slight increase in counterparty default risk can be attributed principally to an increase in default volume from P&C cedents.

Our retrocession partners are carefully selected and monitored in light of credit considerations in order to keep the risk as small as possible. This is also true of our broker relationships, which entail a risk inter alia through the potential loss of the premium paid by the cedant to the broker. We minimise these risks, among other measures, by reviewing broker relationships with an eye to criteria such as the existence of professional indemnity insurance, payment performance and proper contract implementation. The Security Committee decides on measures where necessary to secure receivables that appear to be at risk of default. This process is supported by a risk management application, which specifies cession limits for the individual retrocessionaires participating in protection cover programmes and determines the capacities still available for short-, medium- and long-term business. Depending on the type and expected run-off duration of the reinsured business, the selection of reinsurers takes into account not only the minimum ratings of the rating agencies Standard & Poor’s and A.M. Best but also internal and external expert assessments. Overall, retrocessions conserve our capital, stabilise and optimise our results and enable us to act on market opportunities across a broader front, e.g., following a major loss event. A close and regular dialogue with our retrocessionaires gives us a reliable overview of the market and puts 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 %	2023	2022
Total	64.3	65.4
Property and casualty reinsurance	60.4	62.0
Life and health reinsurance	77.1	76.5

Alongside traditional retrocessions in property and 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 prefinance acquisition costs for our ceding companies. Our cedants, retrocessionaires and broker relationships as well as our investments are therefore carefully evaluated and limited in light of credit considerations and are constantly monitored and controlled within the scope of our system of limits and thresholds. Lastly, short-term deposits at banks are also at risk of counterparty default.

C.4 Liquidity risk

Liquidity risk refers to the risk of being unable to meet our financial obligations when they become due. 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 lower 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 financial resources during the year under review were larger than possible disbursements for assumed extreme events, which means that our liquidity is assured even in the unlikely case of financial crises coinciding with an extreme event that needs to be paid out quickly. The liquid asset reserve stood at EUR 8.6 billion (EUR 9.1 billion) as at the balance sheet date. In addition, we manage the liquidity of the portfolio by checking on each trading day the liquidity of the instruments contained therein. When reinvesting in fixed-income securities during the reporting period, we increasingly invested in instruments with short-term maturities while only slightly reducing the average remaining maturity. By expanding the holding of short-term securities we further strengthened our liquidity base. As an additional liquidity management tool, we have been entering into temporary repurchase agreements (repo agreements) since 2019. These measures enable us to reduce our 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 3,083,112 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 risk means the risk related to business operations and due to inadequate processes, human errors, system failures or 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 reserving 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 operational risk as at 31 December.

Required risk capital (confidence level 99.5%)

in TEUR	2023	2022
Operational risk	640,138	607,039

The changes in the operational risk result above all from updated expert assessments regarding the impact of individual scenarios.

Unlike market, counterparty default and underwriting risks, operational risks are categorised as non-financial risks. We discuss below the subcategories of operational risks.

Business continuity risks arise from natural or man-made hazards that threaten or disrupt business operations. The risk also includes the continuity of IT infrastructure and services. Our Business Continuity Management (BCM) system reduces the risk through preventive measures that are regularly tested. A special organisational and operational structure has been set up to deal reactively with a crisis event. Overall, our focus in BCM is on the following five scenarios:

- Unavailability/loss of staff, e.g. as a consequence of a pandemic
- Outage of the local workplace environment
- Outage of local/central Information Technology, e.g. as a result of a cyber-attack
- Outage of external infrastructures/external service companies
- Critical events without direct impact on our business operation

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 related to 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 a high 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 programs and awareness measures. Russia is categorised as "severe risk" due to the current situation. According to the Sanctions Guideline, for every transaction relating to "severe risk" countries a submission requirement and an in-depth review are mandatory in order to take into account the increased scope of sanctions. New business with Russian cedants is currently excluded.

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 generally increasing shortage of qualified specialists also poses challenges for the Hannover Rück. In order to reduce this risk, we pay particular attention to the qualifications, experience and motivation of our employees. We encourage them through personnel development programmes as well as management activities and conduct regular employee surveys. The regular collection of key figures on staff turnover rates enables us to take targeted control measures in a timely manner.

Information security risks arise, inter alia, out of an inadequate protection of confidentiality, integrity or availability of information, which is stored/processed in Information Technology or handled by human beings. Cyber attacks and the loss of sensitive information can be associated with considerable financial losses and also reputational risks. In our highly networked world it is therefore important to protect information and defend against cyber attacks. With a view to protecting against these risks, Hannover Rück has implemented an Information Security Management System (ISMS) that is closely aligned with international standards and harmonised with other management systems such as data protection or outsourcing management. Specific guidelines and standards regulate 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 on a quarterly basis. 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 CISO, as the main process owner, is responsible for the planning, implementation and ongoing development of the ISMS as well as for coordinating the corresponding tasks within the Hannover Re Group. He is supported by local contacts and additionally bears responsibility Group-wide for the definition and monitoring of controls. The CISO cooperates closely with Information Risk Management (IRM), the central Compliance function and the Data Protection Officer. Both the CISO and the other specified functions form part of the second line of defence. Furthermore, every single member of staff is responsible for adhering to the relevant security standards. To this end, all employees undergo regular training in information security topics as well as awareness-raising, e.g. through phishing simulations. When it comes to a transfer of knowledge in connection with cyber risks (cyber resilience), we participate in various cooperative projects undertaken by our industry.

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 sustainability and reputation 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

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

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

Hannover Rück publishes summary position papers on various emerging risks which can be accessed on our website. In the year under review the papers on resistance to antibiotics, disruption of critical infrastructure, asbestos, advances in medicine and the risk posed by megacities, among others, were updated.

Hannover Rück, represented by members of staff from Risk Management and other units, is a member of the Chief Risk Officer (CRO) Forum and a constant participant in the CRO Forum's Emerging Risk Initiative, which continuously tracks and analyses various emerging risks, publishes information on megatrends and associated risks and conducts corresponding impact analyses. The megatrends considered include "Ageing and health", "Economic instability", "Environment and climate", "ESG issues", "Changes in the geopolitical landscape", "Technological developments and their influence on society" as well as "Demographic and social change". New topics added in the year under review were "Energy storage systems", "Data ethics" and "New insurance competition".

The publications are publicly accessible on the CRO Forum website. An exploration of the carbon intensity of insured portfolios ("Carbon footprinting methodology for underwriting portfolios") written in 2020 is also available there.

C.6.2 Strategic risks

Strategic risks derive from a possible imbalance between the corporate strategy of the Hannover Rück and the constantly changing general business environment, for example with respect to evolving regulatory requirements or the geopolitical 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 Sustainability and reputation risks

The handling of sustainability risks has come into increasing focus in recent years, above all against the backdrop of climate change. Instead of sustainability risks, reference is often made to risks associated with environmental, social and governance (ESG) issues.

We make a fundamental distinction here between risks and impacts to which a company is exposed (outside-in perspective) as well as risks and impacts that a company causes through its business operations (inside-out perspective).

Sustainability risks corresponding to the outside-in perspective are financial risks due to the potential financial repercussions of environmental, social and governance (ESG) issues on Hannover Rück. These financial risks encompass market, underwriting, counterparty default and operational risks and are integrated into the risk management processes for such risks.

The inside-out perspective refers to situations in which the activities of Hannover Rück would be harmful to the environment or social norms or would reflect a failure of governance.

Reputational risks refer to the risk that the trust put in our company by clients, shareholders, employees or the public at large may be damaged. This risk has the potential to significantly jeopardise the business foundation of Hannover Rück. A good corporate reputation is therefore an indispensable prerequisite for our core business as a reinsurer. Reputational risks may arise out of all business activities conducted by the Hannover Rück. Reputational damage may be caused, inter alia, by a data mishap that becomes public knowledge or financial difficulties on account of an underwriting risk. In addition to the risk identification methods already described, we use a number of different techniques for risk mitigation, such as our defined communication channels (e.g. Crisis Communication Guideline), a professional approach to corporate communications, tried and tested processes for specific crisis scenarios as well as our established Code of Conduct. Above and beyond the general influence that sustainability risks have on a number of other risk categories (outside-in perspective), reputation risks form the bridge between the outside-in and inside-out perspective. We see a correlation between reputational and ESG risks (inside-out perspective). Reputation and sustainability risks are closely linked, as failure to fulfil societal expectations of sustainability can result in a reputation risk. Risk Management and the departments Group Sustainability & Strategy and Corporate Communications work together closely to identify ESG and reputational risks. This applies both to the assessment of ESG risks and to the monitoring of media reports, the analysis of NGO activities and the dialogue cultivated with relevant stakeholder groups.

C.6.4 Important developments

In this section, we describe external developments in 2023 with particular relevance for risk management.

C.6.4.1 Geopolitical risks

In 2023, the global tensions increased over the course of the year. The war between Israel and Hamas has added another military conflict with far-reaching consequences.

Russia's war against Ukraine continued. The far-reaching consequences and ramifications for Europe and the world have been mitigated to some extend but are still felt. While the frontline has remained largely unchained over the year, the risk of the conflict escalating beyond the territory of Ukraine remains. This could have potentially extensive consequences for the geopolitical order on a global scale. As reactions on the Russian invasion, Western countries have enacted numerous sanctions against Russia. Hannover Rück ensures that sanctions are not violated. The business relationship with Russian cedants therefore remains suspended. The high level of inflation in Europe, which is partly attributable to the conflict, has eased over the course of 2023 but remains well above the long-term targets set by European Central Bank.

The war between Israel and Hamas in the Gaza Strip is ongoing and a solution is currently not in sight. The risk of an escalation or a spreading of the war to neighbouring countries persists. The global terror risk is considered to be increased. Hannover Rück is examining its covers for terrorism risks and unrest in this context during the treaty renewals.

Generally spoken, risks from armed conflicts are excluded in reinsurance treaties but may be covered under special arrangements such as for marine risks. Political risk and political violence covers, among others, are available for other risks from violent conflicts and their consequences. The risk situation for these policies is therefore elevated. Risks stemming from economic tensions can have disruptive effects on supply chains.

The relations between China and Taiwan continues to be tense. In recent years, the Chinese government is emphasising its territorial claims to the island and threatened a military solution to the situation. A violent escalation of the conflict harbours numerous significant risks for the global economy. The Taiwanese high-tech industry plays a major role in global supply chains, particularly in the production of semiconductors.

The upcoming US presidential elections in November 2024 could – depending on the outcome – lead to a comprehensive reorientation of foreign policy with significant consequences for the conflicts mentioned above.

C.6.4.2 Capital market environment

In the reporting period, our investments continued to perform satisfactorily and in line with our expectations, although numerous geopolitical and economic challenges continued to cause uncertainty. This was reflected in particular in exceptionally volatile interest rate markets. There was a lack of clear macroeconomic signals to counteract the volatility. With regard to the associated valuation swings, our investments benefited from the fact that we had positioned ourselves more defensively with regard to credit risks since the beginning of the previous year in anticipation of the effects of central bank activities.

An important external factor influencing the return achievable on our investments is the general interest rate level. In the reporting period, this reflected the interest rate dynamics of the central banks in our main currency areas, which raised their key interest rates in several steps, in some cases significantly, while constantly balancing the need to combat inflation with fluctuating recession expectations. The high level of liquidity in the markets was only reduced rather hesitantly. Following the very sharp rise in interest rates in the previous year, slight falls in interest rates were recorded at the end of the reporting period in our main currency areas, particularly in medium and long maturities, while short-term interest rates continued to rise, resulting in more pronounced inverse yield curves. Even if the continued high interest rates compared to the past initially reduced the market value of our fixed-interest securities, we benefited from the overall increase in the level of new investments and reinvestments. In addition, the balanced interest rate positions of our investments in relation to the technical provisions as a result of the IFRS 17 and IFRS 9 accounting standards to be applied for the first time in the reporting period resulted in good balance sheet resilience to market fluctuations, as it is now also recognized in the balance sheet that the market values of interest-sensitive assets and liabilities react in the opposite direction to changes in market interest rates.

At the end of the first quarter, uncertainties in the banking sector led to turmoils on the credit markets. This was reflected in some very volatile risk premiums on corporate bonds, which however at the time of reporting had largely even settled below the level at the end of the previous year.

Overall, the market value of our fixed-interest securities increased, although this was partially offset by our high proportion of our US Dollar exposure and its slight loss in value against the Euro.

In contrast to the interest rate markets, the equity markets were characterized by rather stable valuation levels and lower volatilities. Due to the liquidation of our positions in the previous year, the equity markets currently have no significant impact on our investments.

Inflation remains a key issue, with the measured inflation indices in both the Euro and US Dollar areas noticeably losing momentum. This is reflected in lower income from realized inflation amortisation in our ordinary investment result compared to the exceptionally high rates of change in the previous year.

We continue to be exposed to the market for private equity. Here, changes in market value are based less on general market conditions and more on company-specific assessments. The risks are primarily in the business model and profitability and less in the interest component as part of the cash flow forecasts. We therefore also see the declines in market value observed in some cases during the reporting period as part of the risk profile specific to this asset class and company characteristics.

The importance of real estate risks remains unchanged significant for us due to our ongoing commitment in this area. We spread these risks through broadly diversified investments in high-quality markets worldwide, each of which is preceded by detailed property, manager and market analyses. During the reporting period, there was global pressure on market values in the commercial real estate sector, which is important to us. We are not affected by the disposals in the wake of the insolvency of the Signa Group, which is primarily active in the German-speaking region. We do not currently consider any other notable parts of our exposure to be critical.

For the near future, we continue to expect increased volatility on the global capital markets for investments, but we also see this as an opportunity and believe that we are adequately prepared with our current investment strategy.

C.6.4.3 Regulatory developments

In the year 2023, there were numerous regulatory developments at the international, European, and national levels.

In the legislative process for the Solvency-II-Reform and the Directive on Recovery and Resolution in (re)insurance (IRRD), an agreement was reached in December 2023 during the final interinstitutional negotiations between the European Parliament, Council, and Commission. The negotiations included crucial elements of the directives, such as the definition of significant cross-border business, new macroprudential supervisory powers, as well as changes to yield curves and adjustments in the calculation of the risk margin.

On a global scale, the International Association of Insurance Supervisors (IAIS) introduced the latest iteration of the Insurance Capital Standards (ICS) and began assessing the comparability between the American Aggregation Method and the ICS. Implementation of the ICS is set to commence in 2025, with Solvency-II expected to serve as a direct implementation of the standard for European companies.

Within the EU, the Corporate Sustainability Due Diligence Directive (CSDDD) has also entered interinstitutional negotiations. In December 2023, discussions continued regarding the potential inclusion of financial service providers, leading to a preliminary agreement. It is anticipated that financial service companies will fall within the scope concerning their own business activities and supply chains, but not regarding the financial services they offer to customers. However, this is subject to a review clause, allowing a decision to extend coverage to financial institutions and products based on a comprehensive impact analysis at a later date.

During 2023, EIOPA conducted a consultation on reinsurance from third countries aimed at national supervisory authorities (NSAs). The consultation included a draft regulatory statement from EIOPA with recommendations on how reinsurance with third countries could be regulated in the future.

Concerning the EU/US Covered Agreement, both sides issued a joint statement reaffirming the agreement's significance and recognizing its effective functioning. The EU and the USA also committed to continuously reviewing the progress of the agreement and close coordination. They called on relevant authorities to refrain from actions contradicting the agreement.

Digital technologies play a crucial role in the processes of the financial services industry overall, including (re)insurance. The EU has developed a new framework, the Digital Operational Resilience Act (DORA), to ensure the performance of digital services in critical scenarios. Hannover Rück must adjust numerous internal processes related to the review of external IT service providers for compliance with DORA, which becomes effective in 2025.

The European approach to Artificial Intelligence (AI), the EU AI Act, establishes guidelines for the use of AI systems, including automated decision-making. A preliminary agreement was recently reached in the trilogue. Extensive obligations apply to AI systems classified as high-risk, including a mandatory fundamental rights impact assessment, which also applies to the insurance sector. The EU AI Act is expected to be applicable two years after its enactment, with some exceptions for specific provisions. Hannover Rück is preparing for potential requirements regarding AI governance and AI risk management, planning to adapt existing practices for AI use considering legal requirements.

Growing regulatory protectionism in many parts of the world in 2023 led to additional market access restrictions.

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 consistent 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.

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.

Supplementary Notes

With the publication of the Implementing Regulation (EU) 2023/894 by the European Commission on April 4, 2023, the application of Directive 2009/138/EC of the European Parliament and the Council was adapted.

In accordance with the aforementioned legal bases, reinsurance receivables and payables have to be split according to their certainty and existence of a settled agreement. Future payments whose absolute amount and due date are known after settlement with the cedant are reported within the respective balance sheet items. Estimated balances, on the other hand, are included into the reinsurance recoverables.

Since 2019, the Federal Financial Supervisory Authority's (BaFin) interpretative decision on the treatment of settlement receivables and liabilities required a breakdown by amounts due and overdue, both in assumed and ceded business. The application of the interpretative decision was suspended in 2021 and revised in the reporting period on 11 October 2023with reference to the amendments by the new Implementing Regulation.

The aforementioned changes have an effect on the disclosure in the Solvency II balance sheet. The comments on individual balance sheet items contain further information on changes compared to the previous year's presentation.

Solvency II balance sheet

We show our Solvency II balance sheet as of 31 December 2023 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	2023	2022
Assets			
Intangible assets	R0030		
Deferred tax assets	R0040	43,064	1,002,626
Pension benefit surplus	R0050		
Property, plant & equipment held for own use	R0060	76,654	83,140
Investments (other than assets held for index-linked and unit-linked contracts)	R0070	47,117,759	43,795,833
Property (other than for own use)	R0080	7,736	7,925
Holdings in related undertakings, including participations	R0090	14,972,363	13,165,891
Equities	R0100	0	0
Equities - listed	R0110		
Equities - unlisted	R0120	0	0
Bonds	R0130	29,027,890	27,469,101
Government Bonds	R0140	16,346,873	15,927,969
Corporate Bonds	R0150	11,870,359	10,809,648
Structured notes	R0160		
Collateralised securities	R0170	810,658	731,484
Collective Investments Undertakings	R0180	1,904,696	1,736,577
Derivatives	R0190	120,890	210,268
Deposits other than cash equivalents	R0200	1,084,184	1,206,072
Other investments	R0210		
Assets held for index-linked and unit-linked contracts	R0220		
Loans and mortgages	R0230	514,424	132,247
Loans and mortgages to individuals	R0250	1,346	2,087
Other loans and mortgages	R0260	513,078	130,160
Reinsurance recoverables from:	R0270	8,051,748	8,155,028
Non-life and health similar to non-life	R0280	8,366,522	8,380,994
Non-life excluding health	R0290	7,610,939	7,842,482
Health similar to non-life	R0300	755,582	538,512
Life and health similar to life, excluding health and index-linked and unit-linked	R0310	-276,857	-225,967
Health similar to life	R0320	340,082	274,478
Life excluding health and index-linked and unit-linked	R0330	-616,938	-500,445
Life index-linked and unit-linked	R0340	-37,917	
Deposits to cedants	R0350	7,557,620	6,959,900
Insurance and intermediaries receivables	R0360	6,017,201	1,422,220
Reinsurance receivables	R0370	530,236	306,594
Receivables (trade, not insurance)	R0380	551,365	754,382
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	429,531	627,815
Any other assets, not elsewhere shown	R0420	94,612	89,567
Total assets	**R0500**	**70,984,214**	**63,329,353**

in TEUR	Item	2023	2022
Liabilities			
Technical provisions – non-life	R0510	35,492,438	29,766,347
Technical provisions – non-life (excluding health)	R0520	32,928,150	27,583,945
Technical provisions calculated as a whole	R0530		
Best Estimate	R0540	32,490,294	27,117,154
Risk margin	R0550	437,856	466,791
Technical provisions - health (similar to non-life)	R0560	2,564,288	2,182,402
Technical provisions calculated as a whole	R0570		
Best Estimate	R0580	2,507,627	2,119,891
Risk margin	R0590	56,661	62,511
Technical provisions - life (excluding index-linked and unit-linked)	R0600	3,719,058	4,010,181
Technical provisions - health (similar to life)	R0610	1,829,161	1,791,854
Technical provisions calculated as a whole	R0620		
Best Estimate	R0630	1,618,090	1,498,206
Risk margin	R0640	211,071	293,647
Technical provisions – life (excluding health and index-linked and unit-linked)	R0650	1,889,897	2,218,327
Technical provisions calculated as a whole	R0660		
Best Estimate	R0670	1,245,428	1,553,633
Risk margin	R0680	644,469	664,694
Technical provisions – index-linked and unit-linked	R0690	75,226	155,114
Technical provisions calculated as a whole	R0700		
Best Estimate	R0710	72,846	151,858
Risk margin	R0720	2,380	3,256
Contingent liabilities	R0740		
Provisions other than technical provisions	R0750	137,820	115,256
Pension benefit obligations	R0760	119,344	111,836
Deposits from reinsurers	R0770	4,886,340	5,013,023
Deferred tax liabilities	R0780	3,008,267	3,690,031
Derivatives	R0790	75,307	106,342
Debts owed to credit institutions	R0800		
Financial liabilities other than debts owed to credit institutions	R0810	1,010,877	1,093,987
Insurance & intermediaries payables	R0820	1,422,610	828,363
Reinsurance payables	R0830	1,045,749	163,975
Payables (trade, not insurance)	R0840	454,716	113,186
Subordinated liabilities	R0850	3,046,574	3,374,476
Subordinated liabilities in Basic Own Funds	R0870	3,046,574	3,374,476
Any other liabilities, not elsewhere shown	R0880	150,169	301,218
Total liabilities	**R0900**	**54,644,496**	**48,843,337**
Excess of assets over liabilities	**R1000**	**16,339,718**	**14,486,016**

D.1 Assets

D.1.1 Intangible assets R0030

Differences in valuation

Values as of 31.12.2023 in TEUR	Solvency II	HGB
Intangible assets		70,702

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 70,702. 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 2023	Solvency II 2022
Intangible assets		

In the financial year 2023 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 31.12.2023 in TEUR	Solvency II	HGB
Deferred tax assets	43,064	0

In the Solvency II balance sheet, a deferred tax asset totalling TEUR 43,064 is stated as well as a deferred tax liability with the amount of TEUR 3,008,267. 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.

The amount of deferred tax assets recognised is attributable to the UK branch.

Comparison to prior year

in TEUR	Solvency II 2023	Solvency II 2022
Deferred tax assets	43,064	1,002,626

Whereas a deferred tax asset and a deferred tax liability were not offset last year, there is a requirement to offset these positions from 2023 on. This requirement is based on IAS 12.74 in conjunction with Guideline 9 of the EIOPA Guidelines. A detailed description of this requirement is available in Section E.1.3.6.

The decrease in deferred tax assets of EUR 959,562 thousand is predominantly the result of offsetting. Furthermore, changes of the underwriting balance sheet items and capital investments also effect the development of deferred taxes. 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 31.12.2023 in TEUR	Solvency II	HGB
Property, plant & equipment held for own use	76,654	43,632

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 20,300. 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 33,022 is attributable to the valuation of shares in the business facilities located in Hannover (TEUR 17,442) and Leasing contracts not to be reported under HGB (TEUR 15,580). Leasing liabilities are reported under R0810 in the Solvency II balance to the same extent.

Comparison to prior year

in TEUR	Solvency II 2023	Solvency II 2022
Property, plant & equipment held for own use	76,654	83,140

The decrease compared to the previous year is mainly due to regular adjustments in valuation.

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

Differences in valuation

Values as of 31.12.2023 in TEUR	Solvency II	HGB
Property (other than for own use)	7,736	4,506

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 3,230 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 2023	Solvency II 2022
Property (other than for own use)	7,736	7,925

The decrease compared to the previous year is mainly due to regular adjustments of the market valuation.

D.1.5 Participations and related undertakings R0090

Differences in valuation

Values as of 31.12.2023 in TEUR	Solvency II	HGB
Holdings in related undertakings, including participations	14,972,363	10,755,968

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 Solvency 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 4,216,395 is predominantly attributable to participations held by the Hannover Re Group in domestic and foreign reinsurers.

Comparison to prior year

in TEUR	Solvency II 2023	Solvency II 2022
Holdings in related undertakings, including participations	14,972,363	13,165,891

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 31.12.2023 in TEUR	Solvency II	HGB
Equities	0	

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 2023	Solvency II 2022
Equities	0	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 31.12.2023 in TEUR	Solvency II	HGB
Government Bonds	16,346,873	16,504,154

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 99% of the portfolio items reported here 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 -157,281.

In essence, approximately TEUR -283,823 are attributable to hidden burdens arising from the different valuations and TEUR 126,542 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 2023	Solvency II 2022
Government Bonds	16,346,873	15,927,969

The increase in portfolio size compared to the previous year is predominantly attributable to market value increases due to decreasing long-term interest rates leading to increased market values under Solvency II.

D.1.7.2 Corporate Bonds R0150

Differences in valuation

Values as of 31.12.2023 in TEUR	Solvency II	HGB
Corporate Bonds	11,870,359	12,559,937

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 -689,578.

In essence, approximately TEUR -822,191 are attributable to hidden burdens arising from the different valuations and TEUR 132,613 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 2023	Solvency II 2022
Corporate Bonds	11,870,359	10,809,648

The increase in portfolio size compared to the previous year is predominantly attributable to operating cash flows and the decrease of long-term interest rates leading to increased market values under Solvency II.

D.1.7.3 Collateralised securities R0170

Differences in valuation

Values as of 31.12.2023 in TEUR	Solvency II	HGB
Collateralised securities	810,658	831,137

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.

84% 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 16%.

The difference between the Solvency II value of these investments and their value stated within the annual accounts pursuant to the HGB totals TEUR -20,479.

Here, approximately TEUR -31,156 are attributable to hidden burdens arising from the different valuation bases and TEUR 10,677 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 2023	Solvency II 2022
Collateralised securities	810,658	731,484

The increase in portfolio size compared to the previous year is predominantly attributable to the overall decrease in long-term interest rates and operating cashflow.

D.1.8 Collective Investments Undertakings R0180

Differences in valuation

Values as of 31.12.2023 in TEUR	Solvency II	HGB
Collective Investments Undertakings	1,904,696	1,853,528

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 83% of the positions covered here, 17% are valued using the present value method.

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 51,167 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 51,167. This exclusively concerns hidden burdens.

Comparison to prior year

in TEUR	Solvency II 2023	Solvency II 2022
Collective Investments Undertakings	1,904,696	1,736,577

The increase in the portfolio compared to the previous year is mainly due to market value increases and new investments and reinvestments from operating cash flow.

D.1.9 Derivatives R0190

Differences in valuation

Values as of 31.12.2023 in TEUR	Solvency II	HGB
Derivatives	120,890	0

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 118,907 of the difference in valuation are traced back to the different reporting of the hedging transactions under Solvency II and the HGB.

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 1,983 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 2023	Solvency II 2022
Derivatives	120,890	210,268

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 31.12.2023 in TEUR	Solvency II	HGB
Deposits other than cash equivalents	1,084,184	1,041,665

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 42,518.

The difference is attributable to two effects: on the one hand to different valuations in the amount of TEUR 693 and on the other hand to the different methods of stating accrued interest to an amount of TEUR 41,825. 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 2023	Solvency II 2022
Deposits other than cash equivalents	1,084,184	1,206,072

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 31.12.2023 in TEUR	Solvency II	HGB
Other investments		326,991

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 326,991 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 2023	Solvency II 2022
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 31.12.2023 in TEUR	Solvency II	HGB
Loans and mortgages	514,424	513,193

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 1,231 is attributable to the different valuation principles.

Comparison to prior year

in TEUR	Solvency II 2023	Solvency II 2022
Loans and mortgages	514,424	132,247

The underlying assumptions of loans and mortgages did not change in the financial year 2023.

D.1.13 Loans and mortgages to individuals R0250

Differences in valuation

Values as of 31.12.2023 in TEUR	Solvency II	HGB
Loans and mortgages to individuals	1,346	

Loans and mortgages are recognised at their market value under Solvency II.

Under HGB, the valuation is executed using the diluted lowest value principle for fixed assets. The present value method is applied in the absence of any particular structural characteristics. For structured loans, interest rate models are used, cf. “D.4 Alternative methods for valuation”.

The difference between the valuation in the Solvency II-balance sheet and the HGB annual accounts totalling TEUR 1.346 is attributable to the different valuation approaches.

Comparison to prior year

in TEUR	Solvency II 2023	Solvency II 2022
Loans and mortgages to individuals	1,346	2,087

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

D.1.14 Reinsurance recoverables R0270

Differences in valuation

Values as of 31.12.2023 in TEUR	Solvency II	HGB
Property & Casualty reinsurance	8,366,522	10,270,949
Life & Health reinsurance	-314,774	615,988
Total	**8,051,748**	**10,886,937**

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 open items of balances of accounts payables and receivables not yet agreed with retrocession partners with a certain amount are netted against the 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 2023	Solvency II 2022
Property & Casualty reinsurance	8,366,522	8,380,994
Life & Health reinsurance	-314,774	-225,967
Total	**8,051,748**	**8,155,028**

For Property & Casualty reinsurance, the level of amounts of reinsurance recoverables is nearly unchanged.

For Life & Health reinsurance, the changes in the amount of reinsurance recoverables are inter alia due to economic variances.

D.1.15 Deposits to cedants R0350

Differences in valuation

Values as of 31.12.2023 in TEUR	Solvency II	HGB
Deposits to cedants	7,557,620	9,789,139

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, the gross presentation is pursued. For business with very limited risk transfer, Hannover Rück follows a netted 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 2023	Solvency II 2022
Deposits to cedants	7,557,620	6,959,900

Changes in comparison to the previous reporting period in the amount of deposits to cedants are mainly due to market value adjustments.

D.1.16 Insurance and intermediaries receivables R0360

Differences in valuation

Values as of 31.12.2023 in TEUR	Solvency II	HGB
Insurance and intermediaries receivables	6,017,201	5,343,920

Solvency II differentiates between receivables as follows:

- Receivables from insurance companies and intermediaries: Amounts for payment by policyholders, insurers and other linked to insurance business that are not included in technical provisions. It shall include receivables from reinsurance accepted.
- Receivables from reinsurers: Amounts include all expected payments from reinsurers (linked to reinsurance business) to the undertaking, that are not included in reinsurance recoverables, and especially those that have been agreed between cedent and reinsurer and where the amount of the expected payment is certain.

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 1,203,517. The majority of the differences result from the partial reclassification of receivables from ceded business.

Comparison to prior year

in TEUR	Solvency II 2023	Solvency II 2022
Insurance and intermediaries receivables	6,017,201	1,422,220

Following the new requirements for Solvency II, applicable from 2023 onwards, all accounts receivable and payable from assumed business are shown in the appropriate Balance Sheet items. In the previous year, only the overdue portions were shown there. Cashflows due after the balance sheet date were recognized in the technical provisions.

The presentation in 2023 compared to the previous year changed accordingly. Assuming the application of the new reporting definition for the previous year, the insurance and intermediaries receivables would only increase slightly.

D.1.17 Reinsurance receivables R0370

Differences in valuation

Values as of 31.12.2023 in TEUR	Solvency II	HGB
Reinsurance receivables	530,236	

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 2023	Solvency II 2022
Reinsurance receivables	530,236	306,594

The presentation of receivables from ceded business has also changed with the first-time application of the new requirements for Solvency II, applicable from 2023 onwards. In the previous years, only all overdue parts of receivables were shown in this item. In accordance with the new definition for ceded receivables, all open items which have been agreed between cedent and reinsurer and where the amount of the expected payment is certain are reported in this position from now on.

The presentation in 2023 compared to the previous year has changed accordingly. Assuming that the new reporting logic would have been applied for 2022 as well, a slight increase in reinsurance receivables would be shown.

D.1.18 Receivables (trade, not insurance) R0380

Differences in valuation

Values as of 31.12.2023 in TEUR	Solvency II	HGB
Receivables (trade, not insurance)	551,365	550,242

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 2023	Solvency II 2022
Receivables (trade, not insurance)	551,365	754,382

The reduction in the reporting year is mainly caused by a reduction of receivables from profit absorption from affiliated companies of TEUR 184,865 as well as by a reduction of tax and other receivables.

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

D.1.19 Cash and cash equivalents R0410

Differences in valuation

Values as of 31.12.2023 in TEUR	Solvency II	HGB
Cash and cash equivalents	429,531	429,522

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.

The difference of TEUR 9 is caused by accrued interest which are considered in this position in accordance with Solvency II.

Comparison to prior year

in TEUR	Solvency II 2023	Solvency II 2022
Cash and cash equivalents	429,531	627,815

Cash and cash equivalents decreased by TEUR 198,284 during the reporting period.

D.1.20 Any other assets, not elsewhere shown R0420

Differences in valuation

Values as of 31.12.2023 in TEUR	Solvency II	HGB
Any other assets, not elsewhere shown	94,612	116,456

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 2023	Solvency II 2022
Any other assets, not elsewhere shown	94,612	89,567

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

D.2 Technical Provisions

The technical provisions (TP) under Solvency II are 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	Impact of volatility adjustment set to zero
Technical provisions	39,286,722	384,286
Basic own funds	18,517,993	-318,253
Eligible own funds to meet Solvency Capital Requirement	18,517,993	-318,253
Solvency Capital Requirement	6,784,845	270,677
Eligible own funds to meet Minimum Capital Requirement	16,535,426	-293,892
Minimum Capital Requirement	3,053,180	121,805

Transitionals are currently not applied at Hannover Rück. 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 a unilateral right to terminate the contract.
- The (re)insurance undertaking has a unilateral right to reject premiums payable under the contract.
- The (re)insurance undertaking has a unilateral right to amend the premiums or benefits payable under the contract in such a way that the premiums fully reflect the risks.

In case no 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 deduction 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. For very risk remote transactions, a netted presentation is proceeded. 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).

In the previous years, balances of accounts payables and receivables not due were allocated to the best estimates of technical provisions (for assumed business) or reinsurance recoverables (for retroceded business). Starting this year, only open items not yet agreed with retrocession partners with a certain amount are netted against the reinsurance recoverables.

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.

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	4,409,865	46,591	4,456,457	6,846,263	-2,389,806
Workers' compensation insurance	119,317	408	119,725	356,208	-236,483
Income protection insurance	931,250	10,054	941,304	1,369,280	-427,976
Fire and other damage to property insurance	8,262,863	81,041	8,343,905	10,800,196	-2,456,292
Motor vehicle liability insurance	1,755,483	15,411	1,770,894	3,585,526	-1,814,632
Credit and suretyship insurance	1,602,817	20,466	1,623,283	2,627,044	-1,003,761
Marine, aviation, transport	1,122,590	10,039	1,132,630	1,878,008	-745,379
Other motor insurance	1,513,959	11,706	1,525,665	2,079,419	-553,754
Other insurance	663,628	7,446	671,073	904,308	-233,235
Non-proportional health reinsurance	1,182,376	45,213	1,227,590	1,834,042	-606,452
Non-proportional property	4,964,239	54,945	5,019,183	6,795,770	-1,776,587

reinsurance					
Non-proportional marine, aviation and transport	909,219	12,747	921,966	1,147,185	-225,219
Non-proportional casualty reinsurance	7,560,313	178,450	7,738,763	9,942,114	-2,203,350
Total Non-Life Obligation	**34,997,921**	**494,517**	**35,492,438**	**50,165,363**	**-14,672,925**

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 estimated loss, premium and cost cash flows relating to future losses of 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 estimated loss, premium and cost cash flows relating to losses already occurred 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. First, average inflation rates of the past are taken into account. With the help of scenario-based analyses for expected future inflation rates, the necessity of surcharges is examined.

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 2023.

Major revaluation effects
in TEUR

Description	2023
Technical provisions property and casualty reinsurance net under HGB	**39,894,414**
Proportion of business that is ceded to reinsurer under HGB	10,270,949
Equalisation reserve	-4,270,493
Discounting of cash flows	-5,249,905
Risk margin	494,517
Other revaluation effects	-5,647,045
Total revaluation effect from HGB to Solvency II	**-4,401,976**
Technical provisions property and casualty reinsurance under Solvency II	**35,492,438**

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 built 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.

Comparison to BEL of last year

Comparison to prior year

in TEUR	2023	2022
BEL gross	34,997,921	29,237,045
BEL net	26,631,399	20,856,050
RM	494,517	529,302

The increase in BEL is mainly based on changed treatment of accounts payables and receivables for assumed business, which are no longer netted. Further reasons are economic effects and an increased business volume.

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". Details regarding the treatment of funds withheld (FWH) as well as payables and receivables are provided in Section D.2.

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	1,318,274	646,849	1,965,123	9,397,489	-7,432,366
Health	1,618,090	211,071	1,829,161	549,560	1,279,601
Total	**2,936,364**	**857,920**	**3,794,284**	**9,947,049**	**-6,152,765**

The segmentation into the Life and Health lines of business is slightly different under Solvency II and HGB. A reconciliation from the HGB 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. In general, thereby the reporting currency of the respective branch is applied.

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 regularly reviewed and - if necessary - adjusted on the basis of the accounts from the cedents or detailed experience analyses. 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.

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.

Future Management Actions (FMA) are reflected for certain American, Australian and Asian business. Except for some Asian and some US business, the management actions have generally no impact on the Best Estimate Projections, but only on the scenarios used for the internal model. Therefore, they affect the SCR and the risk margin. For Asian business, FMA is only considered in the BEL.

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.

For the longevity business in the UK market, there was a BEL-reducing effect from the adjustment of the mortality improvement and mortality assumptions for large parts of the portfolio. This reduction was so material that it outweighed the BEL-increasing effects mentioned below. There were adjustments to the morbidity assumptions for selected critical illness contracts of the Shanghai branch. The mortality, mortality improvement and expense assumptions were revised for some material contracts in the UK market. The lapse and morbidity assumptions were adjusted for a contract in the Australian market. Adjustments were made to the mortality and mortality improvement assumptions for mortality business of the branch in Canada, which is retroceded to Hannover Rück.

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 -314,774), 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 615,988. 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 a material driver of uncertainty in the modelling of business. Relevant morbidity risks are stemming from potential changes of incidence rates for Chinese critical illness business as well as from Australian and Taiwanese disability business and UK critical illness 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.

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.

Only minor impacts are expected 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	2023
(1)	**Technical HGB liability net of reinsurance**	**9,331,061**
(2)	Risk Margin	857,920
(3)	Deposit cash flows for very risk remote transactions are inlcluded in TP under Solvency II	-2,298,444
(4)	Further differences in methods / assumptions	-3,878,189
(5)	Netting of accounts payables and receivables	58,793
(6)=(1)+...+(5)	**Solvency II TP net of reinsurance**	**4,071,141**

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 Provisions other than technical provisions R0750

Difference in valuation

Values as of 31.12.2023 in TEUR	Solvency II	HGB
Provisions other than technical provisions	137,820	276,474

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 138,654 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 2023	Solvency II 2022
Provisions other than technical provisions	137,820	115,256

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

D.3.2 Pension benefit obligations R0760

Difference in valuation

Values as of 31.12.2023 in TEUR	Solvency II	HGB
Pension benefit obligations	119,344	119,997

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 653 is particularly attributable to the different interest rates applied for discounting.

Comparison to prior year

in TEUR	Solvency II 2023	Solvency II 2022
Pension benefit obligations	119,344	111,836

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

D.3.3 Deposits from reinsurers R0770

Difference in valuation

Values as of 31.12.2023 in TEUR	Solvency II	HGB
Deposits from reinsurers	4,886,340	4,998,161

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 2023	Solvency II 2022
Deposits from reinsurers	4,886,340	5,013,023

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

D.3.4 Deferred tax liabilities R0780

Difference in valuation

Values as of 31.12.2023 in TEUR	Solvency II	HGB
Deferred tax liabilities	3,008,267	0

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 43,064 is stated as well as a deferred tax liability to the amount of TEUR 3,008,267. 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.1.3.5 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 2023	Solvency II 2022
Deferred tax liabilities	3,008,267	3,690,031

Whereas a deferred tax asset and a deferred tax liability were not offset last year, there is a requirement to offset these positions from 2023 on. This requirement is based on IAS 12.74 in conjunction with Guideline 9 of the EIOPA Guidelines. A detailed description of this requirement is available in Section E.1.3.6.

The decline in deferred tax liabilities is due, among other things, to the aforementioned offsetting requirement. Furthermore, 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.3.5 Derivatives R0790

Difference in valuation

Values as of 31.12.2023 in TEUR	Solvency II	HGB
Derivatives	75,307	

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 75,307 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 comparison to the previous year, the assumptions regarding the calculation of this balance sheet item did not change.

in TEUR	Solvency II 2023	Solvency II 2022
Derivatives	75,307	106,342

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

Difference in valuation

Values as of 31.12.2023 in TEUR	Solvency II	HGB
Financial liabilities other than debts owed to credit institutions	1,010,877	1,034,643

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 -23,766. This difference is mainly caused by valuation differences of a senior bond issued in the financial year 2018. Additionally, there are 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 2023	Solvency II 2022
Financial liabilities other than debts owed to credit institutions	1,010,877	1,093,987

The decrease in the value in the year under review results predominantly from a decrease in loans with group companies and a lower market value 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.3.7 Insurance & intermediaries payables R0820

Difference in valuation

Values as of 31.12.2023 in TEUR	Solvency II	HGB
Insurance & intermediaries payables	1,422,610	

Solvency II differentiates between payables as follows:

- payables to insurance companies and intermediaries: Amounts payable to policyholders, insurers and other business linked to insurance that are not included in technical provisions. It shall include payables from reinsurance accepted.
- payables to reinsurers: Amounts payable to reinsurers other than deposits linked to reinsurance business that are not included in reinsurance recoverables. It includes all expected payments from the undertaking to reinsurers, especially agreed payments between cedent and reinsurer and where the amount of the expected payment is certain.

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 2023	Solvency II 2022
Insurance & intermediaries payables	1,422,610	828,363

Following the new requirements for Solvency II, applicable from 2023 onwards, all accounts receivable and payable from assumed business are shown in the appropriate Balance Sheet items. In the previous year, only the overdue portions were shown there. Cashflows due after the balance sheet date were recognized in the technical provisions.

The presentation in 2023 compared to the previous year changed accordingly. Assuming the application of the new reporting definition for the previous year, the insurance and intermediaries receivables would only increase slightly.

D.3.8 Reinsurance payables R0830

Difference in valuation

Values as of 31.12.2023 in TEUR	Solvency II	HGB
Reinsurance payables	1,045,749	2,401,638

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. Reinsurance payables shown in this position have been agreed between cedent and reinsurer and amount of the expected payment is certain.

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 66,721. The majority of the differences result from the partial reclassification of payables from ceded business.

Comparison to prior year

in TEUR	Solvency II 2023	Solvency II 2022
Reinsurance payables	1,045,749	163,975

The presentation of payables from ceded business has also changed with the first-time application of the new requirements, applicable from 2023 onwards. In the previous years, only all overdue parts of payables were shown in this item. In accordance with the new definition for reinsurance payables, all open items which have been agreed between cedent and reinsurer and where the amount of the expected payment is certain are reported on this Balance Sheet item from now on.

The presentation in 2023 compared to the previous year changed accordingly. Assuming that the new reporting logic would have been applied for 2022 as well, reinsurance payables of the previous year would show higher amounts.

D.3.9 Payables (trade, not insurance) R0840

Difference in valuation

Values as of 31.12.2023 in TEUR	Solvency II	HGB
Payables (trade, not insurance)	454,716	479,046

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 statement and the financial statements prepared in accordance with the HGB results from reclassifications.

Comparison to prior year

in TEUR	Solvency II 2023	Solvency II 2022
Payables (trade, not insurance)	454,716	113,186

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

The increase in the year under review is mainly based on an increase of liability from repurchase agreements by TEUR 315,864 and on an increase of tax liabilities by TEUR 25,418.

D.3.10 Subordinated liabilities R0850

Difference in valuation

Values as of 31.12.2023 in TEUR	Solvency II	HGB
Subordinated liabilities	3,046,574	3,250,000

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.

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 -203,426.

Comparison to prior year

in TEUR	Solvency II 2023	Solvency II 2022
Subordinated liabilities	3,046,574	3,374,476

The decrease compared to the previous year is mainly based on the repayment of a subordinated loan to a Group company.

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

D.3.11 Any other liabilities, not elsewhere shown R0880

Difference in valuation

Values as of 31.12.2023 in TEUR	Solvency II	HGB
Any other liabilities, not elsewhere shown	150,169	104,035

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 46,134 is the result of reclassifications.

Comparison to prior year

in TEUR	Solvency II 2023	Solvency II 2022
Any other liabilities, not elsewhere shown	150,169	301,218

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

In the financial year 2023 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 used (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, other term structure models
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
Zero Coupon Inflation Swaps	Interest rate curve, inflation curve, seasonality	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 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 3,451,913. 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 7,315,207. 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 1,997,500. 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 150,000 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 60,000.

Hannover Rück receives collateral from its retrocessionaires for the safeguarding of receivables from retroceded business. The provision of collateral by the retrocessionaires takes places in the form of letters of credit (LoCs) and deposits among other forms. For the majority of our retrocessionaires we also function as reinsurer, meaning that in most cases recoverables can potentially be set off against our own liabilities.

Hannover Rück has residual payment obligations totalling TEUR 222,053 for special investments and shares in affiliate companies. Furthermore, there is a long-term compensation obligation of TEUR 7,387 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 2023.

Structure of basic own funds

in TEUR	2023	2022
Tier 1 unrestricted	15,428,355	13,723,099
Ordinary share capital	120,597	120,597
Share premium account	880,608	880,608
Reconciliation reserve	14,427,150	12,721,894
Tier 1 restricted	496,435	486,034
Subordinated own funds	496,435	486,034
Tier 2	2,550,139	2,888,442
Subordinated own funds	2,550,139	2,888,442
Tier 3	43,064	39,335
An amount equal to the value of net deferred tax assets	43,064	39,335
Total	**18,517,993**	**17,136,910**

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 a change for the 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 2023 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	2023	2022
Total available own funds	18,517,993	17,136,910
Total eligible own funds to meet SCR	18,517,993	17,136,910
Total eligible own funds to meet MCR	16,535,426	14,812,099

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	2023	2022
Shareholders' capital (HGB)	6,365,716	6,697,716
Dividend	-868,299	-723,583
Differences in values and valuations Solvency II to HGB:	15,985,779	13,850,181
Equalisation reserve	4,270,493	4,865,347
Deferred acquisition costs and other intangible assets	-70,702	-60,263
Land, buildings and equipment	36,252	40,445
Shares / investments in affiliates and participations	4,216,395	3,240,621
Fixed-interest securities and other investments	-978,513	-1,993,295
Assets and liabilities from reinsurance business	8,466,612	7,730,847
Miscellaneous non-technical assets and liabilities	45,242	26,478
Deferred taxes on tax differences between Solvency II and HGB	-2,965,203	-2,687,405
Available own funds (Solvency II)	**18,517,993**	**17,136,910**

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 14,427,150. The reconciliation increased by TEUR 1,705,256 during the reporting period.

The reconciliation reserve represents reserves (in particular retained earnings) less value adjustments; 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 five subordinated bonds 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.

At the balance sheet date, the subordinated liabilities totalled TEUR 3.046.574.

In the period under review a subordinated loan with a nominal value of TEUR 500,000 was redeemed to a subsidiary.

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

On 14 November 2022 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 22 March 2021 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 8 July 2020 Hannover Rück 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.

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 43,064.

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.

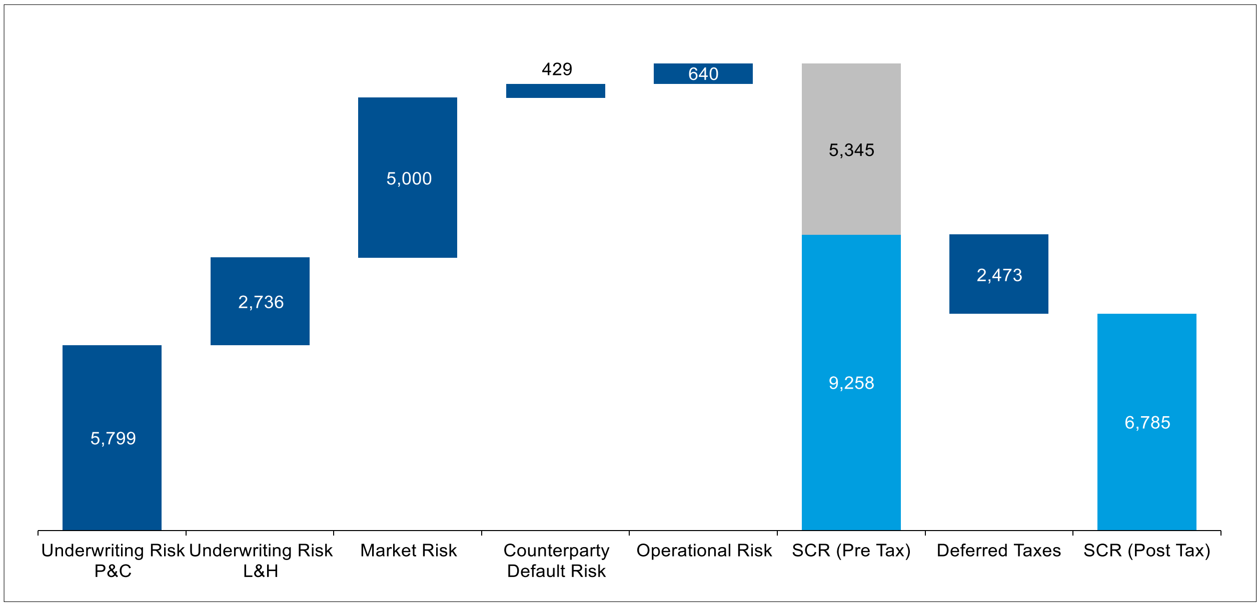
E.2 Solvency Capital Requirement and Minimum Capital Requirement

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	2023	2022
Underwriting risk - Property & Casualty	5,799,022	5,445,473
Underwriting risk - Life & Health	2,735,684	2,507,694
Market risk	4,999,730	4,940,625
Counterparty default risk	428,956	426,917
Operational risk	640,138	607,039
Diversification	**-5,345,260**	**-4,739,894**
Total risk (pre-tax)	**9,258,271**	**9,187,854**
Deferred tax	2,473,426	2,488,237
Total risk (post-tax)	**6,784,845**	**6,699,618**

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% slightly increased in the course of the year. This is primarily a consequence of business growth, which has led to an increase in the underwriting risks of property and casualty reinsurance and life and health reinsurance. The decline in interest rates and the resulting increase in the market value of fixed-income securities contribute to the increase in risk. On the other hand, the stronger euro and improved diversification lead to a decline in the SCR.

Underwriting risks in property and casualty reinsurance have increased mainly as a result of higher premiums and reserves. The higher volumes result from business growth including higher capacities for natural catastrophe risks, claims development and the associated higher reserves.

The higher business volume and the decline in interest rates leads to an increase in underwriting risks in life and health reinsurance. This particularly affects longevity risk and pandemic risk.

The slight increase in the market risk reflects the increase in credit and spread risk due to higher market values of fixed-income securities as well as an increase in exchange rate risk and new investments in real estate. An increase in interest rate risk only contributes insignificantly to the increase in market risk.

The slight increase in counterparty default risk can be attributed principally to an increase in default volume from property and casualty cedents.

The changes in operational risk can be attributed to updated expert assessments regarding the impact of individual scenarios.

The increase in the diversification effect is a result of changes in the composition of the risks. The loss-absorbing effect of taxes remains largely 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 initial net deferred tax liabilities. The net deferred tax liabilities basically stem from temporary valuation differences compared to the tax balance sheet.

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	2023	2022
Eligible own funds	18,517,993	17,136,910
SCR	6,784,845	6,699,618
Ratio of eligible own funds to SCR	**273%**	**256%**

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	2023	2022
Eligible own funds	16,535,426	14,812,099
MCR	3,053,180	3,014,828
Ratio of eligible own funds to MCR	**542%**	**491%**

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 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 that is reflecting the changes in economic value over a period of one year.

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 and 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.

The results of Hannover Rück's internal model provide support to senior management in their decision-making. 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 health as well as property and casualty), 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 and health, underwriting risk property and casualty, 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 – in particular for the underwriting risk. Generally speaking, company data relating to insurance performance within property and casualty is available for more than 30 years. This is deemed sufficiently historical information. However, due to the particular characteristics of early underwriting years, e.g. low premium volume, changing business segmentation or non-representative market segments, only portions of this data are used as part of the internal model calibration.

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

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

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 property and casualty 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. 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 frequent losses.

AF: Actuarial function

BaFin: Bundesanstalt für Finanzdienstleistungsaufsicht, Federal Financial Supervisory Authority

BEL: Best Estimate Liability

CEO: Chief Executive Officer

CFO: Chief Financial Officer

CLO: Collateralised Loan Obligation

CMS: Compliance Management System

DVO: Delegierte Verordnung, Delegated Act

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

IAS: International Accounting Standard

IBNR: Incurred But Not Reported

ICS: Internal Control System

IFRS: International Financial Reporting Standards

MCR: Minimum Capital Requirement

NGO: Non-Governmental Organisation

ORSA: Own Risk and Solvency Assessment

OTC: Over the Counter

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

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**	43,064
Pension benefit surplus	**R0050**	
Property, plant & equipment held for own use	**R0060**	76,654
Investments (other than assets held for index-linked and unit-linked contracts)	**R0070**	47,117,759
Property (other than for own use)	**R0080**	7,736
Holdings in related undertakings, including participations	**R0090**	14,972,363
Equities	**R0100**	0
Equities - listed	**R0110**	
Equities - unlisted	**R0120**	0
Bonds	**R0130**	29,027,890
Government Bonds	**R0140**	16,346,873
Corporate Bonds	**R0150**	11,870,359
Structured notes	**R0160**	
Collateralised securities	**R0170**	810,658
Collective Investments Undertakings	**R0180**	1,904,696
Derivatives	**R0190**	120,890
Deposits other than cash equivalents	**R0200**	1,084,184
Other investments	**R0210**	
Assets held for index-linked and unit-linked contracts	**R0220**	
Loans and mortgages	**R0230**	514,424
Loans on policies	**R0240**	
Loans and mortgages to individuals	**R0250**	1,346
Other loans and mortgages	**R0260**	513,078
Reinsurance recoverables from:	**R0270**	8,051,748
Non-life and health similar to non-life	**R0280**	8,366,522
Non-life excluding health	**R0290**	7,610,939
Health similar to non-life	**R0300**	755,582
Life and health similar to life, excluding health and index-linked and unit-linked	**R0310**	-276,857
Health similar to life	**R0320**	340,082
Life excluding health and index-linked and unit-linked	**R0330**	-616,938
Life index-linked and unit-linked	**R0340**	-37,917
Deposits to cedants	**R0350**	7,557,620
Insurance and intermediaries receivables	**R0360**	6,017,201
Reinsurance receivables	**R0370**	530,236
Receivables (trade, not insurance)	**R0380**	551,365
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**	429,531
Any other assets, not elsewhere shown	**R0420**	94,612
Total assets	**R0500**	**70,984,214**

S.02.01.02: Balance sheet, page 2		Solvency II
Liabilities		**C0010**
Technical provisions – non-life	**R0510**	35,492,438
Technical provisions – non-life (excluding health)	**R0520**	32,928,150
Technical provisions calculated as a whole	**R0530**	
Best Estimate	**R0540**	32,490,294
Risk margin	**R0550**	437,856
Technical provisions - health (similar to non-life)	**R0560**	2,564,288
Technical provisions calculated as a whole	**R0570**	
Best Estimate	**R0580**	2,507,627
Risk margin	**R0590**	56,661
Technical provisions - life (excluding index-linked and unit-linked)	**R0600**	3,719,058
Technical provisions - health (similar to life)	**R0610**	1,829,161
Technical provisions calculated as a whole	**R0620**	
Best Estimate	**R0630**	1,618,090
Risk margin	**R0640**	211,071
Technical provisions – life (excluding health and index-linked and unit-linked)	**R0650**	1,889,897
Technical provisions calculated as a whole	**R0660**	
Best Estimate	**R0670**	1,245,428
Risk margin	**R0680**	644,469
Technical provisions – index-linked and unit-linked	**R0690**	75,226
Technical provisions calculated as a whole	**R0700**	
Best Estimate	**R0710**	72,846
Risk margin	**R0720**	2,380
Contingent liabilities	**R0740**	
Provisions other than technical provisions	**R0750**	137,820
Pension benefit obligations	**R0760**	119,344
Deposits from reinsurers	**R0770**	4,886,340
Deferred tax liabilities	**R0780**	3,008,267
Derivatives	**R0790**	75,307
Debts owed to credit institutions	**R0800**	
Financial liabilities other than debts owed to credit institutions	**R0810**	1,010,877
Insurance & intermediaries payables	**R0820**	1,422,610
Reinsurance payables	**R0830**	1,045,749
Payables (trade, not insurance)	**R0840**	454,716
Subordinated liabilities	**R0850**	3,046,574
Subordinated liabilities not in Basic Own Funds	**R0860**	
Subordinated liabilities in Basic Own Funds	**R0870**	3,046,574
Any other liabilities, not elsewhere shown	**R0880**	150,169
Total liabilities	**R0900**	**54,644,496**
Excess of assets over liabilities	**R1000**	**16,339,718**

S.04.05.21. Non-life insurance and reinsurance obligations (“Countries”)

		Home Country	Top 5 countries: Non-life insurance and reinsurance obligations				
Country	R0010		AU	CN	GB	IE	US
		C0010	C0020	C0039	C0040	C0050	C0060
Premiums written (gross)							
Gross Written Premium (direct)	**R0020**						
Gross Written Premium (proportional reinsurance)	**R0021**	353,716	638,047	820,556	1,995,440	896,329	5,138,680
Gross Written Premium (non-proportional reinsurance)	**R0022**	32,200	200,642	46,457	554,082	80,092	3,215,216
Premiums earned (gross)							
Gross Earned Premium (direct)	**R0030**						
Gross Earned Premium (proportional reinsurance)	**R0031**	336,162	632,846	909,999	1,883,044	930,253	5,132,341
Gross Earned Premium (non-proportional reinsurance)	**R0032**	19,783	153,391	48,785	566,210	76,712	3,182,455
Claims incurred (gross)							
Claims incurred (direct)	**R0040**						
Claims incurred (proportional reinsurance)	**R0041**	166,897	474,430	549,885	1,291,618	683,058	3,653,656
Claims incurred (non-proportional reinsurance)	**R0042**	8,011	52,942	12,455	173,995	29,388	2,520,060
Expenses incurred (gross)							
Gross Expenses Incurred (direct)	**R0050**						
Gross Expenses Incurred (proportional reinsurance)	**R0051**	383,125	147,355	284,061	673,295	308,708	1,471,152
Gross Expenses Incurred (non-proportional reinsurance)	**R0052**	191,428	39,390	7,175	55,580	35,842	505,644

		Home Country	Top 5 countries: Life insurance and reinsurance obligations				
Country	R1010		AU	BB	CN	FR	GB
		C0030	C0040	C0030	C0040	C0050	C0060
Gross Written Premium	**R1020**	6,540	822,622	229,125	782,888	816,226	1,613,147
Gross Earned Premium	**R1030**	6,540	822,622	229,125	782,742	816,284	1,613,147
Claims incurred	**R1040**	5,131	667,797	52,364	639,456	625,982	1,547,652
Gross Expenses Incurred	**R1050**	169,576	-8,407	169,636	56,400	160,737	30,654

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' 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
		C0010	C0020	C0030	C0040	C0050	C0060	C0070	C0080	C0090
Premiums written										
Gross - Direct Business	R0110									
Gross - Proportional reinsurance accepted	R0120	103,117	420,929	85,598	1,496,640	1,756,560	728,497	6,856,157	1,883,001	1,067,638
Gross - Non-proportional reinsurance accepted	R0130									
Reinsurers' share	R0140	11,829	129,304	114,894	632,770	1,072,980	301,341	3,906,090	1,024,839	725,168
Net	R0200	91,288	291,625	-29,296	863,871	683,580	427,156	2,950,067	858,161	342,470
Premiums earned										
Gross - Direct Business	R0210									
Gross - Proportional reinsurance accepted	R0220	107,020	486,904	80,358	1,504,461	1,804,978	729,829	6,832,248	1,898,711	1,006,949
Gross - Non-proportional reinsurance accepted	R0230									
Reinsurers' share	R0240	18,978	156,948	113,912	624,501	1,101,980	306,827	3,928,895	1,034,872	716,233
Net	R0300	88,042	329,957	-33,553	879,960	702,998	423,002	2,903,353	863,839	290,716
Claims incurred										
Gross - Direct Business	R0310									
Gross - Proportional reinsurance accepted	R0320	103,892	464,684	47,908	1,140,815	1,257,286	367,304	4,528,678	1,441,331	455,450
Gross - Non-proportional reinsurance accepted	R0330									
Reinsurers' share	R0340	42,212	190,310	62,055	452,546	744,364	201,411	1,967,243	874,269	270,564
Net	R0400	61,681	274,374	-14,148	688,269	512,922	165,893	2,561,435	567,062	184,886
Expenses incurred	**R0550**	**48,771**	**156,479**	**4,985**	**291,109**	**233,849**	**161,187**	**1,148,914**	**418,129**	**105,336**
Balance - other technical expenses/income	**R1210**									
Total technical expenses	**R1300**									

S.05.01.02: Cover, page 2

		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	Assistance	Miscella-neous financial loss	Health	Casualty	Marine, aviation, transport	Property	
		C0100	**C0110**	**C0120**	**C0130**	**C0140**	**C0150**	**C0160**	**C0200**
Premiums written									
Gross - Direct Business	**R0110**								
Gross - Proportional reinsurance accepted	**R0120**	44,936	67,884	213,654					**14,724,610**
Gross - Non-proportional reinsurance accepted	**R0130**				227,054	1,742,862	326,424	3,915,870	**6,212,210**
Reinsurers' share	**R0140**	6,397	8,848	35,487	3,830	14,010	40,003	265,273	**8,293,064**
Net	**R0200**	38,538	59,036	178,166	223,223	1,728,852	286,422	3,650,598	**12,643,757**
Premiums earned									
Gross - Direct Business	**R0210**								
Gross - Proportional reinsurance accepted	**R0220**	44,815	48,936	208,167					**14,753,378**
Gross - Non-proportional reinsurance accepted	**R0230**				225,746	1,725,218	324,566	3,830,410	**6,105,940**
Reinsurers' share	**R0240**	6,455	6,383	35,350	3,830	13,954	40,483	261,485	**8,371,086**
Net	**R0300**	38,361	42,554	172,817	221,916	1,711,264	284,083	3,568,925	**12,488,232**

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	Assistance	Miscella-neous financial loss	Health	Casualty	Marine, aviation, transport	Property	
		C0100	**C0110**	**C0120**	**C0130**	**C0140**	**C0150**	**C0160**	**C0200**
Claims incurred									
Gross - Direct Business	**R0310**								
Gross - Proportional reinsurance accepted	**R0320**	18,235	32,693	75,825					**9,934,101**
Gross - Non-proportional reinsurance accepted	**R0330**				33,561	1,651,902	296,309	2,069,108	**4,050,880**
Reinsurers' share	**R0340**	2,402	4,183	6,061	-101	326	14,490	-30,390	**4,801,944**
Net	**R0400**	15,834	28,510	69,765	33,663	1,651,576	281,819	2,099,498	**9,183,038**
Expenses incurred	**R0550**	**13,160**	**13,707**	**83,118**	**49,365**	**445,283**	**68,758**	**574,725**	**3,816,876**
Other expenses	**R1210**								
Total expenses	**R1300**								**3,816,876**

S.05.01.02: Cover, page 4

		Line of Business for: life insurance obligations						Life reinsurance obligations		Total
		Health insurance	Insurance with profit participation	Index-linked and unit-linked insurance	Other life insurance	Annuities stemming from non-life insurance contracts and relating to health insurance obligations	Annuities stemming from non-life insurance contracts and relating to insurance obligations other than health insurance obligations	Health reinsurance	Life reinsurance	
		C0210	C0220	C0230	C0240	C0250	C0260	C0270	C0280	C0300
Premiums written										
Gross	**R1410**							2,017,625	4,366,845	6,384,470
Reinsurers' share	**R1420**							331,996	1,127,665	1,459,661
Net	**R1500**							1,685,630	3,239,180	4,924,809
Premiums earned										
Gross	**R1510**							2,014,646	4,370,692	6,385,338
Reinsurers' share	**R1520**							336,019	1,130,985	1,467,004
Net	**R1600**							1,678,627	3,239,707	4,918,334
Claims incurred										
Gross	**R1610**							1,673,622	3,476,730	5,150,353
Reinsurers' share	**R1620**							197,786	807,316	1,005,103
Net	**R1700**							1,475,836	2,669,414	4,145,250
Expenses incurred	**R1900**							259,885	523,129	783,014
Other expenses	**R2500**									
Total expenses	**R2600**									783,014
Total amount of surrenders	**R2700**									

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		
				Contracts without options and guarantees	Contracts with options or guarantees
		C0020	C0030	C0040	C0050
Technical provisions calculated as a whole	R0010				
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	R0020				
Technical provisions calculated as a sum of BE and RM					
Best Estimate					
Gross Best Estimate	R0030				
Total Recoverables from reinsurance/SPV and Finite Re after the adjustment for expected losses due to counterparty default	R0080				
Best estimate minus recoverables from reinsurance/SPV and Finite Re - total	R0090				
Risk Margin	R0100				
Technical provisions - total	R0200				

TP Life, page 2

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

TP Life, page 3

		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
Technical provisions calculated as a whole	**R0010**			
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	**R0020**			
Technical provisions calculated as a sum of BE and RM				
Best Estimate				
Gross Best Estimate	**R0030**		1,318,274	**1,318,274**
Total Recoverables from reinsurance/SPV and Finite Re after the adjustment for expected losses due to counterparty default	**R0080**		-654,856	**-654,856**
Best estimate minus recoverables from reinsurance/SPV and Finite Re - total	**R0090**		1,973,130	**1,973,130**
Risk Margin	**R0100**		646,849	**646,849**
Technical provisions - total	**R0200**		**1,965,123**	**1,965,123**

TP Life, page 4

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

TP Life, page 5

		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
Technical provisions calculated as a whole	**R0010**			
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	**R0020**			
Technical provisions calculated as a sum of BE and RM				
Best Estimate				
Gross Best Estimate	**R0030**		1,618,090	1,618,090
Total Recoverables from reinsurance/SPV and Finite Re after the adjustment for expected losses due to counterparty default	**R0080**		340,082	340,082
Best estimate minus recoverables from reinsurance/SPV and Finite Re - total	**R0090**		1,278,008	1,278,008
Risk Margin	**R0100**		211,071	211,071
Technical provisions - total	**R0200**		1,829,161	1,829,161

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
		C0020	C0030	C0040	C0050	C0060	C0070	C0080	C0090	C0100
Technical provisions calculated as a whole	**R0010**									
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	**R0050**									
Technical provisions calculated as a sum of BE and RM										
Best estimate										
Premium provisions										
Gross	**R0060**	26,780	96,921	17,284	184,065	313,547	105,826	1,375,332	479,009	195,894
Total recoverable from reinsurance/SPV and Finite Re after the adjustment for expected losses due to counterparty default	**R0140**	19,636	50,888	1,863	-5,984	97,444	28,565	-210,234	-58,942	22,214
Net Best Estimate of Premium Provisions	**R0150**	7,144	46,032	15,421	190,049	216,104	77,261	1,585,566	537,950	173,680

S.17.01.02: TP Non-Life, page 2

		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
		C0020	**C0030**	**C0040**	**C0050**	**C0060**	**C0070**	**C0080**	**C0090**	**C0100**
Claims provisions										
Gross	**R0160**	247,904	834,330	102,033	1,571,419	1,200,412	1,016,764	6,887,531	3,930,856	1,406,923
Total recoverable from reinsurance/SPV and Finite Re after the adjustment for expected losses due to counterparty default	**R0240**	128,236	339,668	212,088	744,150	772,692	576,781	3,202,551	1,559,451	552,816
Net Best Estimate of Claims Provisions	**R0250**	119,667	494,661	-110,055	827,269	427,719	439,984	3,684,980	2,371,405	854,108
Total Best estimate - gross	**R0260**	274,683	931,250	119,317	1,755,483	1,513,959	1,122,590	8,262,863	4,409,865	1,602,817
Total Best estimate - net	**R0270**	126,811	540,694	-94,634	1,017,318	643,823	517,245	5,270,546	2,909,356	1,027,787
Risk margin	**R0280**	987	10,054	408	15,411	11,706	10,039	81,041	46,591	20,466

S.17.01.02: TP Non-Life, page 3

		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
		C0020	C0030	C0040	C0050	C0060	C0070	C0080	C0090	C0100
Technical provisions - total										
Technical provisions - total	**R0320**	275,670	941,304	119,725	1,770,894	1,525,665	1,132,630	8,343,905	4,456,457	1,623,283
Recoverable from reinsurance contract/SPV and Finite Re after the adjustment for expected losses due to counterparty default - total	**R0330**	147,872	390,557	213,951	738,165	870,136	605,346	2,992,317	1,500,510	575,030
Technical provisions minus recoverables from reinsurance/SPV and Finite Re - total	**R0340**	127,798	550,747	-94,226	1,032,729	655,530	527,284	5,351,588	2,955,947	1,048,253

S.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	Assistance	Miscellaneous financial loss	Non-proportional health reinsurance	Non-proportional casualty reinsurance	Non-proportional marine, aviation and transport reinsurance	Non-proportional property reinsurance	
		C0110	C0120	C0130	C0140	C0150	C0160	C0170	C0180
Technical provisions calculated as a whole	**R0010**								
Total Recoverables from reinsurance/SPV and Finite Re after the adjustment for expected losses due to counterparty default associated to TP as a whole	**R0050**								
Technical provisions calculated as a sum of BE and RM									
Best estimate									
Premium provisions									
Gross	**R0060**	5,013	19,158	33,696	28,482	499,694	76,486	503,134	**3,960,319**
Total recoverable from reinsurance/SPV and Finite Re after the adjustment for expected losses due to counterparty default	**R0140**	-1,500	-43	447	-37	60	-10,520	-38,967	**-105,109**
Net Best Estimate of Premium Provisions	**R0150**	6,513	19,202	33,249	28,518	499,633	87,006	542,101	**4,065,429**

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	Assistance	Miscellaneous financial loss	Non-proportional health reinsurance	Non-proportional casualty reinsurance	Non-proportional marine, aviation and transport reinsurance	Non-proportional property reinsurance	
		C0110	**C0120**	**C0130**	**C0140**	**C0150**	**C0160**	**C0170**	**C0180**
Claims provisions									
Gross	**R0160**	83,804	26,363	220,910	1,153,895	7,060,619	832,733	4,461,105	**31,037,601**
Total recoverable from reinsurance/SPV and Finite Re after the adjustment for expected losses due to counterparty default	**R0240**	15,015	3,700	59,604	3,239	20,480	80,974	200,187	**8,471,631**
Net Best Estimate of Claims Provisions	**R0250**	68,790	22,663	161,307	1,150,656	7,040,139	751,759	4,260,918	**22,565,970**
Total Best Estimate - gross	**R0260**	88,817	45,521	254,606	1,182,376	7,560,313	909,219	4,964,239	**34,997,921**
Total Best Estimate - net	**R0270**	75,303	41,865	194,555	1,179,174	7,539,772	838,765	4,803,019	**26,631,399**
Risk margin	**R0280**	1,883	266	4,310	45,213	178,450	12,747	54,945	**494,517**
Technical provisions - total									
Technical provisions - total	**R0320**	90,700	45,787	258,916	1,227,590	7,738,763	921,966	5,019,183	**35,492,438**
Recoverable from reinsurance contract/SPV and Finite Re after the adjustment for expected losses due to counterparty default - total	**R0330**	13,514	3,656	60,051	3,202	20,541	70,454	161,220	**8,366,522**
Technical provisions minus recoverables from reinsurance/SPV and Finite Re - total	**R0340**	77,186	42,131	198,865	1,224,387	7,718,222	851,513	4,857,964	**27,125,917**

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	R0100											26,041,877
N-9	R0160	770,079	1,164,585	538,655	243,079	188,125	261,542	150,305	73,049	58,389	51,368	
N-8	R0170	1,096,613	1,121,899	599,243	299,496	193,079	176,047	112,690	108,583	70,641		
N-7	R0180	1,151,842	1,274,454	705,265	318,751	257,247	166,029	143,370	88,365			
N-6	R0190	1,339,258	1,892,409	704,912	571,378	350,393	256,321	196,460				
N-5	R0200	1,659,957	2,268,092	1,123,664	448,691	393,402	269,991					
N-4	R0210	2,198,917	2,736,684	984,768	626,141	626,531						
N-3	R0220	2,250,822	2,584,111	1,086,532	745,049							
N-2	R0230	2,619,970	3,249,213	1,553,446								
N-1	R0240	3,520,021	4,222,194									
N	R0250	3,351,090										

S.19.01.21: page 1		In current year	Sum of years (cumu-lative)
		C0170	C0180
Prior	R0100	26,041,877	26,041,877
N-9	R0160	51,368	3,499,177
N-8	R0170	70,641	3,778,290
N-7	R0180	88,365	4,105,324
N-6	R0190	196,460	5,311,131
N-5	R0200	269,991	6,163,796
N-4	R0210	626,531	7,173,042
N-3	R0220	745,049	6,666,513
N-2	R0230	1,553,446	7,422,629
N-1	R0240	4,222,194	7,742,215
N	R0250	3,351,090	3,351,090
Total	**R0260**	**37,217,013**	**81,255,084**

Gross undiscounted Best Estimate Claims Provision
(absoulte 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	**R0100**											32,341,970
N-9	**R0160**			2,167,852	1,878,134	1,424,282	1,187,225	945,444	729,246	651,686	544,014	
N-8	**R0170**		2,876,438	2,367,643	1,750,022	1,587,700	1,330,758	1,036,632	875,685	704,426		
N-7	**R0180**	2,458,363	3,077,134	2,192,049	2,004,456	1,661,355	1,381,835	1,167,173	971,141			
N-6	**R0190**	2,310,482	3,240,184	3,010,438	2,420,888	1,918,630	1,646,669	1,316,807				
N-5	**R0200**	3,127,651	4,349,669	3,505,604	2,710,064	2,276,061	1,906,454					
N-4	**R0210**	3,988,547	5,315,858	4,093,957	3,203,827	2,541,951						
N-3	**R0220**	4,656,642	6,074,018	4,832,120	3,655,710							
N-2	**R0230**	4,340,592	8,031,084	6,505,966								
N-1	**R0240**	6,826,581	7,539,593									
N	**R0250**	6,339,479										

S.19.01.21: page 2		Year end (discounted data)
		C0360
Prior	**R0100**	2,692,880
N-9	**R0160**	456,890
N-8	**R0170**	591,241
N-7	**R0180**	807,331
N-6	**R0190**	1,122,057
N-5	**R0200**	1,640,573
N-4	**R0210**	2,212,782
N-3	**R0220**	3,199,144
N-2	**R0230**	5,824,460
N-1	**R0240**	6,760,466
N	**R0250**	5,729,778
Total	**R0260**	**31,037,601**

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**	39,286,722			384,286	
Basic own funds	**R0020**	18,517,993			-318,253	
Eligible own funds to meet Solvency Capital Requirement	**R0050**	18,517,993			-318,253	
Solvency Capital Requirement	**R0090**	**6,784,845**			**270,677**	
Eligible own funds to meet Minimum Capital Requirement	**R0100**	16,535,426			-293,892	
Minimum Capital Requirement	**R0110**	**3,053,180**			**121,805**	

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
Basic own funds before deduction for participations in other financial sector as foreseen in article 68 of Delegated Regulation 2015/35						
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**	14,427,150	14,427,150			
Subordinated liabilities	**R0140**	3,046,574		496,435	2,550,139	
An amount equal to the value of net deferred tax assets	**R0160**	43,064				43,064
Other own fund items approved by the supervisory authority as basic own funds not specified above	**R0180**					
Own funds from the financial statements that should not be represented by the reconciliation reserve and do not meet the criteria to be classified as Solvency II own funds						
Own funds from the financial statements that should not be represented by the reconciliation reserve and do not meet the criteria to be classified as Solvency II own funds	**R0220**					
Deductions						
Deductions for participations in financial and credit institutions	**R0230**					
Total basic own funds after deductions	**R0290**	**18,517,993**	15,428,355	496,435	2,550,139	43,064

S.23.01.01: Own funds, page 2

		Total	Tier 1 - unrestricted	Tier 1 - restricted	Tier 2	Tier 3
		C0010	C0020	C0030	C0040	C0050
Ancillary own funds						
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**					
Total ancillary own funds	**R0400**					
Available and eligible own funds						
Total available own funds to meet the SCR	**R0500**	18,517,993	15,428,355	496,435	2,550,139	43,064
Total available own funds to meet the MCR	**R0510**	18,474,929	15,428,355	496,435	2,550,139	
Total eligible own funds to meet the SCR	**R0540**	18,517,993	15,428,355	496,435	2,550,139	43,064
Total eligible own funds to meet the MCR	**R0550**	16,535,426	15,428,355	496,435	610,636	
SCR	**R0580**	**6,784,845**				
MCR	**R0600**	**3,053,180**				
Ratio of Eligible own funds to SCR	**R0620**	**2.7293**				
Ratio of Eligible own funds to MCR	**R0640**	**5.4158**				

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

		C0060
Reconciliation reserve		
Excess of assets over liabilities	**R0700**	16,339,718
Own shares (held directly and indirectly)	**R0710**	
Foreseeable dividends, distributions and charges	**R0720**	868,299
Other basic own fund items	**R0730**	1,044,269
Adjustment for restricted own fund items in respect of matching adjustment portfolios and ring fenced funds	**R0740**	
Reconciliation reserve	**R0760**	**14,427,150**
Expected profits		
Expected profits included in future premiums (EPIFP) - Life business	**R0770**	3,083,112
Expected profits included in future premiums (EPIFP) - Non-life business	**R0780**	
Total Expected profits included in future premiums (EPIFP)	**R0790**	**3,083,112**

S.25.05.21 - Solvency Capital Requirement – for undertakings using an internal model (partial or full)

Solvency Capital Requirement information		Solvency Capital Requirement	Amount modelled	USP	Simpli-fications
		C0010	C0070	C0090	C0120
Risk type					
Total diversification	**R0020**	-8,236,285	-8,236,285		
Total diversified risk before tax	**R0030**	9,258,271	9,258,271		
Total diversified risk after tax	**R0040**	6,784,845	6,784,845		
Total market & credit risk	**R0070**	10,489,997	10,489,997		
Market & Credit risk - diversified	**R0080**	4,999,730	4,999,730		
Credit event risk not covered in market & credit risk	**R0190**	542,911	542,911		
Credit event risk not covered in market & credit risk - diversified	**R0200**	428,956	428,956		
Total Business risk	**R0270**				
Total Business risk - diversified	**R0280**				
Total Net Non-life underwriting risk	**R0310**	10,508,153	10,508,153		
Total Net Non-life underwriting risk - diversified	**R0320**	5,799,022	5,799,022		
Total Life & Health underwriting risk	**R0400**	7,193,140	7,193,140		
Total Life & Health underwriting risk - diversified	**R0410**	2,735,684	2,735,684		
Total Operational risk	**R0480**	640,138	640,138		
Total Operational risk - diversified	**R0490**	640,138	640,138		
Other risk	**R0500**				

Calculation of Solvency Capital Requirement		C0100
Total undiversified components	R0110	14,603,531
Diversification	R0060	-5,345,260
Adjustment due to RFF/MAP nSCR aggregation	R0120	
Capital requirement for business operated in accordance with Art. 4 of Directive 2003/41/EC	R0160	
Solvency capital requirement, excluding capital add-ons	**R0200**	**6,784,845**
Capital add-ons already set	R0210	
of which, Capital add-ons already set - Article 37 (1) Type a	R0211	
of which, Capital add-ons already set - Article 37 (1) Type b	R0212	
of which, Capital add-ons already set - Article 37 (1) Type c	R0213	
of which, Capital add-ons already set - Article 37 (1) Type d	R0214	
Solvency capital requirement	**R0220**	**6,784,845**
Other information on SCR		
Amount/estimate of the overall loss-absorbing capacity of technical provisions	R0300	-271,338
Amount/estimate of the loss absorbing capacity for deferred taxes	R0310	-2,473,426
Capital requirement for duration-based equity risk sub-module	R0400	
Total amount of Notional Solvency Capital Requirements for remaining part	R0410	
Total amount of Notional Solvency Capital Requirements for ring-fenced funds	R0420	
Total amount of Notional Solvency Capital Requirements for matching adjustment portfolios	R0430	
Diversification effects due to RFF nSCR aggregation for article 304	R0440	
Method used to calculate the adjustment due to RFF nSCR aggregation	R0450	4
Net future discretionary benefits	R0460	

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

Calculation of loss absorbing capacity of deferred taxes (LAC DT)		LAC DT
		C0130
Amount/estimate of LAC DT	R0640	
Amount/estimate of LAC DT justified by reversion of deferred tax liabilities	R0650	
Amount/estimate of LAC DT justified by reference to probable future taxable economic profit	R0660	
Amount/estimate of LAC DT justified by carry back, current year	R0670	
Amount/estimate of LAC DT justified by carry back, future years	R0680	
Amount/estimate of Maximum LAC DT	R0690	

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

		C0010
MCR_{NL} Result	**R0010**	5,915,328

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
		C0020	**C0030**
Medical expense insurance and proportional reinsurance	**R0020**	126,811	99,470
Income protection insurance and proportional reinsurance	**R0030**	540,694	348,496
Workers' compensation insurance and proportional reinsurance	**R0040**		57,474
Motor vehicle liability insurance and proportional reinsurance	**R0050**	1,017,318	1,147,071
Other motor insurance and proportional reinsurance	**R0060**	643,823	1,222,813
Marine, aviation and transport insurance and proportional reinsurance	**R0070**	517,245	528,628
Fire and other damage to property insurance and proportional reinsurance	**R0080**	5,270,546	5,331,018
General liability insurance and proportional reinsurance	**R0090**	2,909,356	1,399,393
Credit and suretyship insurance and proportional reinsurance	**R0100**	1,027,787	814,735
Legal expenses insurance and proportional reinsurance	**R0110**	75,303	36,666
Assistance and proportional reinsurance	**R0120**	41,865	64,963
Miscellaneous financial loss insurance and proportional reinsurance	**R0130**	194,555	142,840
Non-proportional health reinsurance	**R0140**	1,179,174	221,002
Non-proportional casualty reinsurance	**R0150**	7,539,772	1,584,852
Non-proportional marine, aviation and transport reinsurance	**R0160**	838,765	303,689
Non-proportional property reinsurance	**R0170**	4,803,019	3,784,655

Linear formula component for life insurance and reinsurance obligations

		C0040
MCR_L Result	**R0200**	1,303,139

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	Net (of reinsurance / SPV) total capital at risk
		C0050	**C0060**
Obligations with profit participation - guaranteed benefits	**R0210**		
Obligations with profit participation - future discretionary benefits	**R0220**		
Index-linked and unit-linked insurance obligations	**R0230**	110,763	
Other life (re)insurance and health (re)insurance obligations	**R0240**	3,140,375	
Total capital at risk for all life (re)insurance obligations	**R0250**		1,766,307,838

Overall MCR calculation

		C0070
Linear MCR	**R0300**	**7,218,466**
SCR	**R0310**	**6,784,845**
MCR cap	**R0320**	**3,053,180**
MCR floor	**R0330**	**1,696,211**
Combined MCR	**R0340**	**3,053,180**
Absolute floor of the MCR	**R0350**	**3,600**
Minimum Capital Requirement	**R0400**	**3,053,180**

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