somewhat different

Hannover Re 2022

Solvency and Financial Condition Report

hannover re®

Contents

Executive Summary

Key figures

in TEUR	2022	2021
Solvency II Balance Sheet		
Assets	73,160,096	72,320,375
Technical Provisions	44,490,996	46,251,366
Other Liabilities	13,120,763	10,913,021
Excess of Assets over Liabilities	15,548,338	15,155,988
Eligible Own Funds		
Tier 1 Basic Own Funds (unrestricted)	14,002,020	13,615,484
Tier 1 Basic Own Funds (restricted)	486,034	533,225
Tier 2 Basic Own Funds	2,897,198	2,496,520
Tier 3 Own Funds	128,783	138,500
Eligible Own Funds (SCR)	17,514,035	16,783,730
Capital Requirements		
Solvency Capital Requirement	6,952,301	6,904,154
Minimum Capital Requirement	4,658,752	4,519,540
Coverage Ratio		
Ratio of Eligible Own Funds to SCR (Solvency Ratio)	252%	243%
Ratio of Eligible Own Funds to MCR	331%	333%

Hannover Re Group (hereinafter referred to as “Hannover Re” or “the Group”) fulfils the minimum and solvency capital requirements (hereinafter referred to as MCR and SCR) stipulated by the supervisory authority as at the reporting date 31 December 2022 and during the financial year 2022. In addition, the solvency ratio ranges above the internal threshold of 200% during the entire financial year.

Please note that this report represents a voluntary publication of the Hannover Re Group.

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

With a gross premium volume of more than TEUR 33,275,528 (previous year: TEUR 27,762,314), Hannover Re is the third-largest reinsurer in the world. Hannover Re transacts all lines of Property & Casualty and Life & Health reinsurance. Its global presence and activities across all lines of reinsurance business allows the company to achieve an efficient risk diversification.

We are thoroughly satisfied with the development of business in the 2022 financial year. Group net income was up by 14.2% at TEUR 1,406,734 (TEUR 1,231,334). We thus achieved our Group earnings guidance of TEUR 1,400,000 to TEUR 1,500,000.

Global reinsurance markets have been fiercely competitive and overshadowed by high costs from natural catastrophes for some years now. At the same time, climate change, Russia's attack on Ukraine, global macroeconomic developments and the Covid-19 pandemic – which has still not been entirely overcome – confronted insurers and reinsurers alike with major challenges in 2022.

The gross premium in the Property & Casualty reinsurance business group grew by 17.9% at constant exchange rates. The main factors here were the favourable market climate and improved prices. On the other hand, the expenditures from large losses of TEUR 1,705,732 surpassed our expected budget of TEUR 1,400,000.

In the Life & Health reinsurance business group grew by 1.0% adjusted for exchange-rate effects. At the same time, demand for reinsurance covers remained strong in areas such as financial solutions and protection against longevity risks. Pandemic-related losses, were lower than expected.

The investment environment, which has always been challenging in the past years, was again very volatile in the reporting period. In particular, the Russian war of aggression in Ukraine and the effects of the Covid-19 pandemic, which continued during the course of the year, as well as the strong rise in inflation posed and continue to pose special challenges to the global economy. Nevertheless, our ordinary investment income, including interest on deposits, was at the previous year's level. Among other things, the sale of our portfolio of listed shares in the first two quarters had a positive impact on the significantly higher gains from the disposal of investments. In the alternative investments, especially in the sector of unlisted corporate investments, portfolios were transferred to a joint venture with Münchener Rückversicherungs-Gesellschaft AG. This led to the disclosure of proportionate hidden reserves. Opposing effects resulted mainly from the sale of fixed income securities in the course of reallocations in our loan portfolios as well as from general portfolio maintenance. In the first quarter, we sold parts of our holdings of Russian and Ukrainian bonds. Impairments on investments were mainly recognized on bearer bonds held as fixed assets. These were mainly Russian or Ukrainian issuers or issuers from the real estate sector in China. We also made write-downs on deposits held on assumed reinsurance. Overall, we thus achieved an investment result significantly above that of the previous year.

The portfolio of our investments under own management was at the comparable level of the previous period, whereby the higher interest rates and increased risk premiums for corporate bonds had a clearly negative impact on the market values of our fixed-interest securities. However, the strong operating cash flow, the issuance of a bond and positive currency effects largely compensated for this. Our investments benefited overall from the fact that we had already positioned ourselves more cautiously since the end of the previous year in view of expected central bank activities and inflation developments, and also only made very moderate new investments and reinvestments in securities with steeper risk profiles in the reporting period. Apart from liquidating our portfolio of listed equities, we have overall arranged our asset allocation somewhat less risky in the corporate bond sector during the reporting period. In real estate, we were able to take

advantage of a few market opportunities to strengthen our portfolio in South America and Europe. At the end of the fourth quarter, we broadened the basis for action for our short- and medium-term liquidity management through realizations in the area of fixed-interest securities. For all other asset classes, we only made minor changes as part of regular portfolio maintenance.

B. System of Governance

Hannover Re 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 in Section B and equipped with appropriate resources.

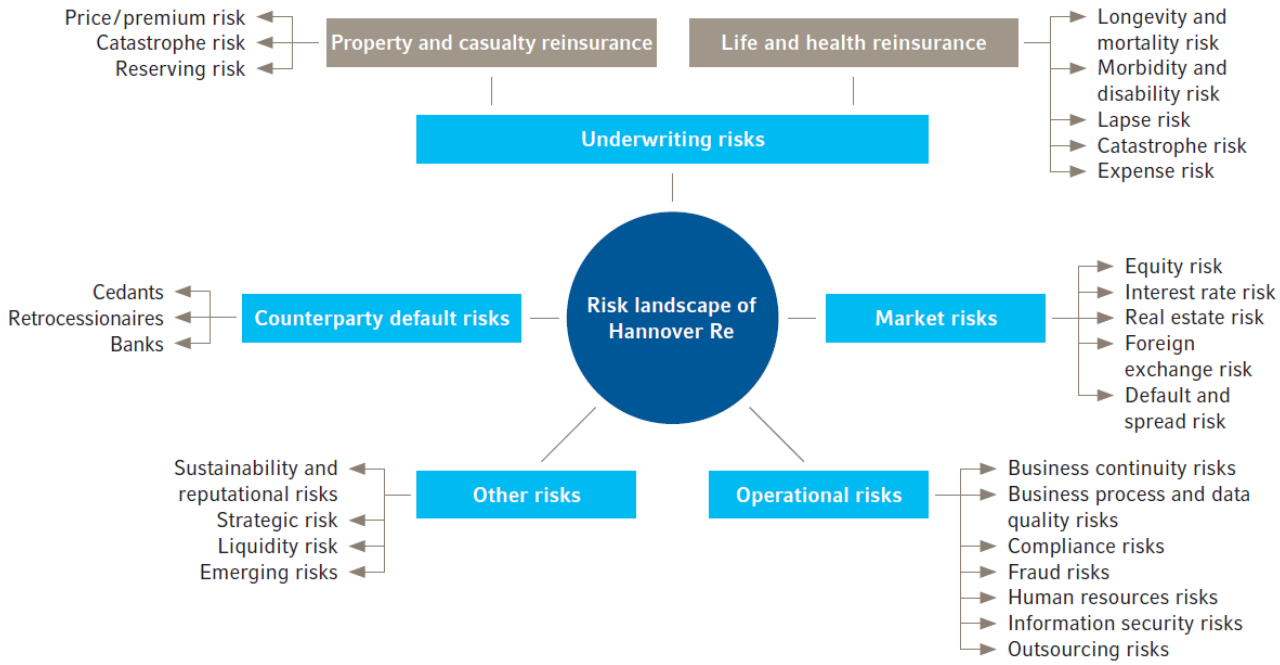
The Executive Board has established a committee, which supports the assessment of the system of governance. Based on the assessment conducted by the committee, the Executive Board has reached the conclusion that the system of governance of Hannover Re is appropriate considering the scope and complexity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

The individual elements of the system of governance of Hannover Re 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. In addition, Hannover Re faces operational, strategic, sustainability and reputational risks. In Section C, we describe the sources and management of these risks. We also explain how we handle potential future risks (emerging risks).

Risk landscape of Hannover Re



The solvency capital requirements (SCR) as of 31 December 2022 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)
in TEUR

Solvency Capital Requirement	2022	2021
Underwriting risk - Property & Casualty	5,664,198	5,473,543
Underwriting risk - Life & Health	2,509,950	3,329,734
Market risk	5,175,558	4,874,756
Counterparty default risk	434,678	468,041
Operational risk	620,826	626,903
Diversification	-4,862,387	-5,238,598
Total risk (pre-tax)	**9,542,822**	**9,534,379**
Deferred tax	2,590,521	2,630,225
Total risk (post-tax)	**6,952,301**	**6,904,154**

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 mortality risks within the underwriting risks of Life & Health reinsurance.

Hannover Re 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 was principally driven by the larger business volumes, which have led to an increase in underwriting risks of Property & Casualty reinsurance and in market risks. The weaker euro against the US dollar also contributed to this increase. On the other hand, the significantly higher interest rate level results in an appreciable decrease in SCR.

Underwriting risks in Property & Casualty reinsurance increased primarily as a consequence of higher business volumes. The enlarged volumes are driven by the business growth, the large loss expenditure and associated higher reserves as well as the stronger US dollar.

The strong increase in interest rates leads to a decrease in underwriting risks in Life & Health reinsurance. This particularly affects longevity risk, but also applies to the mortality and morbidity risk.

The increase in the market risk reflects first and foremost the larger volume due to new investments and higher market values in the areas of private equity and real estate. Wider spreads and increased volumes of fixed-income securities are further factors here.

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

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

The risk monitoring, control mechanisms and developments in 2022 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 based on fair value principles (market value). Insofar as IFRS values appropriately reflect the fair value of individual assets or liabilities, they are applied.

Technical provisions pursuant to Solvency II differentiate significantly from the definition of provisions pursuant to the International Financial Reporting Standards (IFRS 4), both in terms of structure and in relation to the calculation rules. A comparison of IFRS 4 and Solvency II technical provisions is shown as well as a comparison of current technical provisions under Solvency II and those calculated last year.

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

E. Capital Management

Hannover Re's solvency ratio amounted to 252 % as of reporting date 31 December 2022. Hannover Re 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 Hannover Re will adopt measures aimed at either strengthening the company's own funds 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 and also assessed as part of planning activities and in the event of large transactions. During the financial year 2022, the solvency ratio ranges above the threshold of 200 %. Further information on the calculation of the solvency ratio can be found in Section E.

Own funds include subordinated (Tier 1 and 2) capital. Ancillary own funds were not in use by Hannover Re as at 31 December 2022.

Hannover Re 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 estimated 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

With a gross premium volume of TEUR 33,275,528, the Hannover Re Group is the third-largest reinsurer in the world. Hannover Rück SE is a European Company, Societas Europaea (SE), based in Hannover, Germany. We transact reinsurance in our Property & Casualty and Life & Health business groups.

The strategy pursued in both Property & Casualty and Life & Health reinsurance supports our Group's paramount mission, namely: "Striving for sustainable outperformance". Our 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 rivals. In this way we deliver above-average profitability while at the same time being able to offer our customers reinsurance protection on competitive terms.

Furthermore, we strive for the broadest possible diversification and hence an efficient risk balance. This is achieved by accepting reinsurance risks in all lines and regions of Property & Casualty and Life & Health reinsurance. In conjunction with efficient capital management, this is the key to our comparatively low cost of capital.

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

In the Property & Casualty reinsurance business group, we consider ourselves to be a reliable, flexible and innovative market player that ranks among the best in any given market. Cost leadership, effective cycle management and superlative risk management are the key elements of our competitive positioning. 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 recognized – as customer surveys confirm – as one of the top players for traditional covers and a leading provider of structured solutions. We achieve this standing by, among other things, anticipating the future needs of our customers through the early identification of trends.

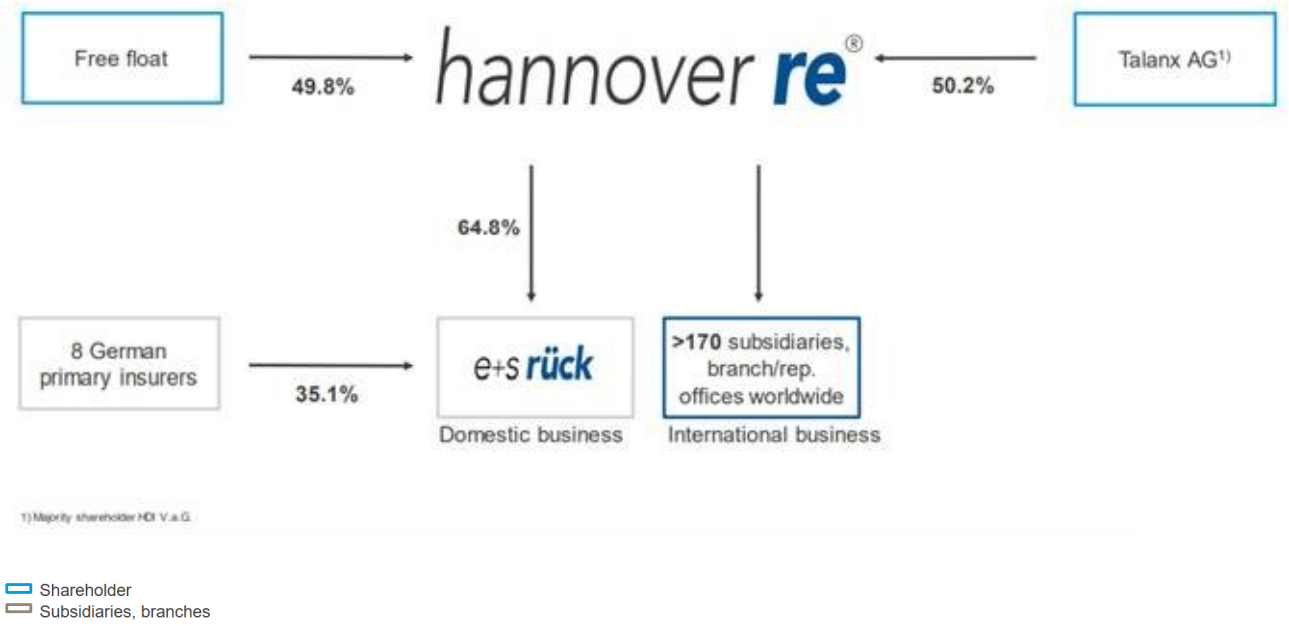
Our business model further makes allowance for the fact that social and environmental factors influence corporate success and our activities impact people and the environment.

A.1.2 Headquarters, supervisors and auditors

Hannover Rück SE – as the parent company of the Hannover Re Group – 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 SE

shares are held by Talanx AG, Hannover, which in turn is majority-owned – with an interest of 79.0% – by HDI Haftpflichtverband der Deutschen Industrie V.a.G. (HDI), Hannover.

Shareholders, subsidiaries and branches



Hannover Re as well as Talanx and HDI are subject to the Federal Financial Supervisory Authority (BaFin).

Address of Federal Financial Supervisory Authority (BaFin)

Graurheindorfer Straße 108
53117 Bonn
Germany

alternatively:
Postbox 1253
53002 Bonn
Germany

Contact details of Federal Financial Supervisory Authority (BaFin)

Phone +049 22 8 / 41 08-0
Fax +049 22 8 / 41 08-15 50

E-mail poststelle@bafin.de or De-Mail poststelle@bafin.de-mail.de

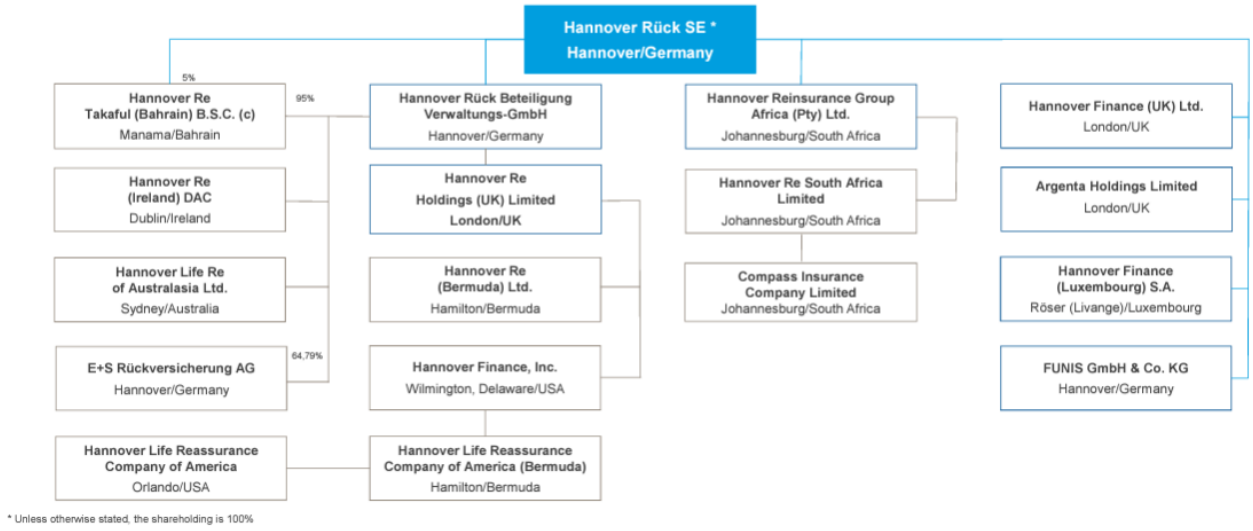
The Group auditor appointed for Hannover Re within the meaning of Section 318 of the German Commercial Code (hereafter referred to as HGB) is PricewaterhouseCoopers GmbH, Wirtschaftsprüfungsgesellschaft, Fuhrberger Straße 5, 30625 Hannover.

A.1.3 Group structure

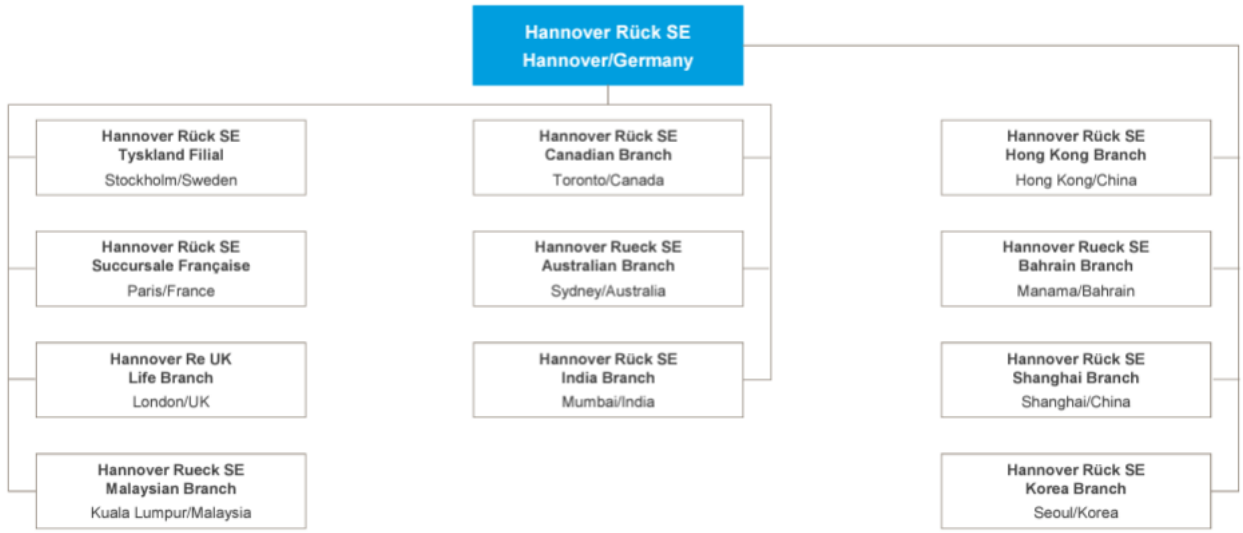
The company's network consists of more than 170 subsidiaries, affiliates, branches and representative offices worldwide with 3,519 staff.

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

Subsidiaries of Hannover Rück SE



Branches of Hannover Rück



A.2 Performance

As the third-largest reinsurer in the world, Hannover Re has a far-reaching international network and extensive underwriting expertise. On this basis, we are able to offer our customers traditional,

tailor-made and innovative reinsurance solutions and we work with them to open up new business opportunities. Global reinsurance markets have been fiercely competitive and overshadowed by rising costs from natural catastrophes for some years now. At the same time, climate change, Russia's attack on Ukraine, global macroeconomic developments and the Covid-19 pandemic – which has still not been entirely overcome – confronted insurers and reinsurers alike with major challenges in 2022.

The operating profit (EBIT) grew by 20.3% to EUR 2,087.4 million (EUR 1,734.8 million). Group net income was up by 14.2% at EUR 1,406.7 million (EUR 1,231.3 million). We thus achieved our Group earnings guidance of EUR 1.4 billion to EUR 1.5 billion. Earnings per share stood at EUR 11.66 (EUR 10.21).

Gross premium in our Property & Casualty reinsurance business group grew by 17.9% at constant exchange rates. The main factors here were the favourable market climate and improved prices. On the other hand, the expenditures from large losses of EUR 1.7 billion surpassed our expected budget of EUR 1.4 billion. The combined ratio in Property & Casualty reinsurance increased to 99.8% (previous year: 97.7%) owing to the burden of large losses and expenditures connected with the Covid-19 pandemic as well as late reported claims from losses incurred in prior years. The sustained improvement in prices and conditions for reinsurance coverage continued due to the challenging market environment described at the outset. This similarly led to a further increase in the cost of retrocession covers that we take out to protect our own portfolio.

The gross premium booked in our Life & Health reinsurance business group grew by 1.0% adjusted for exchange-rate effects. At the same time, demand for reinsurance covers remained strong in areas such as financial solutions and protection against longevity risks. Pandemic-related losses, on the other hand, were considerably lower. The operating result (EBIT) in Life & Health reinsurance improved sharply to EUR 736.9 million (EUR 223.3 million) and thus played an important part overall in the total result for the year under review.

The investment income generated from assets under own management increased by 8.9% to EUR 1,824.6 million (EUR 1,674.8 million) – and was thus another major factor in the total result for the financial year. Positive effects derived from, among other things, strong income from our portfolio of inflation-linked bonds, the sale of the equity portfolio and the contribution of private equity investments to a joint venture. The return on investment stood at 3.2% and thus very comfortably beat our target, which we had revised upwards to more than 2.5%.

Other income improved by 42.8% to EUR 387.3 million (EUR 271.2 million). This reflected, among other things, a positive effect from the contribution of private equity investments in an amount of EUR 129.3 million.

In addition, the following table shows the performance targets for the business years 2022 and the attained results.

Business group	Key data	Targets for 2022	2022
	Return on equity[3]	900 bps above risk-free	14.1%
	Solvency ratio[4,5]	≥ 200%	251.9%
Property & Casualty reinsurance	Gross premium growth	≥ 5%[6]	17.9%
	EBIT growth	≥ 5%[7]	-10.6%
	Combined ratio	≤ 96%	99.8%
	xRoCA[4,8]	≥ 2%	4.0%
Life & Health reinsurance	Gross premium growth	≥ 3%[6]	1.0%
	EBIT growth	≥ 5%[7]	230,1%
	Value of New Business (VNB)[4,9]	≥ EUR 250 million	EUR 496 million
	xRoCA[4,8]	≥ 2%	15.7%

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

For further information regarding our performance please refer to our Annual Report. You can receive the Annual Report via download from our homepage (https://www.hannover-re.com/1947402/individual-annual-report-2022.pdf)

B. System of Governance

B.1 General Information on the System of Governance

The Hannover Re Group 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.

The following overview shows the allocation of the areas of responsibility to the members of the Executive Board as of 31 December 2022.

Members of the Executive Board

Chairman	Chief Financial Officer	Property & Casualty Reinsurance			Life & Health Reinsurance	
Jean-Jacques Henchoz	**Clemens Jungsthöfel**	**Dr. Michael Pickel**	**Sven Althoff**	**Silke Sehm**	**Claude Chèvre**	**Dr. Klaus Miller**
Compliance IT and Facility Management Human Resources Management Internal Auditing Risk Management & Actuarial Function Group Operations and Strategy Corporate Communi-cations	Asset Management Reinsurance Accounting and Valuation Group Finance Investor and Rating Agency Relations	Property & Casualty Reinsurance: Asia, Australia and Middle East. Germany, Switzerland, Austria and Italy. Latin America and Iberian Peninsula. Run-Off Solutions Agricultural Risks Group Legal Services	Coordination of Property & Casualty Business Group Property & Casualty Reinsurance: North America and Carribean, United Kingdom, Ireland and London Market. Aviation and Marine Credit, Surety and Political Risks Facultative Reinsurance Quotations	Property & Casualty Reinsurance: Continental Europe and Africa Catastrophe XL (Cat XL) Structured Reinsurance and Insurance-Linked Securities Retrocessions	Life & Health Reinsurance: Africa, Asia, Australia, Latin America, Middle East, Western and Southern Europe Analytics & Longevity	Life & Health Reinsurance: North America and Bermuda, 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 shall consist 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 shall be for the remaining term of the resigned member.

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

Members of the Supervisory Board and membership in committees

Members of the Supervisory Board	Standing Committee	Finance and Audit Committee	Nomination Committee	Staff representative
Torsten Leue, Chairman	X	X	X	
Herbert K. Haas, Deputy Chairman	X	X	X	
Natalie Bani Ardalan				X
Frauke Heitmüller				X
Ilka Hundeshagen				X
Dr. Ursula Lipowski		X		
Dr. Michael Ollmann				
Dr. Andrea Pollak			X	
Dr. Erhard Schipporeit	X			

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

The Supervisory Board received an analysis of the 2021 results in Property & Casualty and Life & Health reinsurance as well as a presentation from the Executive Board covering the profit expectations for the 2022 financial year and the operational planning for the 2023 financial year. Outside the meetings, the Chairman of the Supervisory Board was constantly kept informed by the Chairman of the Executive Board of major developments and pending decisions as well as of the company's risk situation. The full Supervisory Board was also kept informed of major events outside the meetings in writing. Dr. Lipowsky, since 1 April 2022 Chairwoman of the Finance and Audit Committee, and prior to her Mr. Haas in the same role as Chairman, engaged in a regular dialogue during 2022 with the Chief Financial Officer and the independent auditor on the topics of financial reporting, auditing of the financial statements and the internal control system. All in all, the Supervisory Board was involved in decisions taken by the Executive Board and assured itself of the lawfulness, regularity and efficiency of the company's management as required by its statutory responsibilities and those placed upon it by the company's Articles of Association.

No audit measures pursuant to § 111 Para. 2 Sentence 1 of the Stock Corporation Act (AktG) were required in the 2022 financial year.

There were no changes in the composition of the Supervisory Board or its committees in the year under review. The term of office of the company's Supervisory Board ends pursuant to § 10 (3) of the Articles of Association of Hannover Re at the end of the General Meeting that ratifies the acts of management for the 2023 financial year. Nor were any changes made to the composition of the Executive Board in 2022.

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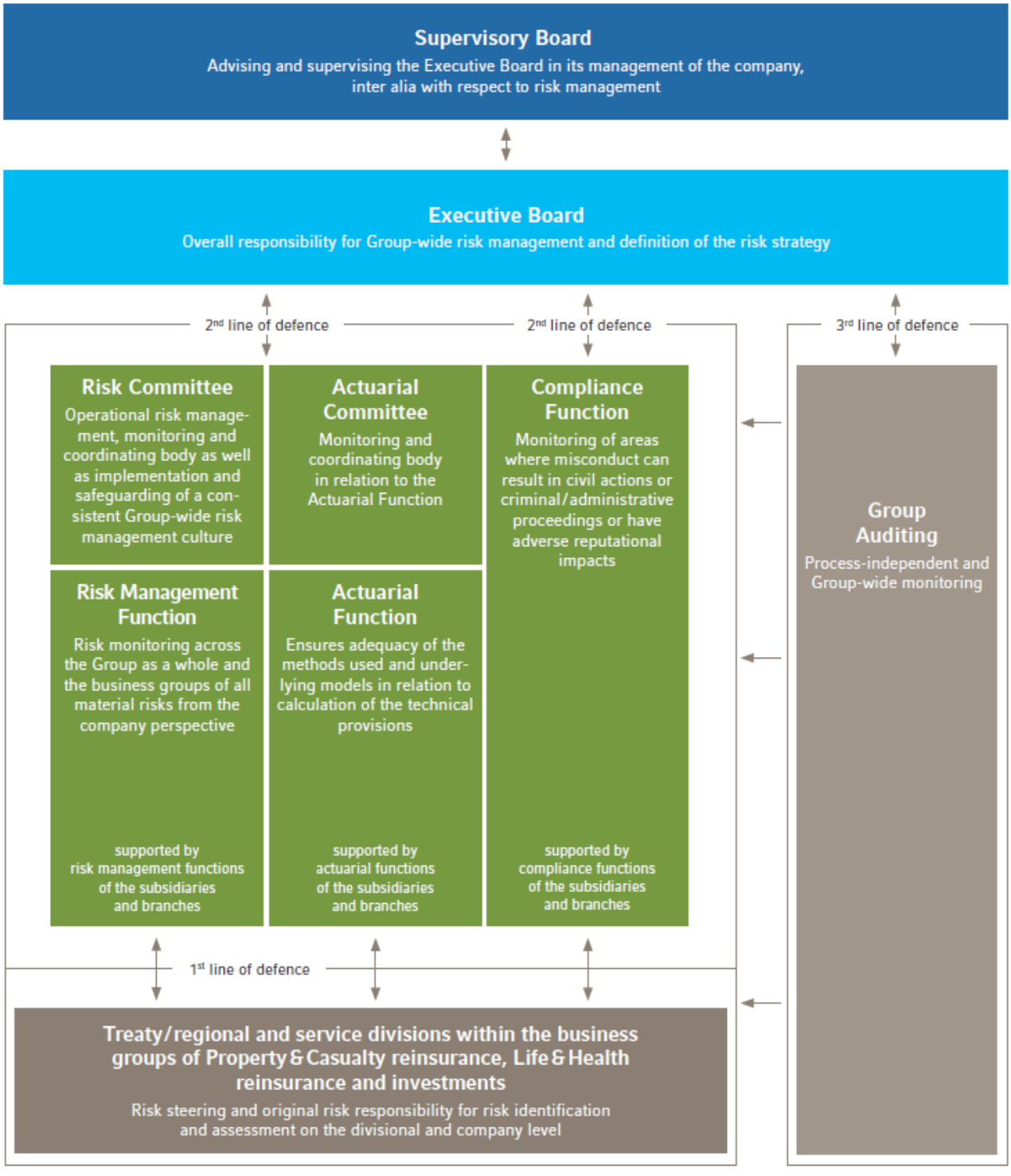
B.1.1.2 Key functions

The following graph provides an overview of the main tasks and the interaction of the key functions:



Hannover Re has set up a Group-wide risk management function to safeguard an efficient and effective risk management system. The individual elements of the risk management function 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 risk steering rests with market and market-supporting departments on the divisional or company level. The second line of defence is made up of the risk management functions, the actuarial function and the compliance function. These functions are responsible for process-integrated monitoring and control. The third line of defence is the process-independent monitoring performed by the internal audit function.

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

B.1.2 Remuneration policy

B.1.2.1 Remuneration of the Executive Board

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

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

The profit- and performance-based remuneration (variable remuneration) is contingent on certain defined results and the attainment of certain set targets. The set targets vary according to the function of the Board member in question. The variable remuneration consists of a profit bonus and a performance bonus. The variable remuneration is defined at the Supervisory Board meeting that approves the consolidated financial statement for the financial year just ended.

The Executive Board remuneration is stated on the basis of the remuneration granted and owing. The total remuneration received by the Executive Board of Hannover Re Group on the basis of its work for Hannover Re and the companies belonging to the Group amounts to TEUR 9,689.

B.1.2.2 Remuneration of the Supervisory Board

The remuneration of the Supervisory Board is determined by the Annual General Meeting of Hannover Re and regulated by the Statute of Hannover Re.

The total remuneration received by the Supervisory Board of Hannover Re amounts to TEUR 1,035.

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.

Members of staff on the levels of Chief Manager, Senior Manager and Manager are also able to participate in a variable remuneration system through the Group Performance Bonus (GPB). The GPB is a remuneration model 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 Re. For its part, HDI Haftpflichtverband der Deutschen Industrie Versicherungsverein auf Gegenseitigkeit (HDI), Hannover, holds a stake of 79.0% in Talanx AG.

The business relationship between Hannover Re and its subsidiary E+S Rückversicherung AG is based on a cooperation agreement. A retrocession by Hannover Re to E+S Rückversicherung AG exists in Property & Casualty reinsurance. E+S Rückversicherung AG and Hannover Re 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

A framework directive pertaining to the fulfilment of the Fit & Proper requirements in the Hannover Re Group was established 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 Re, 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 required specific knowledge for owners of one of the key functions including compliance, internal audit, risk management, and actuarial function is included in the referred role description.

In the event that key functions are outsourced, general requirements for this are defined within a group policy. Currently, we do not outsource key functions of Hannover Re.

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

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 Strategy implementation

Robust governance and strong risk management, integrated compliance and corporate social responsibility 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, regulatory parameters, the expectations of rating agencies with respect to our target rating and the expectations of our clients. We maintain a capital cushion in order to be able to act on new business opportunities.

B.3.2 Risk capital

In the interests of our shareholders, clients and employees, we strive to ensure that our risks remain commensurate with our capital resources. Our quantitative risk management provides a uniform framework for the evaluation and steering of all risks affecting the company as well as of our capital position. In this context, the internal capital model – a stochastic enterprise model – is our central tool. It covers all subsidiaries and business groups of the Hannover Re Group. The core variable in risk and enterprise management is the economic capital, which is calculated according to market-consistent measurement principles and also constitutes the basis for calculating the own funds under Solvency II.

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

We hold capital to meet the requirements of the rating agencies for our target rating and to be able to act flexibly on business opportunities. We strive for a rating from the rating agencies most relevant to our industry that facilitates and secures our access to all reinsurance business worldwide. Hannover Re is analysed by the rating agencies Standard & Poor’s 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 strong.

B.3.3 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 Re 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.3.4 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 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 Risk and Capital Management Guideline. 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 a 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.3.7). 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 Re. Changes to the risk management function during the reporting period include the strengthening of cyber and pandemic exposure management standards, the strengthening of new product processes, the further integration of climate change analysis in regular risk management processes as well as the strengthening of IT security standards.

B.3.5 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 the Hannover Re Group describe the central elements of our risk management system. This is subject to a constant cycle of planning, action, control and improvement. Systematic risk identification, analysis, measurement, steering and monitoring as well as risk reporting are especially crucial to the effectiveness of the system as a whole.

This guideline describes, among other things, the major tasks, rights and responsibilities, the 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 major anchor point for strategic considerations in relation to risk communication. Beyond that, risk management's requirements are stated in guidelines and policies, which are communicated Group-wide.

Risk identification

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

Risk analysis and assessment

In principle, every risk that is identified and considered material is 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 can take the form of, for example, expert evaluations. Quantitative assessment of material risks and the overall risk position is performed using the internal risk model. The model makes allowance for risk concentration and risk diversification.

Risk steering

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

Risk monitoring

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

Risk communication and risk culture

Risk management is firmly integrated into our operational processes. It is assisted by transparent risk communication and the open handling of risks as part of our risk culture. Risk communication takes the form, for example, of internal and external risk reports, 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.3.6 Risk landscape

In the context of its business operations, the Hannover Re Group enters into a broad variety of risks. These risks are deliberately accepted, steered and monitored in order to be able to act on the associated opportunities. The parameters and decisions of the Executive Board with respect to the risk appetite of the Hannover Re Group, which are based on the calculations of risk-bearing capacity, are fundamental to the acceptance of risks. Through our business operations on all continents and the diversification between our Property & Casualty and Life & Health reinsurance business groups we are able to effectively allocate our capital in light of opportunity and risk considerations and generate a higher-than-average return on equity. Along with our principal business operations as a reinsurer of Property & Casualty and Life & Health business, we also transact primary insurance in selected niche markets as a complement to our core reinsurance business. Crucial importance attaches to our risk management in order to ensure that, among other

things, risks to the reinsurance portfolio remain calculable and also exceptional major losses do not have an unduly adverse impact on the result.

The risk landscape of Hannover Re encompasses:

- Underwriting risks in Property & Casualty and Life & Health reinsurance which originate from our business activities and manifest themselves, inter alia, in fluctuations in loss estimates as well as in unexpected catastrophes and changes in biometric factors such as mortality,
- Market risks which arise in connection with our investments and also as a consequence of the valuation of long-term payment obligations associated with the technical account,
- Counterparty default risks resulting from our diverse business relationships and payment obligations, inter alia, with clients, retrocessionaires and banks,
- Operational risks which may derive, for example, from deficient processes or systems as well as
- Reputational and sustainability, liquidity, strategic and emerging risks.

B.3.7 Own Risk and Solvency Assessment (ORSA)

The ORSA cycle mirrors our circuit of planning, action, monitoring und enhancement, and comprises the elements listed in Section B.3.5.

The ORSA report is prepared on an annual basis and summarizes the results of the last ORSA cycle. Here, the internal model is used – especially for the calculation of solvency requirements in comparison to the allocated risk capital. The interplay between risk and capital management is highlighted here. Finally, it explains the inclusion of the Executive Board into the ORSA process and its use as one of the controlling instruments at the company's disposal.

The ORSA report is coordinated by the risk management division and is subject to both assessment and approval by the Executive Board. In addition, the report is submitted to the Supervisory Board and the BaFin.

Risk reporting

The risk monitoring function produces regular reports, which show the company's risk position. These reports form the basis for the solvency and risk assessments described in the ORSA report. Therein, all employees contributing to the above procedures are involved as data and information suppliers, and consulted for quality assurance.

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

In the event that – because of a material change in risk profile – an ad hoc ORSA report is necessary, Hannover Re 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 Re's ICS are documented in a guideline that establishes a common understanding of the differentiated execution of the necessary controls. The guideline defines concepts, stipulates responsibilities and provides a guide for the description of controls. The ICS consists of systematically structured organisational and technical measures and controls within the 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 Re defines compliance as the observance of the applicable statutory and regulatory provisions and intra-company guidelines.

Hannover Re 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).

In 2022, Hannover Re revised its Code of Conduct. The current version was approved by the Hannover Re Executive Board and acknowledged by the Supervisory Board. Both English and German versions of the new Code of Conduct are published on the Hannover Re website. The publication of the document in further languages is in preparation.

Compliance function

Hannover Re 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 Hannover Re department Group Legal Services (GLS) is the holder of the key compliance function as well as the Chief Compliance Officer (CCO).

The Executive Board of Hannover Re has established the compliance division within GLS for the fulfilment of some of the tasks of the Compliance function. The CCO 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 the CMS the particularly sensitive compliance topics were identified through the employment of a risk-based approach and past experiences gained primarily by the Compliance and Internal Audit department (Group Auditing, GA). The scope is assessed annually. The CCO 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 Re. 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 Re.

The handling of subjects of particular compliance relevance by the departments, who collectively form the compliance function, comprises at the least the following activities:

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

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 CCO prepares a compliance plan for the following year. This plan determines the key areas of compliance activity in the subsequent year. The compliance plan takes into account all relevant areas of activity of the company and the compliance risk situation. The CCO implemented a compliance plan for 2022.

Hannover Re has specified its compliance policy in writing bearing the title “Group Compliance Handbook”. This policy is regularly assessed for its topicality and, if necessary, updated – at least

once a year – and on an event-driven basis by the members of staff within the compliance function when new developments occur.

The appointed CCO for Hannover Re bears particular responsibility for the 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 CCO advises members of the Executive Board and members of staff of Hannover Re upon request regarding compliance topics.

Compliance communication

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

The CCO 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 CCO reports directly to the members of the Executive Board responsible for GLS and the compliance function within Hannover Re. Reports are provided on relevant compliance incidents and are completed in written, verbal or electronic form, although verbal reports are, as a rule, subsequently backed up in writing. Depending on the seriousness of the incident, the reporting can be performed within a regular annual report or on an ad hoc basis.

For the preparation of the Hannover Re annual compliance report to be presented to the Supervisory Board in its Finance & Audit Committee meeting the CCO 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. With publication of the new Code of Conduct, a new training on compliance topics was installed in 2022 for all staff.

Compliance monitoring and improvement

By way of continuous monitoring, the CCO 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 Re 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 discharged by the department Group Auditing (GA). GA renders independent objective audit services, incl. evaluations and recommendations that 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 training concentrations, 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

Tasks and responsibilities of the Actuarial Function (AF) are defined in the AF policy which has been approved by the Executive Board. The owner of the AF coordinates the tasks of the AF.

The tasks are conducted by the division Group Risk Management and its departments. This reflects 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.

Tasks

The tasks of the AF are inter alia:

- Coordination and validation of the calculation of the Solvency II technical provisions (TP)
- Ensure the appropriateness of the applied methods, the underlying models and assumptions
  - used for the calculation of the TP for solvency as well as for accounting purposes
  - used as a basis for the appropriate recognition of the inherent risks of these methods, models and assumptions in the internal model
- Evaluation of the uncertainty associated with the estimations made in the calculation of the TP
- Regular review and assessment of the underlying data in terms of sufficiency and quality
- Regular comparison of best estimates against experience
- Reconciliation of TP between local accounting principles and Solvency II
- External validation and quality checks by actuarial consulting companies in addition to the internal validation of the TP
- Recommendations on improving processes and models used for the calculation of the TP, including data collection, if deficiencies have been observed, and monitoring of their implementation
- In the context of the contribution to the RMF inter alia
  - Support of the internal model, especially with respect to underwriting risks including the delivery and validation of models, data, parameters
  - Monitoring of the reserve level within the scope of the system of limits and thresholds
  - Analysis of large transactions and new types of business
- Preparation of the AF report containing inter alia the following topics
  - Tasks of the AF
  - Activities of the AF in the reporting period
  - Methods, results and sensitivity analyses in respect of TP
  - Opinion on the underwriting policy and 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 on an ad hoc basis or upon requests. Direct reporting to Executive Board and Actuarial Committee ensure the independence of the AF from the other key functions and the operational management.

The Actuarial Committee consists of the CEO, CFO, the Board member responsible for the risk management coordination of the worldwide Property & Casualty reinsurance, the Board member responsible for the risk management coordination of the worldwide 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 reserving for Property & Casualty reinsurance business.

B.7 Outsourcing

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

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

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

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

B.8 Any other information

Evaluating the appropriateness of the system of governance

On an annual basis, the Executive Board receives an opinion from the System of Governance Assessment Committee regarding the past financial year. This opinion presented by the committee dated 13 February 2023 was assessed and approved by the Executive Board.

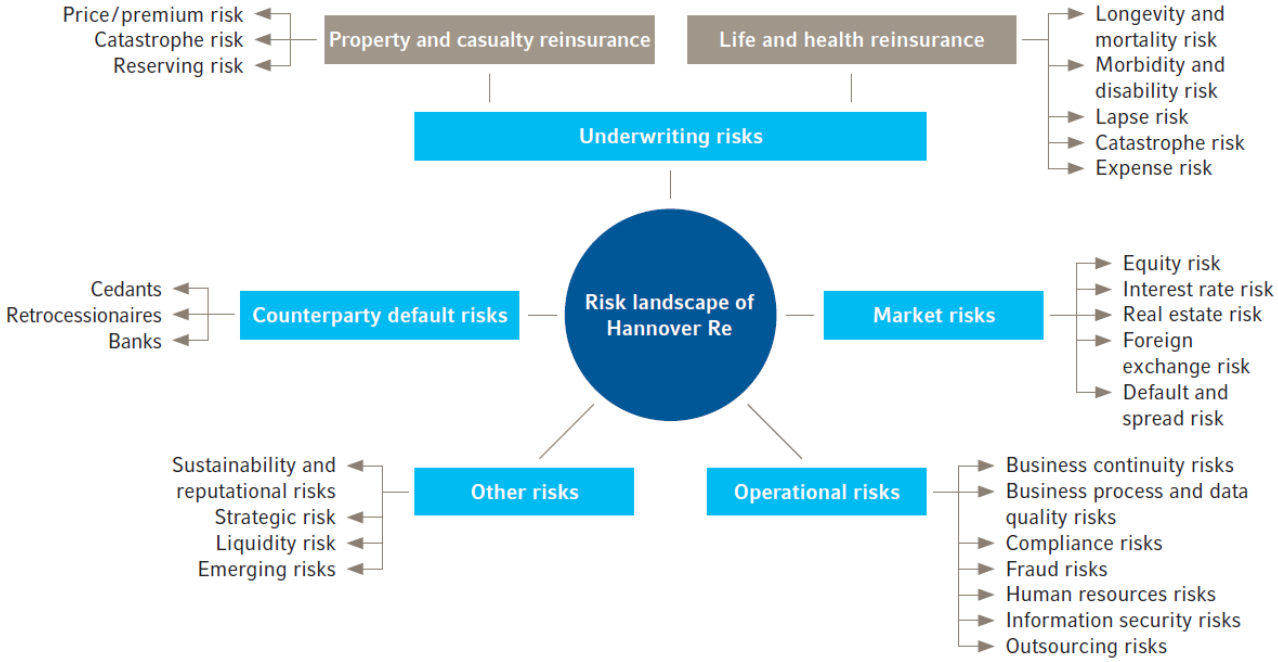
The committee is made up of the Heads of the key functions, the Head of Human Resources and the Head of Group Operations & Strategy – Costs, Organisation & Processes, and usually convenes twice a year. Guests are invited on an event-driven basis. The basis for the assessment of the system of governance includes, among other things, the annual reports submitted by the key functions.

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

C. Risk Profile

The risk landscape is presented in Section B.3.6 and displayed in the following graph.

Risk landscape of Hannover Re



In the context of its business operations Hannover Re Group is confronted with a broad variety of risks. These risks are deliberately accepted, steered and monitored in order to be able to act on the associated opportunities. The parameters and decisions of the Executive Board with respect to the risk appetite of Hannover Re, 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 & Casualty reinsurance and the mortality risks within the underwriting risks of Life & Health reinsurance.

Retrocession has a particular significance within risk appetite and risk reduction. It is used to protect the capital of the Hannover Re Group. The process of strategic retrocession placement for the Group, subsidiaries or branches is determined by the responsible Board member and overseen by the Executive Board.

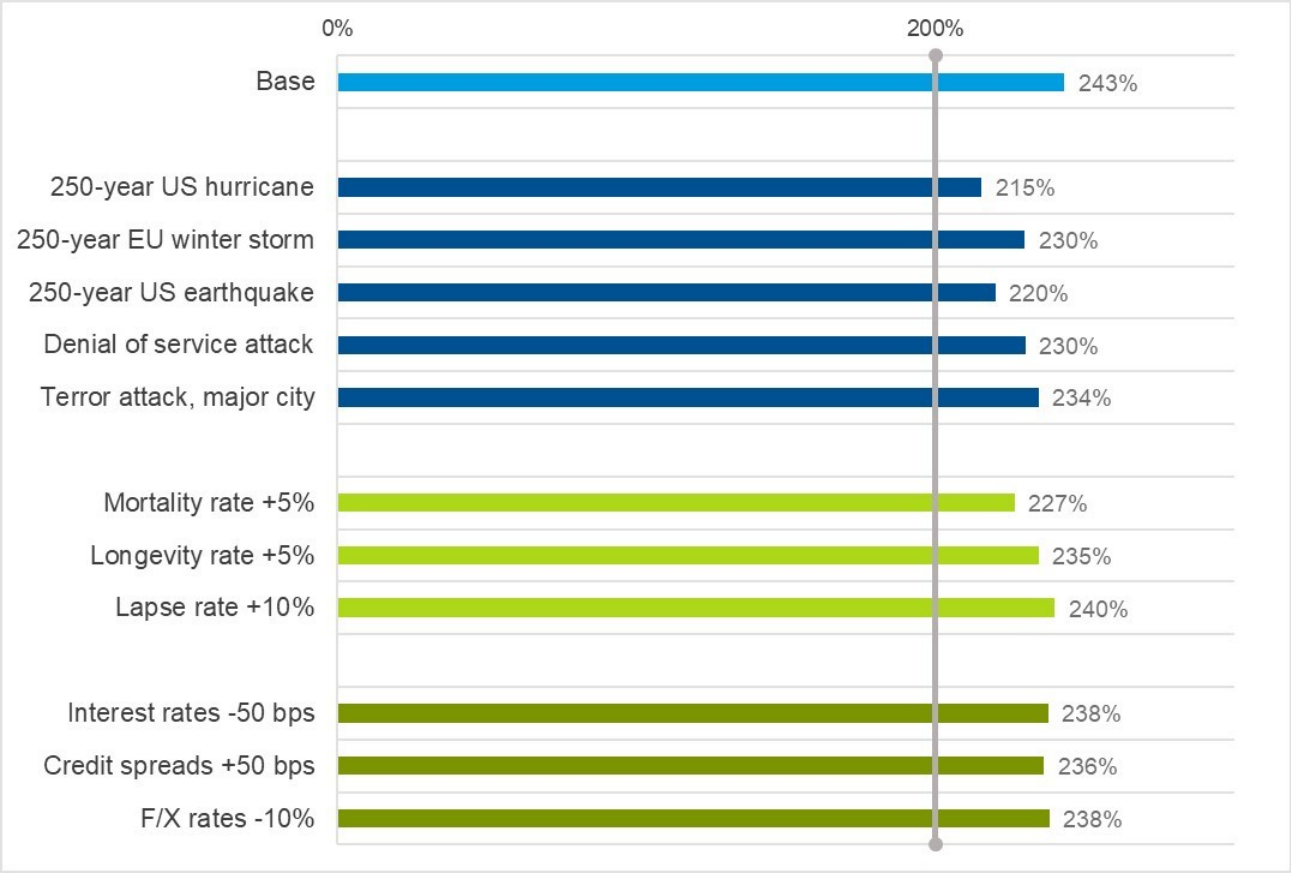
In the course of the mid-term planning, we monitor the business development over a time horizon of five years. Besides the basic scenario, we also behold alternative scenarios in respect of the evolution of (re)insurance markets including different impacts related to business growth and performance. Under the assumptions within the mid-term business plan, the risk profile and the capitalisation of Hannover Re Group remains comfortable. It is worthwhile to notice that the forecast of the capital requirements is based on various assumptions for the future economic and business environment and is therefore to be handled carefully.

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

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

In addition to stochastic modelling, we perform stress tests, scenario and sensitivity analyses on a regular basis. This represents a central element of our risk management. The main stress tests and analyses have to be performed at least annually. They include analyses regarding natural catastrophes, terror events, equity and fixed-income securities as well as real estate. Selected scenarios and stress tests based on the Solvency II ratio for year-end 2021 are presented in the following graph.

Sensitivities of the Solvency II ratio YE 2021
Values in percent



Additional information on individual risk categories can be found in the following sections.

C.1 Underwriting risk

C.1.1 Underwriting risk Property and Casualty

Risk management in Property & 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 utilize the available risk budgets based on the risk management parameters of the Hannover Re Group and to steer the acceptance

of risks systematically through the existing central and local underwriting guidelines. Our conservative reserving level is a key factor in our risk management, too.

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

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

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

Solvency Capital Requirement for underwriting risks in property and casualty reinsurance

in TEUR	2022	2021
Premium risk (incl. catastrophe risk)	4,119,771	3,910,862
Reserve risk	3,273,771	3,225,835
Diversification	-1,729,345	-1,663,154
Underwriting risk property and casualty	**5,664,198**	**5,473,543**

The underwriting risks in Property & Casualty reinsurance increased primarily as a consequence of higher premium and reserve volumes. The higher volumes are driven by the business growth, the large loss expenditure and associated higher reserves as well as the stronger US dollar.

C.1.1.1 Risks arising from natural disasters

A large share of the required risk capital for the premium risk (including catastrophe risk) is attributable to risks from natural disasters. They constitute the main concentration risk in Property & Casualty reinsurance. The following table shows the required risk capital (with a confidence level of 99,5%) for five of our largest natural hazards scenarios:

Required risk capital for five major natural hazards scenarios

in TEUR	2022	2021
Hurricane US	2,273,411	2,355,356
Earthquake US West Coast	1,625,424	1,784,204
Winter storm Europe	1,016,747	1,148,280
Earthquake Japan	1,218,948	1,477,165
Earthquake Chile	1,360,593	1,387,502

The capital requirements decreased compared to last year due to different effects. Increases due to stronger USD and planned capacities for 2023 is offset by the decrease from renewal of retrocessions.

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

adjustments based on the experience of our specialist departments. The monitoring of the risks resulting from natural hazards is complemented by scenario analyses. Major scenarios and stress tests are shown in the following table:

Stress tests for natural catastrophes after retrocessions
Effect on forecasted net income

in TEUR	2022	2021
Hurricane US		
100-year loss	-1,377,995	-1,452,285
250-year loss	-1,858,961	-1,959,283
Earthquake US West Coast		
100-year loss	-758,439	-838,924
250-year loss	-1,385,456	-1,615,161
Winter storm Europe		
100-year loss	-613,556	-667,471
250-year loss	-874,415	-1,009,331
Earthquake Japan		
100-year loss	-644,720	-757,539
250-year loss	-966,022	-1,202,763
Earthquake Chile		
100-year loss	-513,396	-492,617
250-year loss	-1,179,654	-1,277,355

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; the limits set take into account the profitability of the business in question. Risk management ensures adherence to these maximum amounts. The Executive Board, Risk Committee and P & C Executive Committee are kept regularly updated on the degree of capacity utilisation.

C.1.2 Reserve risk

The reserve risk, i.e. the risk of under-reserving of incurred or foreseeable losses, 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 as well as reserve for losses that have already occurred but have not yet been reported to us. Liability claims have a major influence on the latter reserve. Reserves are calculated on a differentiated basis according to lines 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 in the recalculation of the

reserves to be established at each 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.

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

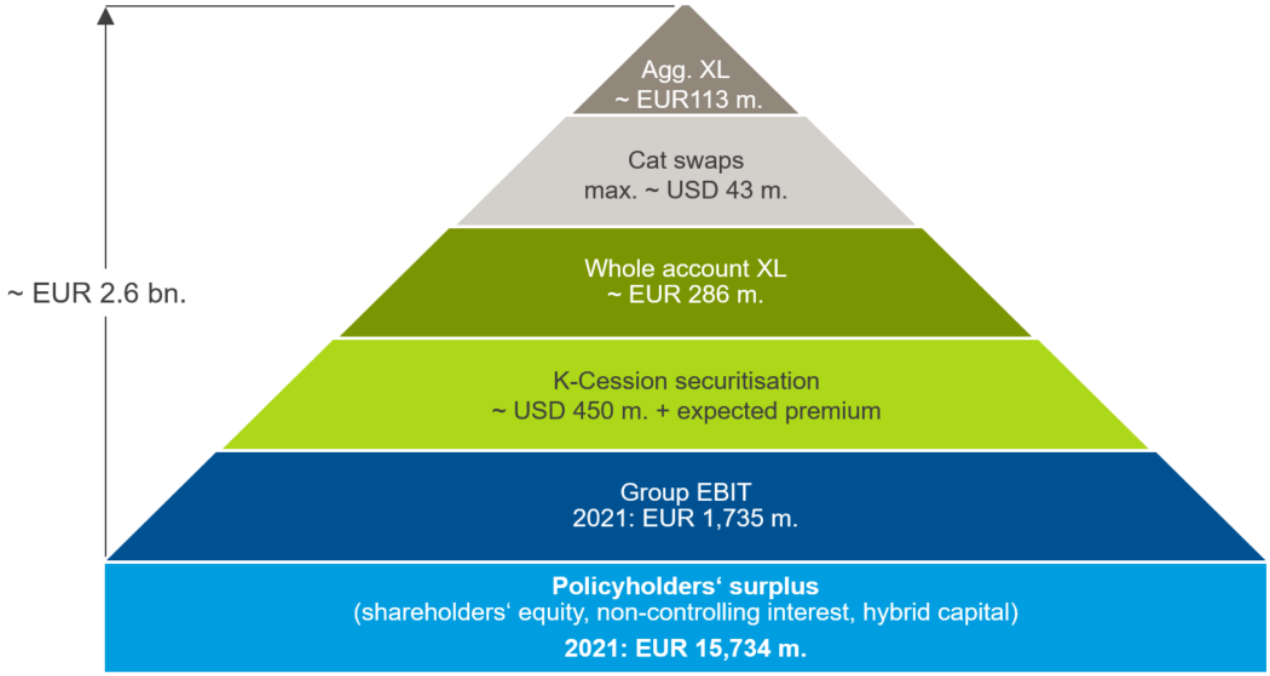
C.1.3 Risk mitigation techniques Property & Casualty

C.1.3.1 Strategic aims and key figures

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

The Executive Board derives the risk budget for natural perils from the global risk budget. Many risk tolerances are based on net metrics, i.e. the placement of retrocessions plays a key role in adhering to the limits.During the planning phase in September and October every year, the Executive Board decides on the capacities for the following year. The planning process includes an assessment of the utilisation of all risk tolerances. An overutilization would be inconsistent with the risk appetite and an underutilisation would result in under-deployment of allocated capital.

The resulting multilevel protection increases the reinsurance capacity for natural catastrophes and thus provides additional revenues with a defined risk appetite.



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

C.1.3.2 Description of main types of cover against natural perils

Details on the individual forms of reinsurance covers are described below.

Whole Account Protection 2022

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 branch offices. The protections are placed on a gross claim basis.

Large Loss Aggregate XL 2022

The Large Loss Aggregate XL is an aggregate protection and covers all natural catastrophe perils for the Hannover Re Group on a net basis.

K-Quota Share 2022

The portfolio covered under the K-quota share 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)

By way of its “K-transactions”, Hannover Re 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. It 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 Re.

C.1.4 Underwriting risk Life and Health

All risks directly connected with the Life & 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 & 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 & Health reinsurance is dominated by mortality and longevity risks. This is due to the fact that under some of our contracts we pay death benefits, while under others we pay survival benefits. The volume of our annuity portfolio contributes to diversification within Life & Health reinsurance. We calculate the diversification effect between mortality and longevity risks prudently because the contracts are normally taken out for different regions, age groups and individuals. Morbidity risks are also playing an increasingly significant role. The required risk capital with a confidence level of 99.5% for underwriting risks in Life & Health reinsurance breaks down as follows:

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

in TEUR	2022	2021
Mortality risk (incl. catastrophe risk)	1,791,549	2,116,268
Longevity risk	1,448,376	2,505,878
Morbidity and disability risk	1,369,917	1,671,649
Lapse risk	379,618	353,659
Expense risk	157,985	163,211
Diversification	-2,637,496	-3,480,932
Underwriting risk life and health	**2,509,950**	**3,329,734**

Diversification is a central management tool for our company. We seek to spread risks as far as possible across different risk classes and different regions. In our pricing of reinsurance treaties we provide incentives to further increase diversification.

The underwriting risks in Life & Health reinsurance decreased primarily due to the sharp rise in interest rates. The reduction is particularly marked for longevity risk but also applies to mortality and morbidity risk.

A risk concentration in Life & Health reinsurance business arises from mortality and morbidity risks, followed by longevity risks. Concerning mortality risks, the risk of a pandemic event represents a main driver for our solvency capital requirement for Life & Health business with regard to concentration risks. To govern our risks we regularly monitor our exposure regarding potential pandemic events in the context of internal model runs. A systematic validation of the internal model with regard to the findings from the Covid-19 pandemic was carried out in 2021 and 2022. It will be followed-up 2023. More information is available in Section D.2.2.

Through our quality assurance measures we ensure that the reserves established by ceding companies in accordance with local accounting principles satisfy all requirements with respect to the calculation methods used and assumptions made (e.g. use of mortality and morbidity tables, assumptions regarding the lapse rate). In addition, the assumptions are continuously reviewed on the basis of empirical data and modified if necessary. New business is written in all regions in compliance with underwriting guidelines applicable worldwide, which set out detailed rules governing the type, quality, level and origin of risks and how these considerations are factored into the pricing. These global guidelines are revised annually and approved by the Executive Board. Special underwriting guidelines give due consideration to the particular features of individual markets. By monitoring compliance with these underwriting guidelines we minimise the risk of an inability to pay or of deterioration in the financial status of cedants. Regular reviews and holistic analyses (e.g. with an eye to lapse risks) are carried out with respect to new business activities and the assumption of international portfolios. Large transactions are also examined by our risk management department. Individual actuarial reports and documentation ensure that regular scrutiny also takes place at the subsidiary level. The interest rate risk, which in the primary sector is

important in life business owing to the guarantees that are given, is of only minimal relevance to our company thanks to the design of our reinsurance treaties. We have confidence in the entrepreneurial abilities of our underwriters and grant them the most extensive possible powers. In our decentralised organisation we manage risks where they arise using a consistent Group-wide approach in order to obtain an overall view of the risks in Life & 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 purpose of risk reduction are only used on a 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. Life & Health business group expects a payment from this cover in 2023 due to Covid-19 claims.

Some large longevity deals are retroceded proportionally and on a regular premium 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 will be collateralised 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 per life retention applied for the Hannover Re. For risk reduction reasons, they are no longer necessary and have been placed in run-off.

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 strains 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 Re in a standardized way, using standard systems and methods which are described in Section C.3.

C.2 Market risk

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

of ceding companies that we assume in connection with insurance contracts. The following table shows the risk capital with a confidence level of 99.5% for the market risks from investments under own and third-party management.

Required risk capital for market risks
Including private equity

in TEUR	2022	2021
Credit and spread risk	3,027,134	2,818,933
Interest rate risk	1,004,115	1,082,203
Foreign exchange risk	1,774,882	1,593,361
Equity risk	2,021,904	2,048,298
Real estate risk	946,474	755,371
Diversification	-3,598,951	-3,423,411
Market risk	**5,175,558**	**4,874,756**

The increase in market risk is a consequence of new investments and higher market values for private equity and real estate. Wider spreads and larger volumes of fixed-income securities are further factors driving the risks. On the other hand holdings in listed equity have been sold to a large extent, resulting in a decrease in equity 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 overstepped.

Interest rate markets were again highly volatile over the course of the year under review. In contrast to the previous years, which had seen continued declines in the rate level, rates moved sharply higher in the year under review across all maturities in our main currency areas. Furthermore, appreciable increases in risk premiums were observed for bonds issued by developing countries and lower-quality issuers, most notably from the second quarter onwards. Overall, however, a marked decrease in the hidden reserves for fixed-income securities was booked over the year as a whole. The predefined discussion and analysis mechanisms upon triggering of the escalation levels of the early-warning system were activated in the course of the year under review on account of interest rate 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.

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 Hannover Re 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 Hannover Re. 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 1.3% (0.8%) as at the end of the reporting period.

Stress tests are conducted in order to be able to map extreme scenarios as well as normal market scenarios for the purpose of calculating the Value at Risk. In this context, the loss potentials for fair values and shareholders' equity (before tax) are simulated on the basis of already occurred or notional extreme events.

Scenarios for changes in the fair value of material asset classes

		Portfolio change on a fair value basis	
in TEUR	Scenario	2022	2021
Equity securities and private equity	Share prices -10%	-199,613	-206,169
	Share prices -20%	-399,227	-412,338
	Share prices +10%	+199,613	+206,169
	Share prices +20%	+399,227	+412,338
Fixed-income securities	Yield increase +50 basis points	-1,187,869	-1,422,231
	Yield increase +100 basis points	-2,311,851	-2,766,819
	Yield decrease -50 basis points	+1,255,253	+1,508,547
	Yield decrease -100 basis points	+ 2,585,785	+3,113,345
Real Estate	Real estate market values -10%	-381,478	-310,594
	Real estate market values +10%	+381,478	+310,594

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.

Equity risks derive from the possibility of unfavourable changes in the value of equities, equity derivatives or equity index derivatives in our portfolio. Their relevance to our investments was, however, very slight because we acted on market opportunities early in the year under review for extensive sales of equity funds in what was already our minimal portfolio of equities and equity funds. Our equity allocation thus stands at just 0.0% (0.5%). Our exposure to the private equity market remains unchanged. Changes in fair value here tend to be prompted less by general market conditions and more by entity-specific assessments. The risks are associated principally with the business model and profitability and less so with the interest rate component in the consideration of cash flow forecasts.

By far the largest part of our assets under own management is invested in fixed-income securities. They are exposed to the interest rate risk. Declining market yields lead to increases and rising market yields to decreases in the fair value of the fixed-income securities portfolio. The credit spread risk should also be mentioned. The credit spread refers to the interest rate differential between a risk-entailing bond and 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 minimize 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 optimize 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 unfavorable 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.

We use derivative financial instruments only to the extent needed to hedge risks. The primary purpose of such financial instruments is to hedge against potentially adverse developments on capital markets. A portion of our cash flows from the insurance business as well as foreign exchange risks arising because currency matching cannot be efficiently achieved are hedged to some extent using forward exchange transactions. Hannover Re holds further derivative financial instruments to hedge interest rate risks from loans taken out to finance real estate and to hedge inflation risks from the life reinsurance business written by our Australian branch. In addition, Hannover Re holds hedges in the form of equity swaps to hedge price risks in connection with the stock appreciation rights granted under the Share Award Plan. These are intended to neutralize 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 collateralized. Insurance derivatives connected with the technical account are also recognized 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 Re gears its investment portfolio to the principles of a balanced risk / return ratio coupled with broad diversification. Accordingly, we counter the risk concentrations that nevertheless arise in individual asset classes with the broadest possible spread of different issuers per asset class. This is just as much a key component of our investment policy as credit rating assessment and management based on the quality criteria defined in the investment guidelines.

C.3 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	2022	2021
Counterparty default risk	434,678	468,041

The decrease in counterparty default risk mainly stems from a smaller default volume from retrocessionaires.

Our retrocession partners are carefully selected and monitored in light of credit considerations in order to keep the risk as small as possible. This is also true of our broker relationships, which entail a risk inter alia through the potential loss of the premium paid by the cedant to the broker. We minimise these risks, among other measures, by reviewing broker relationships with an eye to criteria such as the existence of professional indemnity insurance, payment performance and proper contract implementation. The credit status of retrocessionaires is continuously monitored. The Security Committee decides on measures where necessary to secure receivables that appear to be at risk of default. This process is supported by a risk management application, which specifies cession limits for the individual retrocessionaires participating in protection cover programmes and determines the capacities still available for short-, medium- and long-term business. Depending on the type and expected run-off duration of the reinsured business, the selection of reinsurers takes into account not only the minimum ratings of the rating agencies Standard & Poor's and A.M. Best but also internal and external expert assessments. Overall, retrocessions conserve our capital, stabilise and optimise our results and enable us to act on market opportunities across a broader front, e.g. following a major loss event. 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 %	2022	2021
Total	90.0	89.5
Property and casualty reinsurance	90.6	90.1
Life and health reinsurance	88.5	88.2

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

Counterparty default risks, among other risks, are also relevant to our investments and in Life & 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.

77.9 % of our recoverables from reinsurance business are secured by deposits or letters of credit. For the majority of our retrocessionaires we also function as reinsurer, meaning that in most cases recoverables can potentially be set off against our own liabilities.

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

Retrocession gives rise to claims that we hold against our retrocessionaires. These reinsurance recoverables – i.e. the reinsurance recoverables on unpaid claims – amounted to TEUR 3,313,370 (TEUR 2,674,107) at the balance sheet date.

The following table shows our reinsurance recoverables – split by rating quality – due from our retrocessionaires. Offsetting items as letters of credit and reinsurance deposits held as security against reinsurance recoverables on unpaid claims are consolidated in the column “secured”.

Reinsurance recoverables as at the balance sheet date

in TEUR	2022	2021
Secured	2,581,905	1,642,416
AAA		
AA	218,885	196,586
A	387,643	753,936
≤ BBB, NR	124,937	81,169
Total	**3,313,370**	**2,674,107**

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 poorer price than expected due to a lack of market liquidity). Core elements of the liquidity management of our investments are, in the first place, management of the maturity structure of our investments on the basis of the planned payment profiles arising out of our technical liabilities and, secondly, regular liquidity planning as well as the asset structure of the

investments. Above and beyond the foreseeable payments, unexpected and exceptionally large payments may pose a threat to liquidity. In reinsurance business, however, significant events (major losses) are normally paid out after a lead time that can be reliably planned. As part of our liquidity management we have nevertheless defined asset holdings that have proven to be highly liquid – even in times of financial stress such as the 2008 financial crisis. Our holdings of unrestricted German, UK and US government bonds as well as 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 9.1 billion (EUR 6.7 billion) as at the balance sheet date. In addition, we manage the liquidity of the portfolio by checking on each trading day the liquidity of the instruments contained therein. When reinvesting in fixed-income securities in the last quarter of the reporting period, we increasingly invested in instruments with short and long-term maturities while maintaining the average remaining maturity. By expanding the holding of short-term securities we further strengthened our liquidity base. These measures enable us to reduce our liquidity risk.

Regarding the “total amount of the expected profit included in future premiums” required by Art. 295 (5) of the Delegated Regulation 2015/35 please refer to the Quantitative Reporting Template S.23.01.22, item R0790. We do not use this quantity for our liquidity management.

C.5 Operational risk

Operational risk is the risk related to business operations and refers to potential losses arising from inadequate or failed internal processes, human errors, personnel and systems failures, or external events. Within the overall framework of operational risks, we distinguish 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, market and counterparty risks, which we enter into in a deliberate and controlled manner in the context of our business activities, operational risks are an indivisible part of our business activities. The focus is therefore on risk minimisation. With the aid of half-yearly Group-wide self-assessments, in which all relevant corporate operations are actively involved, we determine the maturity level of our risk management system for operational risks and define action fields for improvements. The assessment is carried out by evaluating the maturity level of the corporate governance, the risk management function and the respective risk identification, analysis, evaluation, steering, monitoring and reporting. The assessment of the maturity level enables us, among other things, to prioritise operational risks. In order to calculate the capital commitment in our internal capital model we perform extensive scenario analyses and take the findings as a basis for specifying the parameters for the stochastic model. In this context, experts across all disciplines establish assumptions for the loss frequency and losses in joint workshops. In addition, internal loss events and near-losses are systematically recorded and examined with an eye to possible measures for improving the control system. The internal data are enhanced with insights gained from external events, which either become known through public channels or were reported through a loss data consortium of which we are a member.

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

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

Required risk capital (confidence level 99.5 %)

in TEUR	2022	2021
Operational risk	620,826	626,903

The changes in operational risk can be attributed to 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. Risks connected with ESG issues can occur in particular in the subcategories of business continuity, compliance, human resources, information security and outsourcing.

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

- Non-availability/shortage of personnel, e.g. as a consequence of a pandemic
- Loss of the workplace environment
- Failure of local/central IT
- Failure of external infrastructures/service providers
- Security events (life and limb of employees at risk)

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

Compliance risks are associated with the risk of breaches of standards and requirements, non-compliance with which may entail lawsuits or official proceedings with not inconsiderable detrimental implications for the business activities of Hannover Re. Compliance with regulatory standards, the company’s Code of Conduct, tax regulations, data privacy requirements as well as the stipulations of anti-trust and competition law have been defined as issues of particular relevance. In conformity with a risk-based approach, sanctions screening software is used on relevant parts of the Hannover Re’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. With regard to Russia, a submission requirement and an in-depth review were introduced due to the current situation 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 proper functioning and competitiveness of Hannover Re can be attributed in large measure to the expertise and dedication of our staff. In order to minimise personnel risks, we pay special attention to the skills, experience and motivation of our employees and foster these qualities through personnel development and leadership activities. These measures are supported by ongoing talent management and regular employee surveys. Hannover Re has at its disposal different indicators for the early detection and monitoring of material risks. In view of the increased global competition for talent, a crucial indicator is the continuous monitoring of the internal turnover rate compared to the industry benchmark. In this regard, the talent management initiative supports the implementation and maintenance of the goals we have set.

Information security risks arise, inter alia, out of the risk of inadequate confidentiality, integrity or availability of information as well as impacts from or on other assets such as systems, processes, buildings / premises or persons. By way of example, losses and damage resulting from the unauthorized passing on of confidential information, the malicious overloading of important IT systems or from computer viruses / ransomware are material to Hannover Re. Given the broad spectrum of such risks, a diverse range of technical steering and monitoring measures and organisational standards, including for example the requirement to conclude confidentiality agreements with service providers, have been put in place. In addition, our employees are made aware of such security risks through practically oriented tools provided online in the intranet, by way of training opportunities and through targeted information. Hannover Re has implemented an Information Security Management System (ISMS) that is closely aligned with international standards – principally ISO 27001 – and harmonised with other management systems such as data protection or outsourcing management. The ISMS has successfully ensured that no material security incidents have occurred in recent years.The central document is the “Information Security Policy”, which is valid for all locations worldwide. Together with specific guidelines and standards, it regulates all technical and organisational measures including those relating to the confidentiality, integrity and availability of information assets. Consideration is given to all types of digital and physical information assets. The Executive Board bears overall responsibility for information security. It is supported by the Risk Committee. The Information Risk & Security Committee (IRSC) is a sub-committee of the Risk Committee and is comprised of the Head of Risk Management, the Chief Information Security Officer (CISO) and the Head of IT. The IRSC evaluates and monitors the corresponding risks and steers any conflicts of interest in relation to information and IT security. It acts – in common with the risk management function and the CRO – independently of any instructions. The full Executive Board is provided with information at least annually by way of an information security report and also within the year if necessary. The Risk Committee receives information on a quarterly basis.

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

C.6 Other material risks

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

Furthermore, we monitor the contagion risk between single entities of the Hannover Re Group and in respect of the relation to the HDI Group.

C.6.1 Emerging risks

Emerging risks are risks that are in the process of forming or may shortly become relevant due to current developments. Emerging risks evolve gradually from weak signals to unmistakable tendencies. They can directly impact our treaty portfolio in both Property & Casualty and Life & Health reinsurance and influence our investments. A further hallmark is that their risk content cannot be reliably assessed, especially with respect to our treaty portfolio.

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

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

Hannover Re publishes summary position papers on various emerging risks which can be accessed on our website. In the year under review the papers on supply chain risks, technological risks, fracking, pollution and the risk posed by terrorism, among others, were updated.

Hannover Re, represented by members of staff from Risk Management and other units, is a member of the Chief Risk Officer (CRO) Forum and a consistent 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 "Climate engineering" and "Space risk associated with a low earth orbit". The publications are publicly accessible on the CRO Forum website. An exploration of the carbon intensity of insured portfolios ("Carbon footprinting methodology for underwriting portfolios") is also available there.

C.6.2 Strategic risks

Strategic risks derive from a possible imbalance between the corporate strategy of the Hannover Re and the constantly changing general business environment, for example with respect to evolving regulatory requirements. 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 reputational risks

Reputational risks refer to the risk that the trust put in our company by clients, shareholders, employees or the public at large may be damaged. This risk has the potential to significantly jeopardise the business foundation of Hannover Re. A good corporate reputation is therefore an indispensable prerequisite for our core business as a reinsurer. Reputational risks may arise out of all business activities conducted by the Hannover Re. Reputational damage may be caused, inter alia, by a data mishap that becomes public knowledge or financial difficulties on account of an underwriting risk. In addition to the risk identification methods already described, we use a number of different techniques for risk mitigation, such as our defined communication channels (e.g. Crisis Communication Guideline), a professional approach to corporate communications, tried and tested processes for specific crisis scenarios as well as our established Code of Conduct. Above and beyond the general influence that sustainability risks have on a number of other risk categories (outside-in perspective), we also see a correlation between reputational and ESG risks (inside-out perspective). Risk Management and the Group Sustainability & Strategy team 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 2022 with particular relevance for risk management.

C.6.4.1 Geopolitical risks

The Russian invasion of Ukraine in February 2022 and the ensuing war has far-reaching consequences in Europe and worldwide. Further escalation of the conflict beyond the territory of Ukraine cannot be excluded and would have potentially considerable and far-reaching consequences for the geopolitical order. Fear of Russian aggression has prompted Sweden and Finland to seek NATO membership and thus set aside their long-standing policy of neutrality. Escalation of the conflict – whether due to the nature of the weapons deployed or the involvement of further parties in the conflict – is an obvious and ever-present danger. Multiple Western countries have additionally imposed sanctions on Russia, which have similarly been implemented by Hannover Re to the extent that it is affected by them. The impact on trade relations has been extensive. The conflict in Ukraine and its repercussions have, among other effects, driven up prices for energy and raw materials and hence inflation – especially in Europe. Governments in the European Union have taken various actions to alleviate the economic impacts of higher energy costs and to control prices and volumes. Tensions around the Taiwan Strait persist, as was evident on multiple occasions in 2022.

Additionally, clashes have occurred in recent years along the border between India and China. Escalation of such situations remain possible, and could have far-reaching consequences. Risks from armed conflicts are generally 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. Until recently, China pursued a strict zero-Covid policy, which was relaxed at the end of 2022. This caused infection rates to rise across the entire country. China also gradually eased its border restrictions, thereby increasingly facilitating the resumption of travel. While the zero-Covid policy was in force, Covid-related constraints impacted the Chinese economy and its infrastructure, leading to supply shortages affecting various goods and materials. The effects of these bottlenecks have been gradually alleviated as the economy opens up again, which should also be accompanied by a drop in inflation over the medium term. Trade relations between the United States and China have come under additional strain. Further reciprocal measures restricting trade between the world's two largest economies could have extensive repercussions on global trade. In Iran, moves to reactivate the Joint Comprehensive Plan of Action (JCPOA), or Iran nuclear deal, concluded between Iran and the Western powers have not produced any appreciable results. The eruption of widespread protests against the Iranian government following the death of a young woman in police custody destroyed any chance of reviving the agreement and triggered a wave of condemnation from abroad. These tensions cover the latent risk of a more widespread conflict in the Middle East.

The repercussions of Brexit are still being felt in the United Kingdom. The changes at 10 Downing Street in 2022 were not conducive to the institutional stability that would have facilitated a renegotiation of the Northern Ireland Protocol with the EU. A solution to this question is seen by both sides as key to a stable relationship post-Brexit. An agreement that satisfies all parties is seen as vital to resolving the currently dormant discussions around the equivalence of financial services. Another potential sticking point for equivalence is the expected changes under the UK solvency regime, which would probably lead to a divergence (albeit a minimal one) from the EU Solvency II

standard. Hannover Re's business relations with UK cedants have not, however, been adversely affected by Brexit. Hannover Re's branch in London has acquired the status of a third-country branch and is thus able to continue its operations.

C.6.4.2 Natural catastrophe risks and climate change

In 2022 Hannover Re was again impacted by natural catastrophe events in various parts of the world (Europe, Australia, the United States). Particularly noteworthy in the year under review were winter storm Ylenia / Zeynep in Central Europe, the heavy rain and flooding event in February and March in Australia and, most strikingly, Hurricane Ian in the US. Natural disasters should be viewed as inextricably linked to climate change. The associated impacts present a major challenge for risk management. We use both external and internal risk models to model the impacts of catastrophic events. The monitoring of risks resulting from natural perils is rounded off with stress tests as well as scenario and sensitivity analyses.

C.6.4.3 Capital market environment

Our investments performed highly satisfactorily overall in the reporting period despite numerous geopolitical and economic challenges. Most significantly, the war in Ukraine and the Covid-19 pandemic – the effects of which are still being felt – as well as the in part associated sharp surge in inflation are currently confronting the world economy with special challenges. Our investments benefited on the whole from the fact that we had already adopted a rather prudent positioning at the turn of the previous year in view of anticipated central bank moves and inflation trends.

The general level of interest rates is an important external factor influencing the return that can be generated on our investments. The monetary policy pursued by central banks has significant implications in this regard. The meteoric rise in inflation prompted the US Federal Reserve, the ECB and many other central banks to emphatically tighten their monetary policy by hiking short-term rates and reducing or entirely stopping bond purchases. Along with inflation fears, growing levels of public debt in many countries also had an adverse effect. In our main currency areas this initially led to a very marked rise in interest rates across all maturities. Furthermore, appreciable increases in risk premiums were observed on bonds issued by developing countries and lower-quality issuers, particularly from the second quarter onwards. Both these and the interest rate levels slow down somewhat towards year-end as anticipated. Nevertheless, the valuation reserves for our fixed-income securities consequently fell into clearly negative territory. These declines were partially offset by the large proportion that we hold in foreign currencies and the marked strengthening of some currencies – especially the US dollar – against the euro. In addition, higher interest rates have substantially positive implications for new investments and reinvesting activities.

Equity markets posted their weakest performance in recent years through to the third quarter, only recouping some of these losses in the fourth quarter. Through timely liquidation of our positions in the first six months, we were nevertheless able to generate a positive profit contribution here of EUR 94 million.

Inflation continues to be a dominant issue. Even without the war in Ukraine, catch-up effects from the pandemic would come up against tight labour markets and could, as is already evident in the US, set in motion a wage-price spiral. Higher energy costs and disrupted supply chains – especially in Europe – are further contributory factors. In the latter case, China's important – but difficult to evaluate – role against the backdrop of its Covid-19 policy also needs to be kept in mind. The

topics of energy, raw materials and protectionism will also inject added tension into the future of the existing globalization trend and its trade flows. High inflation thus remains a major concern – albeit one which we are countering with income from our portfolio of inflation-linked bonds. These made a very pleasing contribution to our ordinary investment income with a positive amortisation amount of EUR 458.5 million and serve primarily to mitigate the effects of claims inflation.

We continue to have exposure to the private equity market. Fair value changes here tend to be less influenced by general market conditions and more by company-specific evaluations. The risks are therefore primarily associated with the business model and profitability and to a lesser extent with the interest rate component in the consideration of cash flow forecasts. We also view the need to take higher write-downs in the year under review on isolated assets not solely as evidence of a generally elevated risk in the market, but rather in the context of the risk profile specific to this asset class and set of company characteristics. By contributing large parts of our private equity portfolio to a joint venture with Münchener Rückversicherungs-Gesellschaft, we are able not only to further diversify our existing portfolio but also to secure expanded market access to broader spreading of future investments.

The significance of real estate risks remains high for our company owing to our consistent participation in this sector. We spread these risks through broadly diversified investments in high-quality markets around the world, with each investment decision being preceded by extensive analyses of the relevant property, manager and market. The current market environment is increasingly seeing sharply higher refinancing rates and an appreciable slowdown in transaction activity, which can have knock-on effects on real estate valuations. We are keeping a close eye on this for our existing real estate portfolio, but also believe that the present correction potentially offers targeted buying opportunities.

As far as our investments are concerned, we anticipate continuing elevated volatility on global capital markets in the immediate future, although we also see this as an opportunity and believe that we are appropriately prepared with our current investment posture. Geopolitical tensions and armed conflict, as currently seen in Ukraine, pose corresponding risks to the prevailing political balance of power in Europe. Adverse impacts on financial markets are possible. Resulting increases in energy prices may push inflation even higher.

C.6.4.4 Inflation on the underwriting side

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

segment is affected more heavily than Life & Health reinsurance. In the course of the year we observed sharply negative runoffs of certain large losses from prior years, which we attribute partly to the rise in inflation.

C.6.4.5 Regulatory developments

The European Parliament and Council are negotiating the final legislative texts on the basis of the European Commission's proposals for the overhaul of the Solvency II, as well as a new directive for the recovery and resolution of insurance and reinsurance undertakings. The Commission's proposals include, among other aspects, new macro-prudential supervisory powers as well as changes to yield curves and revisions to the calculation of the risk margin. Depending on the final outcome of the ongoing legislative process, these proposals could have considerable implications for the European (re)insurance industry. Numerous regulatory developments relating to sustainability occurred in 2022 on the international, European and national level. In the EU these are linked to the European Green Deal strategy pursued by the European Commission. The European Commission thereby renewed the high-level goals for sustainable finance, which were first set out in the Commission's 2018 action plan. Most significant for Hannover Re are the Taxonomy Directive and the Corporate Sustainability Reporting Directive (CSRD). In the course of 2022, EIOPA carried out another internal model comparative study, in which Hannover Re participated. Aspects such as the parameters and results of the market risk models were compared. The EIOPA studies and their findings are intended to harmonise regulatory approaches in the EU and hence refine the supervision of internal models above and beyond the existing tools. This poses, among other issues, a systemic risk that approaches specific to particular undertakings may be too heavily restricted. Digital technologies are of pivotal importance for processes in the financial services industry as a whole and especially for (re)insurers. The EU has developed the Digital Operational Resilience Act (DORA) as a new framework for ensuring the resilience of digital services in critical scenarios. Hannover Re must adjust many internal processes in connection with the review of external IT service providers in order to implement the requirements. Growing protectionism is leading to additional restrictions on market access in many parts of the world. This trend makes it more challenging to close existing and emerging protection gaps, such as in the aftermath of catastrophic events.

C.6.4.6 Corporate taxes

The EU Member States have reached agreement in principle to implement the minimum taxation component, known as Pillar 2, of the OECD reform of international taxation on the EU level. The profits of large multinational and domestic groups or companies with a combined annual turnover of at least EUR 750 million will be taxed at a minimum rate of 15%. The global minimum tax will enter into force on 1 January 2024. Political discussions are still ongoing about a transitional period in which certain safe harbor arrangements may apply. This will have considerable implications for the reporting obligations of Hannover Re and all other Group companies. Transposition will be governed by a German implementing act setting out the definitive legal basis for this project.

C.6.4.7 Covid-19 pandemic and biometric risks

After almost three years of operational and financial experience with the pandemic and its effects, we now have a solid basis to assess potential further developments and impacts on our company.

We continue to evaluate our financial strength and profitability on a regular basis using stress tests and sensitivity analyses, and take measures as needed to reduce risks or strengthen our capital resources. This is true not only regarding of Covid-19 but also with respect to potential future pandemics. We are also monitoring the possible long-term effects of Covid-19 infections and their implications for reinsurance products. Building adequate reserves for ongoing losses from Covid-19 has been incorporated into regular processes. Contrary to the overall positive run-off in many lines of our Property & Casualty reinsurance, we incurred significant losses in the 2022 financial year from Covid-19 in Asia in the business lines accident and short-term health. In Life & Health, we continuously monitor the development of our mortality portfolio (especially in the United States) as well as of our worldwide morbidity business, particularly with an eye to the impacts of the Covid-19 pandemic. It is to be anticipated that losses from the Covid-19 pandemic will continue to diminish in most markets in 2023. We are closely tracking the latest dynamic developments in China and build reserves where necessary.

C.6.5 Contagion risks

Contagion risk refers to the risks originated by interactions between individual entities of Hannover Re 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 Re manages this risk by a strict look-through approach in its management systems.

D. Valuation for Solvency purposes

A valuation principle assigns monetary values to sets of rights and obligations in a structured way. The decision on what rights and obligations need to be considered is one of the distinguishing features of the valuation principles.

Hannover Re's internal valuation approaches are based on economic valuation principles. In principle economic valuation assigns to each right or obligation the price at which this right or obligation would be traded in an arms-length transaction between willing and knowledgeable parties. This principle has the advantages of being:

- Objective, since transaction prices can (in theory) be simply observed and do not require any further input,
- Comprehensive, since a transaction would incorporate all potential cash flows arising from those rights or obligations. In particular there can be no off-balance sheet items within an economic valuation framework,
- Risk-adjusted, since trades between risk-adverse parties will always incorporate the price of risk.

Depending on the specific position being valued and the state of the market at the time of valuation, two different and mutually exclusive levels of valuation can be distinguished:

Mark-to-market: This is the prototypical and simplest level of economic valuation. It is applicable if the positions to be valued are quoted in an active market. In that case, the value of the position is just the market price. Examples for positions, which can be valued on a mark-to-market basis are US treasuries, blue chips or futures with standard maturities on broad indices, such as the S&P 500. In general, everything traded in a deep and liquid market can be valued on a mark-to-market basis.

Market-consistent valuation (mark-to-model): This principle applies if neither prices themselves nor all inputs required for generally accepted pricing models can be observed in active markets. Accordingly, at least some parameters and inputs will be based on judgmental, and thus subjective, decisions. The valuation of many investments and most insurance contracts falls within this category, which is why this level of valuation is the most important one within the internal model. For consistency of the valuation with mark-to-market principles, it is required that

1. Observable prices and model parameters derived from them are used wherever available,
2. Parameter estimates are unbiased and derived according to sound techniques based on statistics or expert judgment,
3. Unavoidable risk must be allowed for in the valuation, consistent with the prevailing market price of risk. For this, it does not matter whether the risk is caused by the cash flows themselves or due to uncertainties in models or parameter estimates. This allowance for risk is called the risk margin.

Unavoidable risk is defined as the risk, which cannot be replicated completely by financial instruments. If it can be replicated by such instruments, the risk can be avoided by investing in the replicating portfolio and the price of the position will be identical to the price of the replicating portfolio.

Many risks are hedgeable in principle but some positions in the resulting hedge portfolios might not be quoted in active markets. One example is credit risk of smaller or non-listed obligors, where in theory OTC CDS are available from certain counterparties but observable market prices are not. In addition, if the position cannot be replicated perfectly, i.e. if basis risk remains, this residual risk is still considered unavoidable and requires a risk margin.

The terms unavoidable and non-hedgeable will be used synonymously below.

Non-hedgeable risk is allowed for in Hannover Re's economic valuation framework by decreasing assets and / or increasing liabilities with a risk margin. Hannover Re defines the risk margin for non-hedgeable risk as the market cost of capital required for the orderly run-off of all its rights and obligations.

Fair value hierarchy according to IFRS

The fair value hierarchy according to IFRS, which reflects characteristics of the price data and inputs used for measurement purposes, is similar to Solvency II valuation methods and structured as follows:

- Level 1: Assets or liabilities measured at (unadjusted) prices quoted directly in active and liquid markets.
- Level 2: Assets or liabilities which are measured using observable market data and are not allocable to level 1. Measurement is based, in particular, on prices for comparable assets and liabilities that are traded on active markets, prices on markets that are not considered active as well as inputs derived from such prices or market data.
- Level 3: Assets or liabilities that cannot be measured or can only be partially measured using observable market inputs. The measurement of such instruments draws principally on valuation models and methods.

If input factors from different levels are used to measure a financial instrument, the level of the lowest input factor material to measurement is determinative. The operational units responsible for coordinating and documenting measurement are organisationally separate from the operational units that enter into investment risks. All relevant valuation processes and valuation methods are documented. Decisions on fundamental valuation issues are taken by a valuation committee that meets monthly.

General valuation principles

The primary objective is an economic, market-consistent approach to the valuation of assets and liabilities. According to the risk-based approach in the internal steering processes as well as under Solvency II, when valuing balance sheet items on an economic basis, the risks that arise from a particular balance sheet item need to be considered, using assumptions that market participants would use in valuing the asset or the liability.

According to this approach, assets and liabilities should be valued as follows:

- Assets should be valued at the amount for which they could be exchanged between knowledgeable willing parties in an arm's length transaction.
- Liabilities should be valued at the amount for which they could be transferred, or settled, between knowledgeable willing parties in an arm's length transaction.

- The time value of money should be reflected, i.e. all cash flows are 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 adjustment to take account of the own credit standing of the insurance or reinsurance undertaking shall be made.
- Assets and liabilities shall be valued based on the assumption that the undertaking will pursue its business as a going concern.
- Individual assets and liabilities are valued separately.
- The application of materiality, whereby the omissions or misstatements of items are material if they could, individually or collectively, influence the economic decisions that users make on the basis of the Solvency II balance sheet. Materiality depends on the size and nature of the omission or misstatement judged in the surrounding circumstances. The size or nature of the item, or a combination of both, could be the determining factor.
- The application of simplifications is feasible when the method is proportionate to the nature, scale and complexity of the risks inherent.

Unless otherwise stated, assets and liabilities other than technical provisions shall be recognised in conformity with the international accounting standards, as endorsed by the Commission in accordance with Regulation (EC) No 1606/2002.

- Valuation of assets and liabilities other than technical provisions shall be carried out, unless otherwise stated, in conformity with international accounting standards, as endorsed by the Commission in accordance with Regulation (EC) No 1606/2002 provided that those standards include valuation methods that are consistent with the valuation approach set out in Article 75 of Directive 2009/138/EC. If those standards allow for more than one valuation method, only valuation methods that are consistent with Article 75 of Directive 2009/138/EC can be used.
- Where the valuation methods included in international accounting standards, as endorsed by the Commission in accordance with Regulation (EC) No 1606/2002 are either temporarily or permanently not consistent with the valuation approach set out in Article 75 of Directive 2009/138/EC, insurance and reinsurance undertakings shall use the other valuation methods that have been deemed to be consistent with Article 75 of Directive 2009/138/EC.
- When valuing liabilities using fair value, the adjustment to take account of the own credit standing as required by IFRS 13 Fair Value Measurement has to be eliminated. When valuing financial liabilities this only applies to the subsequent adjustment after initial recognition.
- As a Guidance for marking-to-market and marking-to-model the guidance on fair value measurement within IFRS 13 may be used, for example the characteristics of inactive markets described in IFRS 13.

IFRS do not always require an economic valuation as envisaged by Article 75 of Directive 2009/138/EC.

Hannover Re made use of the volatility adjustment for the first time. The impact of the application of the volatility adjustment is displayed in Section D.2.

D.1 Solvency II balance sheet

Difference in valuation

in TEUR	Item	Solvency II	IFRS
Assets			
Goodwill	R0010		77,365
Deferred acquisition costs	R0020		3,578,805
Intangible assets	R0030		158,011
Deferred tax assets	R0040	1,309,190	1,874,202
Property, plant & equipment held for own use	R0060	180,631	163,415
Investments (other than assets held for index-linked and unit-linked contracts)	R0070	55,117,406	55,312,778
Property (other than for own use)	R0080	2,857,986	2,319,332
Holdings in related undertakings, including participations	R0090	3,041,489	3,038,734
Equities	R0100	0	0
Equities - listed	R0110		0
Equities - unlisted	R0120	0	
Bonds	R0130	44,508,215	47,130,959
Government Bonds	R0140	25,587,524	28,587,385
Corporate Bonds	R0150	17,336,172	17,084,206
Structured notes	R0160	125,504	0
Collateralised securities	R0170	1,459,015	1,459,368
Collective Investments Undertakings	R0180	3,082,344	1,785,807
Derivatives	R0190	202,670	466,287
Deposits other than cash equivalents	R0200	1,320,962	457,775
Other investments	R0210	103,738	113,883
Loans and mortgages	R0230	403,043	311,130
Loans and mortgages to individuals	R0250	2,087	
Other loans and mortgages	R0260	400,956	311,130
Reinsurance recoverables from:	R0270	2,147,057	3,766,559
Non-life and health similar to non-life	R0280	2,046,388	3,403,449
Non-life excluding health	R0290	2,035,250	3,395,363
Health similar to non-life	R0300	11,138	8,086
Life and health similar to life, excluding health and index-linked and unit-linked	R0310	79,155	363,110
Health similar to life	R0320	190,910	26,298
Life excluding health and index-linked and unit-linked	R0330	-111,754	336,812
Life index-linked and unit-linked	R0340	21,513	
Deposits to cedants	R0350	10,348,498	11,538,853
Insurance and intermediaries receivables	R0360	1,626,128	8,276,914
Reinsurance receivables	R0370	195,143	63,617
Receivables (trade, not insurance)	R0380	326,398	322,241
Cash and cash equivalents	R0410	1,323,006	1,323,175
Any other assets, not elsewhere shown	R0420	183,596	185,310
Total assets	**R0500**	**73,160,096**	**86,952,374**

in TEUR	Item	Solvency II	IFRS
Liabilities			
Technical provisions – non-life	R0510	35,534,341	48,018,372
Technical provisions – non-life (excluding health)	R0520	33,061,299	44,717,921
TP calculated as a whole	R0530		
Best Estimate	R0540	32,328,248	
Risk margin	R0550	733,050	
Technical provisions - health (similar to non-life)	R0560	2,473,043	3,300,451
TP calculated as a whole	R0570		
Best Estimate	R0580	2,382,449	
Risk margin	R0590	90,594	
Technical provisions - life (excluding index-linked and unit-linked)	R0600	8,241,337	13,681,892
Technical provisions - health (similar to life)	R0610	3,788,965	3,846,714
TP calculated as a whole	R0620		
Best Estimate	R0630	3,269,063	
Risk margin	R0640	519,902	
Technical provisions – life (excluding health and index-linked and unit-linked)	R0650	4,452,372	9,835,178
TP calculated as a whole	R0660		
Best Estimate	R0670	2,627,764	
Risk margin	R0680	1,824,607	
Technical provisions – index-linked and unit-linked	R0690	715,318	
TP calculated as a whole	R0700		
Best Estimate	R0710	705,963	
Risk margin	R0720	9,355	
Contingent liabilities	R0740		
Provisions other than technical provisions	R0750	189,703	189,703
Pension benefit obligations	R0760	153,757	153,757
Deposits from reinsurers	R0770	620,856	4,076,405
Deferred tax liabilities	R0780	4,832,252	2,617,632
Derivatives	R0790	61,417	169,607
Debts owed to credit institutions	R0800	675,894	688,144
Financial liabilities other than debts owed to credit institutions	R0810	1,170,209	1,235,908
Insurance & intermediaries payables	R0820	988,234	1,967,151
Reinsurance payables	R0830	204,606	855,011
Payables (trade, not insurance)	R0840	352,375	352,375
Subordinated liabilities	R0850	3,383,232	3,726,321
Subordinated liabilities not in BOF	R0860	0	0
Subordinated liabilities in BOF	R0870	3,383,232	3,726,321
Any other liabilities, not elsewhere shown	R0880	488,229	472,380
Total liabilities	**R0900**	**57,611,759**	**78,204,657**
Excess of assets over liabilities	**R1000**	**15,548,338**	**8,747,716**

For general differences in valuation between Solvency II and IFRS please refer to Section D.

Comparison to prior year

in TEUR	Item	Solvency II 2022	Solvency II 2021
Assets			
Intangible assets	R0030		
Deferred tax assets	R0040	1,309,190	368,823
Pension benefit surplus	R0050		
Property, plant & equipment held for own use	R0060	180,631	178,975
Investments (other than assets held for index-linked and unit-linked contracts)	R0070	55,117,406	54,608,532
Property (other than for own use)	R0080	2,857,986	2,308,643
Holdings in related undertakings, including participations	R0090	3,041,489	573,240
Equities	R0100	0	175
Equities - listed	R0110		
Equities - unlisted	R0120	0	175
Bonds	R0130	44,508,215	45,492,915
Government Bonds	R0140	25,587,524	24,096,610
Corporate Bonds	R0150	17,336,172	19,928,724
Structured notes	R0160	125,504	77,518
Collateralised securities	R0170	1,459,015	1,390,064
Collective Investments Undertakings	R0180	3,082,344	4,970,074
Derivatives	R0190	202,670	18,537
Deposits other than cash equivalents	R0200	1,320,962	1,176,304
Other investments	R0210	103,738	68,643
Assets held for index-linked and unit-linked contracts	R0220		
Loans and mortgages	R0230	403,043	360,660
Loans and mortgages to individuals	R0250	2,087	2,619
Other loans and mortgages	R0260	400,956	358,041
Reinsurance recoverables from:	R0270	2,147,057	1,838,510
Non-life and health similar to non-life	R0280	2,046,388	1,881,853
Non-life excluding health	R0290	2,035,250	1,864,475
Health similar to non-life	R0300	11,138	17,379
Life and health similar to life, excluding health and index-linked and unit-linked	R0310	79,155	-77,673
Health similar to life	R0320	190,910	248,696
Life excluding health and index-linked and unit-linked	R0330	-111,754	-326,370
Life index-linked and unit-linked	R0340	21,513	34,330
Deposits to cedants	R0350	10,348,498	11,337,121
Insurance and intermediaries receivables	R0360	1,626,128	1,358,360
Reinsurance receivables	R0370	195,143	259,645
Receivables (trade, not insurance)	R0380	326,398	482,781
Cash and cash equivalents	R0410	1,323,006	1,355,071
Any other assets, not elsewhere shown	R0420	183,596	171,898
Total assets	**R0500**	**73,160,096**	**72,320,375**

in TEUR	Item	Solvency II 2022	Solvency II 2021
Liabilities			
Technical provisions – non-life	R0510	35,534,341	33,958,469
Technical provisions – non-life (excluding health)	R0520	33,061,299	31,696,120
TP calculated as a whole	R0530		
Best Estimate	R0540	32,328,248	30,968,148
Risk margin	R0550	733,050	727,972
Technical provisions - health (similar to non-life)	R0560	2,473,043	2,262,349
TP calculated as a whole	R0570		
Best Estimate	R0580	2,382,449	2,153,929
Risk margin	R0590	90,594	108,420
Technical provisions - life (excluding index-linked and unit-linked)	R0600	8,241,337	11,139,989
Technical provisions - health (similar to life)	R0610	3,788,965	3,978,950
TP calculated as a whole	R0620		
Best Estimate	R0630	3,269,063	3,362,661
Risk margin	R0640	519,902	616,289
Technical provisions – life (excluding health and index-linked and unit-linked)	R0650	4,452,372	7,161,040
TP calculated as a whole	R0660		
Best Estimate	R0670	2,627,764	4,544,196
Risk margin	R0680	1,824,607	2,616,844
Technical provisions – index-linked and unit-linked	R0690	715,318	1,152,908
TP calculated as a whole	R0700		
Best Estimate	R0710	705,963	1,140,470
Risk margin	R0720	9,355	12,438
Contingent liabilities	R0740		
Provisions other than technical provisions	R0750	189,703	182,623
Pension benefit obligations	R0760	153,757	208,750
Deposits from reinsurers	R0770	620,856	595,968
Deferred tax liabilities	R0780	4,832,252	3,808,053
Derivatives	R0790	61,417	52,438
Debts owed to credit institutions	R0800	675,894	540,940
Financial liabilities other than debts owed to credit institutions	R0810	1,170,209	966,178
Insurance & intermediaries payables	R0820	988,234	927,282
Reinsurance payables	R0830	204,606	141,727
Payables (trade, not insurance)	R0840	352,375	233,562
Subordinated liabilities	R0850	3,383,232	3,029,745
Subordinated liabilities in BOF	R0870	3,383,232	3,029,745
Any other liabilities, not elsewhere shown	R0880	488,229	225,753
Total liabilities	**R0900**	**57,611,759**	**57,164,387**
Excess of assets over liabilities	**R1000**	**15,548,338**	**15,155,988**

Solvency II recognition, valuation and presentation of balance sheet items follows regulatory requirements. The IFRS balance sheet is taken from Hannover Re Group's annual financial statements and shown in the column "IFRS" on the right hand side.

Note that for allocation of investments under own management to Solvency II balance sheet items, detailed EIOPA regulations on classification as well as BaFin regulations (e.g. regarding collective investment undertakings) have to be followed and are not utilised for the IFRS balance sheet items.

Comparing Solvency II and IFRS balance sheets, Hannover Re Group classifies differences in recognition, valuation and presentation into the following categories:

- Adjustments of self-managed investments, which comprise market valuation vs. valuation at amortised cost for several, but not all self-managed investments under IFRS,
- Adjustments of technical items (incl. risk margin), where technical items are revaluated for Solvency II purposes as described in Section D.2,
- Adjustments of other balance sheet items (without deferred taxes), which mostly consist of differences in recognition of balance sheet items for Solvency II vs. IFRS (e.g. intangible assets) as well as reclassifications, together with market valuation (e.g. of subordinated liabilities),
- Deferred tax, which comprises the effects on deferred tax assets and deferred tax liabilities when moving from IFRS to Solvency II valuation.

Those adjustments amounted to a difference in excess of assets over liabilities (including minorities) for Solvency II compared to IFRS of TEUR 6,800,621 as at the balance sheet date.

For the Solvency II balance sheet as at the balance sheet date, the principles of recognition, valuation and presentation remained unchanged compared to the previous period.

D.2 Technical provisions

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

Cash flows are discounted with risk-free rates in line with EIOPA requirements. A matching adjustment is not applied. Furthermore, the risk-free yield curves are not adjusted as set out in Art. 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 Re 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 Re 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) and the basic own funds and the amounts of own funds eligible to meet the SCR.

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

Impact of non-application of a volatility adjustment

in TEUR	Amount with Long Term Guarantee measures and transitionals	Impact of volatility adjustment set to zero
Technical provisions	44,490,996	568,851
Basic own funds	17,514,035	-327,127
Eligible own funds to meet Solvency Capital Requirement	17,514,035	-327,127
Solvency Capital Requirement	6,952,301	348,961

Transitionals are currently not applied at Hannover Re. For Solvency II purposes, all contracts have to be evaluated over the whole lifetime within the individual contract boundaries (ultimate view). The contract boundary is defined as the future date on which at least one of the following criteria is met:

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

In case no such condition is met, the policies are projected until their natural expiry.

The BEL is shown on a gross basis in the following, i.e. before the 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 on-going operations.

Cash flows in connection with funds withheld (FWH) – increase, decrease or interest on FWH – of the underlying business are usually not netted against the liability cash flows. Any FWH shown as such in the IFRS balance sheet will need to be shown as a FWH in the Solvency II balance sheet. For very risk remote transactions a netted presentation is proceeded in line with the IFRS presentation. For all other transactions the FWH are grossed up.

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).

According to Solvency II, there is a differentiation between business accepted – shown on the liability side – and business ceded – shown on the asset side. According to IFRS, the assignment to the asset and liability side, respectively, partially depends on the sign of the accounting figures.

For the Property & Casualty business, the TP does not include any financial options and guarantees (FOGs). For the Life & Health business, there is an immaterial amount of FOGs for US business. The latter is included in the BEL.

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

Risk Margin (RM)

According to Art. 37 (1) of the delegated acts (EU) 2015/35, 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 Re'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.

According to Solvency II principles, the risk margin of all legal entities is calculated on a standalone basis, thus there is no allowance for diversification effects between legal entities. Diversification is taken into account within a legal entity including diversification effects between Property & Casualty and Life & Health.

Covid-19 pandemic

After almost three years of operational and financial experience with the pandemic and its effects, we now have a solid basis to assess potential further developments and impacts on our company.

We continue to evaluate our financial strength and profitability on a regular basis using stress tests and sensitivity analyses, and take measures as needed to reduce risks or strengthen our capital resources. This is true not only regarding of Covid-19 but also with respect to potential future pandemics. We are also monitoring the possible long-term effects of Covid-19 infections and their implications for reinsurance products. Building adequate reserves for ongoing losses from Covid-19 has been incorporated into regular processes.

Contrary to the overall positive run-off in many lines of our Property & Casualty reinsurance, we incurred significant losses in the 2022 financial year from Covid-19 in Asia in the business lines accident and short-term health.

In Life & Health, we continuously monitor the development of our mortality portfolio (especially in the United States) as well as of our worldwide morbidity business, particularly with an eye to the impacts of the Covid-19 pandemic. It is to be anticipated that losses from the Covid-19 pandemic will continue to diminish in most markets in 2023. We are closely tracking the latest dynamic developments in China and build reserves where necessary.

Inflation

The higher rates of inflation worldwide have the potential to affect multiple factors in our business activities, including for example the insured values and their premium calculation, the loss reserves, the large loss budget, the investments (as described in the previous section) and the management expenses. We have developed measures to deal with inflation in all these respects. It should be borne in mind here that the general rise in consumer prices needs to be differentiated from the claims and cost inflation that is relevant to our company. The Hannover Re-specific claims inflation index is a blend of different regions and currencies and dependent on the line of business. Mention should be made here of wages and salaries for liability business, construction costs for property insurance including natural perils and medical expenses for Life & Health insurance. Inflation is considered in our reserving process. Essentially, this process is based on average past inflation rates; if there are indications of a future rise in inflation, we review the need to apply loadings. This is especially important in long-tail lines because multiple underwriting years can be affected at the

same time. We monitor inflation drivers over the entire course of the business and reduce them by, among other things, making appropriate allowance in the premium calculation and by means of index clauses and sliding-scale commissions.

We also use the inflation-linked securities referred to in the previous subsection to hedge inflation risks. Overall, the Property & Casualty reinsurance segment is affected more heavily than Life & Health reinsurance.

In the course of the year we observed sharply negative runoffs of certain large losses from prior years, which we attribute partly to the rise in inflation.

D.2.1 Technical provisions of Property and Casualty Reinsurance

This section provides information on the technical provisions held for Property & Casualty reinsurance and insurance. The next sections shows BEL and RM per line of business and the following section provides further detail on the valuation methods.

D.2.1.1 Value of technical provisions

Gross technical provisions property & casualty by lines of business
in TEUR

Line of business	BEL	RM	TP	TP IFRS	Difference SII and IFRS
General liability insurance	4,347,890	110,156	4,458,047	5,753,717	-1,295,670
Workers' compensation insurance	140,076	12,520	152,596	146,050	6,546
Income protection insurance	643,737	19,135	662,871	1,188,054	-525,182
Fire and other damage to property insurance	6,530,027	166,633	6,696,659	8,720,965	-2,024,306
Motor vehicle liability insurance	2,581,601	40,109	2,621,710	2,989,951	-368,241
Credit and suretyship insurance	1,392,754	40,531	1,433,285	1,958,899	-525,614
Marine, aviation, transport	1,030,617	20,897	1,051,514	1,519,315	-467,801
Other motor insurance	1,192,926	27,314	1,220,240	1,466,572	-246,332
Other insurance	532,238	8,751	540,989	814,074	-273,084
Non-proportional health reinsurance	1,400,410	57,104	1,457,514	2,317,911	-860,397
Non-proportional property reinsurance	5,999,895	86,686	6,086,580	8,268,434	-2,181,854
Non-proportional marine, aviation and transport	931,944	17,336	949,280	1,403,557	-454,277
Non-proportional casualty reinsurance	7,986,582	216,474	8,203,056	11,470,874	-3,267,818
Total Non-Life Obligation	**34,710,697**	**823,644**	**35,534,341**	**48,018,372**	**-12,484,031**

The line of business "Other insurance" comprises assistance, legal expenses insurance, medical expense insurance and miscellaneous financial loss.

D.2.1.2 Valuation of technical provisions

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.

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. 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 Solvency II calculations to determine all relevant cash flows for premium and claims provision reflect a best estimate projection. The calculation of the BEL is based on gross data. 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.

For the calculation of the BEL, development pattern and estimated ultimates are applied on the homogeneous risk groups. The pattern and the ultimates are determined on run-off triangles using standard actuarial methods, in particular, variations of the Chain-Ladder-Method. The triangles are generated using up-to-date and trustworthy data.

The cash flows are discounted using the risk-free interest rates provided by EIOPA and converted to the reporting currency EUR 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 the reinsurance recoverables is undertaken analogously to the principles applied for the calculation of technical (gross) provisions of Property & Casualty reinsurance.

The 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.

D.2.1.3 Comparison with other provisions

Comparison to IFRS provisions

This section outlines the reconciliation of the net technical provisions from IFRS to the Solvency II.

Reconcilliation Solvency II vs. IFRS
in TEUR

Description	2022
IFRS "net technical provisions" property and casualty (incl. unearned premium reserve)	**44,614,924**
Discounting of cash flows	-6,651,020
Risk margin	823,644
Differences in actuarial estimates and business volume differences	-1,374,332
Total revaluation effect from IFRS to Solvency II	**-7,201,707**
Netting of accounts payables and receivables	-3,925,263
Solvency II net technical provisions property and casualty	**33,487,953**

The individual items of the reconciliation refer to the following aspects:

- Solvency II technical provisions are present values of future cash flows discounted at the risk-free interest rate, whereas under IFRS generally annuity reserves are discounted, only.
- The risk margin under Solvency II 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.
- Solvency II technical provisions are calculated as a probability weighted average, whereas under IFRS the technical provisions represent a more prudent best estimate. In addition, Solvency II takes a homogenous ultimate view while IFRS distinguishes earned and unearned loss and premium reserves. Both effects are presented as item “Differences in actuarial estimates and business volume differences”.
- The accounts payables receivables are netted against the Solvency II cash flows.

Comparison to BEL of last year

Comparison to prior year

in TEUR	2022	2021
BEL gross	34,710,697	33,122,077
BEL net	32,664,309	31,240,223
RM	823,644	836,392

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

D.2.2 Technical provisions Life & Health

In the section, we provide quantitative information with respect to the Life°&°Health BEL, RM and TP as well as a comparison to the IFRS liability.

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 technical provisions“.

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

D.2.2.1 Quantitative Information on technical provisions Life & Health

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	IFRS liability	Comparison IFRS/ Solvency II
Life	3,333,727	1,833,962	5,167,689	9,835,178	-4,667,488
Health	3,269,063	519,902	3,788,965	3,846,714	-57,749
Total	**6,602,791**	**2,353,864**	**8,956,654**	**13,681,892**	**-4,725,238**

Details regarding the treatment of funds withheld (FWH) as well as payables and receivables are provided in Section D.2. The segmentation into the Life & Health lines of business is slightly different under Solvency II and IFRS. A reconciliation from the IFRS liability net of reinsurance to the Solvency II TP net of reinsurance is provided in Section D.2.2.3.

D.2.2.2 Valuation of the technical provisions Life & Health

Valuation basis

All business is valued employing current best estimate assumptions. 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 or – if available and material – based on individual policy data. 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

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 and projected into the future. Thereby the reporting currency of the respective branch is applied.

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 & 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 detailed policy data). The assumptions are monitored when the accounts from the cedants are booked and are in turn adjusted, if necessary. The base mortality / morbidity table is usually the table used in pricing. Also here, adjustments are made in case that the actual figures materially differ from 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 Hannover Re's base standard tables and updated regularly. For financial solution and morbidity risk solution business in the US market, mortality / morbidity assumptions are set using best estimate pricing assumptions. Also they are validated regularly. The projection of structured financial transactions in the US market allows for counterparty recapture assumptions. Rates can be increased for certain health business in the US market. This circumstance is reflected in the projections since this is market practice of managing the business.

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

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

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

A few smaller treaties modelled are 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 relevant insight emerges. 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

For the Critical Illness business of the Shanghai Branch, there were adjustments to the mortality and morbidity assumptions, which in total had an increasing effect on the BEL. There was also an increase in BEL due to an update of the expense assumptions for certain US and Australian business and for longevity business of the UK branch. Adjustments to the termination rates for Australian disability business as well as adjusted mortality improvement assumptions for Canadian mortality business led to a further increase in BEL.

For the Hong Kong Branch, adjustments to mortality and lapse assumptions for selected treaties resulted in a decrease in BEL. For the US business, the assumptions of one treaty were updated to be in line with the IFRS 17 assumptions and mortality assumptions were updated for certain treaties in the context of model rebuilds. Both effects led to a decrease in BEL.

Reinsurance recoverables

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

In total the reinsurance recoverables under Solvency II are positive (TEUR 100,669), i.e. this position is to be seen as an asset for Hannover Re and reduces the net Solvency II reserves.

The respective IFRS reinsurance recoverables amount to TEUR 363,110. Some revaluation steps between IFRS and Solvency II are provided in Section D.2.2.4.

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 mortality, longevity and morbidity business. This also becomes evident from the capital requirements under Solvency II presented in Section E.

For the mortality business, small changes in the mortality rates can have significant effects on the claims 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. The valuation of the US mortality business reflects the expected cash flows from inforce management activity, most notably rate increases pursuant to the contractual rights. Significant mortality risk is stemming from US mortality business.

The valuation of this business reflects the expected cash flows from inforce management activity, most notably rate increases pursuant to our contractual rights. As part of our inforce management measures we had initiated rate adjustments for the portfolio concerned in 2018. For the majority of the underlying business, these rate adjustments have been successfully implemented or the cedant has recaptured the business. We are currently engaged in arbitration procedures with a small number of individual cedants in respect of the implemented rate increases. Rate increases for further selected treaties were initiated in the course of 2021. Here, too, we anticipate that arbitration proceedings may ensue in individual cases. Based on the information currently available to us, we take a favourable view of our legal position for the remaining proceedings.

The longevity business is 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 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.

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 direction of the lapse effect is dependent on the treaty and type of reinsurance used. In aggregate, an increase in lapse rates would be more adverse in that Hannover Re Group would forgo positive expected future cash flows.Pandemic risk is a tail risk, i.e. a risk with a low probability of occurrence but a potential high impact. It is one of the key drivers of capital requirements and is therefore allowed for in the Risk Margin.

The TP include adjustments for already incurred as well as expected future claims from the Covid-19 pandemic, especially from the North American market. Nevertheless, there is the possibility of higher claims in the near future and an adverse development in mortality and morbidity rates from long-term consequences for people suffering from the Covid-19 pandemic. Experience continues to be monitored on an ongoing basis.

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.2.2.3 Comparison of the technical provision with the IFRS liability

In the following, a reconciliation between IFRS and Solvency II liabilities is provided. The reconciliation steps are explained below. The figures are net of reinsurance recoverables.

Reconciliation from IFRS to Solvency II
in TEUR

Reconciliation Step	Explanation	2022
(1)	**IFRS liability net of reinsurance**	**13,318,782**
(2)	Deferred Acquisition Costs (DAC) and Contract Deposit (CD)	830,028
(3)=(1)+(2)	**Technical IFRS liability net of reinsurance**	**14,148,810**
(4)	Risk Margin	2,353,864
(5)	Further differences in methods/ assumptions	-7,413,740
(6)	Netting of accounts payables and receivables	-232,949
(7)=(3)+…+(6)	**Solvency II TP net of reinsurance**	**8,855,985**

Note that DAC and CD are not applicable under Solvency II.

The sources of the differences in methods and assumptions are:

(5a) The calculation of the BEL includes all future cash flows. For certain business, this means negative liabilities. In contrast, IFRS does not allow for negative liabilities.

(5b) The IFRS liability includes for certain treaties a provision for the risk of adverse deviation (PAD) in the form of buffers in the assumptions, but no further explicit risk margin like in the Solvency II methodology. The TP includes a risk margin but no buffers.

(5c) The BEL reflects current best estimate assumptions (e.g., regarding mortality, mortality improvements and lapse), whereas the IFRS assumptions are locked-in for certain business (depending on the IFRS / US GAAP FAS type).

(5d) The BEL is discounted with current risk free interest rates (including a volatility adjustment), whereas the IFRS liabilities are calculated using locked-in interest rates. The average valuation interest rate is higher than the current Solvency II rates.

(5e) For some treaties the Solvency II contract boundaries differ from the contract boundaries under IFRS.

(5f) Due to different reporting deadlines under IFRS and Solvency II there may appear differences.

(5g) Reclassification from non-technical positions to technical items may cause further differences.

E. Capital Management

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

E.1 Own Funds

E.1.1 Management of own funds

Hannover Re 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 for our hybrid capital instruments to correspond with the 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 Re Group’s economic capital model is used for the evaluation of both the quantitatively measurable individual risks and also the overall risk position. The assumptions and calculation methods for the determination of the risk-bearing capacity of the company are recorded in the documentation of the risk model and in regular reports.

E.1.2 Tiering

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

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

E.1.3 Basic own funds

The following table displays the composition of basic own funds held by Hannover Re Group as of 31 December 2022.

Basic own funds

in TEUR	2022	2021
Tier 1 unrestricted	14,002,020	13,615,484
Ordinary Share capital	120,597	120,597
Share premium account related to ordinary share capital	880,608	880,608
Reconciliation reserve	13,650,756	13,294,683
Non available minority interests at Group level	-649,941	-680,403
Tier 1 restricted	486,034	533,225
Subordinated liabilities	486,034	533,225
Tier 2	2,897,198	2,496,520
Subordinated liabilities	2,897,198	2,496,520
Tier 3	128,783	138,500
Net deferred tax assets	128,783	138,500
Total	**17,514,035**	**16,783,730**

The change in basic own funds is a result of the increasing reconciliation reserve and the issue of a subordinated bond in the period under review.

The reconciliation reserve change results from a change in excess of assets over liabilities and – compared to the previous year – change in foreseeable dividend.

Solvency II imposes restrictions on the availability of own funds to cover SCR. For Hannover Re restrictions arise from non-available minority interests at Group level which relate primarily to the minority interests in E+S Rück.

Tier 3 capital arises as a consequence of net deferred tax assets in branches and subsidiaries of the Hannover Re Group.

Restrictions may arise from limitations to use tier 2 and tier 3 capital to meet SCR and MCR. Such restrictions do not arise for Hannover Re with respect to SCR coverage but with respect to the availability of tier 2 and tier 3 capital to cover MCR.

Funds are denoted as eligible if they can effectively be used to cover the SCR or MCR.

Available and eligible own funds

in TEUR	2022	2021
Available own funds	17,514,035	16,783,730
Eligible own funds to meet SCR	17,514,035	16,783,730
Eligible own funds to meet MCR	15,419,805	15,052,618

E.1.3.1 Movement analysis of eligible own funds and solvency capital requirements

The movement analysis of Solvency II eligible own funds and SCR in the year under consideration is presented in the table below.

Eligible own funds and SCR movement analysis

in TEUR	Eligible own funds	SCR
Year end 2021	**16,783,730**	**6,904,154**
Model changes	-174,657	-15,697
Operating Impact	1,513,277	462,090
Market variances	-442,427	-437,950
Taxes	-184,936	39,705
Capital management	19,049	-
Year end 2022	**17,514,035**	**6,952,301**

Model changes include internal model changes approved by the regulator in the course of the model governance process. In addition, it includes model updates for the calculation of technical provisions or other items. The main impact for eligible own funds during the reporting period relates to the calculation of technical provisions for Life & Health business. A number of minor model changes, with each of them having a small impact, affected the SCR.

Operating impacts mainly comprise the investment result above risk-free, unwind, new business value and the Property & Casualty run-off result as well as assumption changes. Despite the large loss burden above budget, the operating impact was clearly positive during the reporting period, mainly due to the positive contribution from new business for both Life & Health and Property & Casualty business. For the SCR the effect from operating experiences mainly stems from an increased business volume. This relates to P&C and L&H business but also to new investment.

Market variances comprise changes in eligible own funds and SCR due to changes of foreign exchange rates, interest rates, credit spreads and other financial market indicators. Higher credit spreads and rising interest rates had a negative impact on eligible own funds, but could partly be positively offset by overall favourable currency effects. Increasing interest rates are the main drivers for the decrease in SCR due to market variances whereas the stronger US dollar has an increasing effect on SCR.

All items are shown on a pre-tax basis, tax effects including tax payments and changes in deferred taxes are shown separately.

Capital management comprises dividend payments and changes in foreseeable dividends. Moreover, the issuance of a new hybrid bond during the reporting period is included here.

E.1.3.2 Reconcilliation IFRS to Solvency II basic own funds

Finally, we present the transition from IFRS shareholders' equity to Solvency II basic own funds.

Reconciliation of IFRS shareholders' equity to Solvency II own funds

in TEUR	2022	2021
Shareholders' equity IFRS incl. minority interests	**8,747,716**	**12,756,231**
Adjustments Solvency II to IFRS		
Adjustments of investments under own management	211,051	626,565
Adjustments of technical items (incl. risk margin)	8,906,937	3,364,692
Adjustments of other balance sheet items	462,265	-312,300
Deferred tax	-2,779,632	-1,279,200
Economic shareholders' equity incl. minority interests	**15,548,337**	**15,155,988**
Foreseeable dividends	-767,593	-721,600
Subordinated liabilites	3,383,232	3,029,745
Available economic shareholders' equity incl. minority interests	**18,163,976**	**17,464,133**
Non available minority interests at Group level	-649,941	-680,403
Total amount of basic own funds after deductions	**17,514,035**	**16,783,730**

The remarkable increase in adjustments of technical items is mainly due to the strong increase in discounting effects due to higher interest rates. Stability of Solvency II own funds – compared to IFRS equity - reflects the asset-liability matching approach.

E.1.3.3 Ordinary share capital

The ordinary share capital (capital stock of Hannover Rück SE) stands at TEUR 120,597 as of the balance sheet date. The shares have been paid up in full. The capital stock 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.

No new shares were issued in the reporting period.

The capital stock paid in and the corresponding issue 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.1.3.4 Share premium account related to ordinary share capital

The issue premium in relation to the capital stock of Hannover Re Group stands at TEUR 880,608 as of the balance sheet date.

The share premium account 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 capital stock, are transferred in accordance with national statutory provisions.

E.1.3.5 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 subscribed capital, the capital reserve and shareholder dividend payouts.

At the balance sheet date, the reconciliation reserve was TEUR 13,650,756.

The reconciliation reserve represents reserves (in particular retained earnings) less value adjustments; it does, moreover, contain the differences between the accounting valuation pursuant to IFRS and the valuation pursuant to the Directive 2009/138/EC.

E.1.3.6 Subordinated own funds

Hannover Re Group holds four subordinated bonds and one subordinated loan in its portfolio at the balance sheet date, which fulfil the criteria stipulated under Solvency II pertaining to subordinated liabilities, and which thus can be categorised under basic own funds.

Subordinated own funds

in TEUR	2022	2021
Subordinated debts (Tier 1 – restricted)	486,034	533,225
Subordinated debts (Tier 2)	2,897,198	2,496,520
Total	**3,383,232**	**3,029,745**

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

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

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

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

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

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

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

E.1.4 Transferability

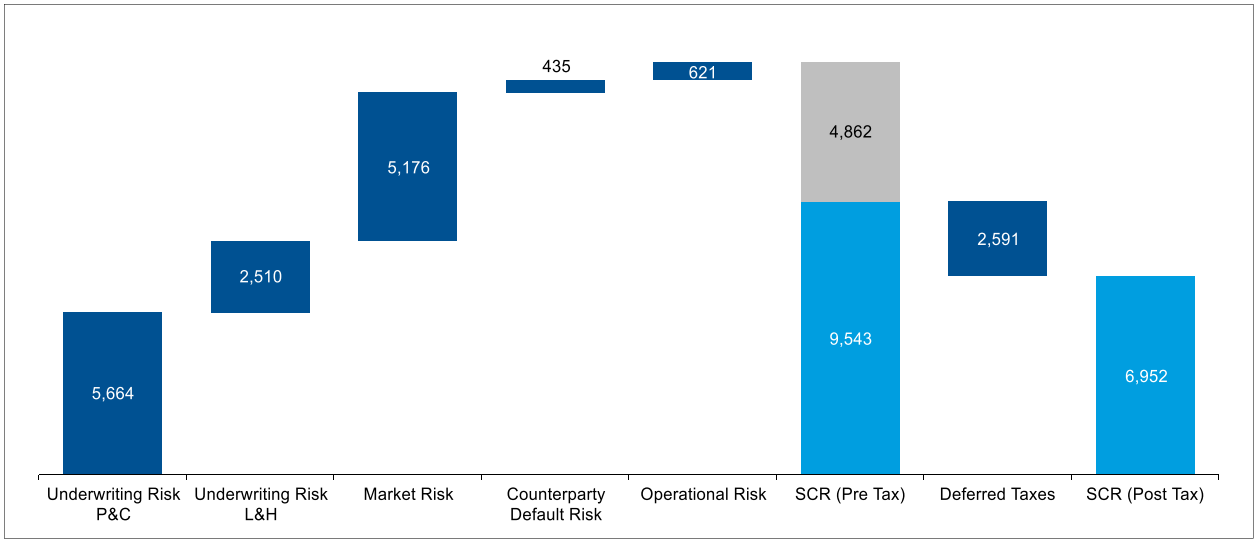
Hannover Re Group actively manages its capital resources. Restraints in transferability arise due to minority interests in E+S Rück of TEUR 649,941. In the period under consideration, no further issues were identified that restrict the transferability of the capital for the covering of the solvency capital 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 Re are defined in Section E.4.1.4. Capital requirements per risk category are shown in the following.

Solvency Capital Requirement – per risk category
in EUR million



Solvency Capital Requirement (SCR)
in TEUR

Solvency Capital Requirement	2022	2021
Underwriting risk - Property & Casualty	5,664,198	5,473,543
Underwriting risk - Life & Health	2,509,950	3,329,734
Market risk	5,175,558	4,874,756
Counterparty default risk	434,678	468,041
Operational risk	620,826	626,903
Diversification	-4,862,387	-5,238,598
Total risk (pre-tax)	**9,542,822**	**9,534,379**
Deferred tax	2,590,521	2,630,225
Total risk (post-tax)	**6,952,301**	**6,904,154**

The required capital has been calculated based on the approved internal model. Hannover Re 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 Re uses the dynamic volatility in its internal model.

The model is subject to strict internal quality checks and extensive validation. The adequacy of the tax module of the internal model is currently under review. The expected impact on the solvency capital requirement is small. 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 was principally driven by the larger business volumes, which have led to an increase in underwriting risks in Property & Casualty reinsurance and in market risks. The weaker euro against the US dollar also contributed to this increase. On the other hand, the significantly higher interest rate level results in an appreciable decrease in SCR.

Underwriting risks in Property & Casualty reinsurance increased primarily as a consequence of higher premium and reserve volumes. The enlarged volumes are driven by the business growth, the large loss expenditure and associated higher reserves as well as the stronger US dollar.

The strong increase in interest rates leads to a decrease in underwriting risks in Life & Health reinsurance. This particularly affects longevity risk, but also applies to the mortality and morbidity risk.

The increase in the market risk reflects first and foremost the larger volume due to new investments and higher market values in the areas of private equity and real estate. Wider spreads and increased volumes of fixed-income securities are further factors here.

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

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

The decrease in the diversification effect is a result of changes in the composition of the underwriting and market risks. The loss-absorbing effect of taxes remained relatively stable.

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

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

Ratio of eligible own funds to Solvency Capital Requirement

in TEUR	2022	2021
Eligible own funds	17,514,035	16,783,730
SCR	6,952,301	6,904,154
Ratio of eligible own funds to SCR	**252%**	**243%**

E.2.2 Minimum Capital Requirement (MCR)

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

The group MCR is the result of the sum of the MCRs of the different legal entities.

in TEUR	2022	2021
Eligible own funds	15,419,805	15,052,618
MCR	4,658,752	4,519,540
Ratio of eligible own funds to MCR	**331%**	**333%**

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

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

E.4.1 The internal model

Hannover Re received approval from the regulatory authorities to calculate its solvency requirements using a full internal capital model. This section provides information regarding the internal capital model.

E.4.1.1 Introduction

The quantitative risk management of Hannover Re 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 Re.

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 Re 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 Re. 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 Re calculates the required capital using the Value at Risk (VaR) reflecting the changes in economic value over a period of one year with a confidence level of 99.97%. This is equivalent to the target to limit the ruin probability over a horizon of one year to 0.03%. The internal target capitalisation of Hannover Re is significantly larger than that to a confidence level of 99.5% as required by Solvency II.

The internal capital model uses state-of-the-art techniques of insurance and financial mathematics. In case of underwriting risks, we draw on a comprehensive history of internal data to estimate probability distributions, e.g., for reserving risk. In the context of natural catastrophe risks, we use external models that we adjusted in the course of detailed internal reviews to represent our risk profile adequately. For Life & Health reinsurance we determine long-term cash flows for different scenarios. The determination of scenarios and probability distributions is based on internal data for all mentioned risks. The internal data base is enriched with parameters set by experts. These parameters are of importance in particular in the area of extreme events that have not been observed by now.

The aggregation of single risks takes into account dependencies between risk factors. Dependencies arise, e.g., during financial crises, which affect several market segments at the same time. Furthermore, market phenomena such as pricing cycles can cause dependencies over time. We generally assume that extreme events do not all occur simultaneously. The absence of complete dependency is denoted as diversification. Hannover Re’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 costs of capital 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 Re relates to the calculation of the required and available capital for Hannover Re. The principles outlined below are the manifestation of Hannover Re'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. This assumption holds for all lines of business.
- Stochastic simulation: The capital model of Hannover Re is based on stochastic simulations, i.e. we generate discrete approximations for the probability distribution of our target variables.
- Capital fungibility: Hannover Re's capital model covers the risks stemming from several (legally independent) business units within the Group. We assume full capital fungibility. This is based on the assessment of stress tests for capital fungibility and transferability.
- Consolidation method: The capital model of Hannover Re 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 Re'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 Re'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 Re's complete risk landscape comprises the main risk categories underwriting risks (Life & Health as well as Property & 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 Re using a quantitative model are the categories underwriting risk Life & Health, underwriting risk Property & 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.

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 Re 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 Re 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 & 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 & 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 Re is convinced that input parameters for the SCR calculation cannot be solely derived by quantitative methods.

In general, Hannover Re 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 Re quite different from a typical European primary insurer, in particular, its access to global diversification across regions, markets, cedants 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 & Casualty underwriting risk. It also has some influence on counterparty and market risk.

A further difference is caused by the fact that Hannover Re 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 Re 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 Re's internal model and founded on Hannover Re'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 Re.

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 Re's internal model. Hannover Re'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.

Abbreviations and glossary

AF: Actuarial function

AGM: Annual General Meeting

BaFin: Bundesanstalt für Finanzdienstleistungsaufsicht, Federal Financial Supervisory Authority

BEL: Best Estimate Liability

BOF: Basic own funds

CCO: Chief Compliance Officer

CDS: Credit Default Swap

CEO: Chief Executive Officer

CFO: Chief Financial Officer

CMS: Compliance Management System

EBIT: Earnings before interest and taxes

EEA: European Economic Area

EIOPA: European Insurance and Occupational Pensions Authority

ESG: Environment Social Governance

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

FAS: Financial Accounting Standard

FWH: Funds withheld

GA: Group Auditing, internal audit of Hannover Re Group

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

Hannover Re: Hannover Re Group, Hannover

Hannover Rück: Hannover Rück SE, Hannover

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

HGB: Handelsgesetzbuch, German Commercial Code

IAS: International Accounting Standard

ICS: Internal Control System

IFRS: International Financial Reporting Standards

Inter Hannover: International Insurance Company of Hannover SE, Hannover, since 1 January 2019: HDI Global Specialty SE, Hannover

L&H: Life & Health

MCR: Minimum Capital Requirement

NGO: Non-Governmental Organisation

ORSA: Own Risk and Solvency Assessment

P&C: Property & Casualty

QRT: Quantitative Reporting Template

RM: Risk margin

RMF: Risk Management Function

SCR: Solvency Capital Requirement

SII: Solvency II

TP: Technical provisions

US GAAP: United States Generally Accepted Accounting Principles

VAG: Gesetz über die Beaufsichtigung der Versicherungsunternehmen (Versicherungsaufsichts-gesetz), Insurance Supervision Act

VaR: Value-at-Risk

WHO: World Health Organization

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 Re has no value to state.

Please note that this report represents a voluntary publication of the Hannover Re Group. Hence, we provide information we think are most informative for our stakeholders.

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

The Hannover Re Group 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 the Hannover Re Group 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**	1,309,190
Pension benefit surplus	**R0050**	
Property, plant & equipment held for own use	**R0060**	180,631
Investments (other than assets held for index-linked and unit-linked contracts)	**R0070**	55,117,406
Property (other than for own use)	**R0080**	2,857,986
Holdings in related undertakings, including participations	**R0090**	3,041,489
Equities	**R0100**	0
Equities - listed	**R0110**	
Equities - unlisted	**R0120**	0
Bonds	**R0130**	44,508,215
Government Bonds	**R0140**	25,587,524
Corporate Bonds	**R0150**	17,336,172
Structured notes	**R0160**	125,504
Collateralised securities	**R0170**	1,459,015
Collective Investments Undertakings	**R0180**	3,082,344
Derivatives	**R0190**	202,670
Deposits other than cash equivalents	**R0200**	1,320,962
Other investments	**R0210**	103,738
Assets held for index-linked and unit-linked contracts	**R0220**	
Loans and mortgages	**R0230**	403,043
Loans on policies	**R0240**	
Loans and mortgages to individuals	**R0250**	2,087
Other loans and mortgages	**R0260**	400,956
Reinsurance recoverables from:	**R0270**	2,147,057
Non-life and health similar to non-life	**R0280**	2,046,388
Non-life excluding health	**R0290**	2,035,250
Health similar to non-life	**R0300**	11,138
Life and health similar to life, excluding health and index-linked and unit-linked	**R0310**	79,155
Health similar to life	**R0320**	190,910
Life excluding health and index-linked and unit-linked	**R0330**	-111,754
Life index-linked and unit-linked	**R0340**	21,513
Deposits to cedants	**R0350**	10,348,498
Insurance and intermediaries receivables	**R0360**	1,626,128
Reinsurance receivables	**R0370**	195,143
Receivables (trade, not insurance)	**R0380**	326,398
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**	1,323,006
Any other assets, not elsewhere shown	**R0420**	183,596
Total assets	**R0500**	**73,160,096**

S.02.01.02: Balance sheet, page 2		Solvency II
Liabilities		**C0010**
Technical provisions – non-life	**R0510**	35,534,341
Technical provisions – non-life (excluding health)	**R0520**	33,061,299
Technical provisions calculated as a whole	**R0530**	
Best Estimate	**R0540**	32,328,248
Risk margin	**R0550**	733,050
Technical provisions - health (similar to non-life)	**R0560**	2,473,043
Technical provisions calculated as a whole	**R0570**	
Best Estimate	**R0580**	2,382,449
Risk margin	**R0590**	90,594
Technical provisions - life (excluding index-linked and unit-linked)	**R0600**	8,241,337
Technical provisions - health (similar to life)	**R0610**	3,788,965
Technical provisions calculated as a whole	**R0620**	
Best Estimate	**R0630**	3,269,063
Risk margin	**R0640**	519,902
Technical provisions – life (excluding health and index-linked and unit-linked)	**R0650**	4,452,372
Technical provisions calculated as a whole	**R0660**	
Best Estimate	**R0670**	2,627,764
Risk margin	**R0680**	1,824,607
Technical provisions – index-linked and unit-linked	**R0690**	715,318
Technical provisions calculated as a whole	**R0700**	
Best Estimate	**R0710**	705,963
Risk margin	**R0720**	9,355
Contingent liabilities	**R0740**	
Provisions other than technical provisions	**R0750**	189,703
Pension benefit obligations	**R0760**	153,757
Deposits from reinsurers	**R0770**	620,856
Deferred tax liabilities	**R0780**	4,832,252
Derivatives	**R0790**	61,417
Debts owed to credit institutions	**R0800**	675,894
Financial liabilities other than debts owed to credit institutions	**R0810**	1,170,209
Insurance & intermediaries payables	**R0820**	988,234
Reinsurance payables	**R0830**	204,606
Payables (trade, not insurance)	**R0840**	352,375
Subordinated liabilities	**R0850**	3,383,232
Subordinated liabilities not in Basic Own Funds	**R0860**	0
Subordinated liabilities in Basic Own Funds	**R0870**	3,383,232
Any other liabilities, not elsewhere shown	**R0880**	488,229
Total liabilities	**R0900**	**57,611,759**
Excess of assets over liabilities	**R1000**	**15,548,338**

S.12.01.02: Life and Health SLT Technical Provisions

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				
Amount of the transitional on Technical Provisions					
Technical Provisions calculated as a whole	R0110				
Best estimate	R0120				
Risk margin	R0130				
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**			
Amount of the transitional on Technical Provisions				
Technical Provisions calculated as a whole	**R0110**			
Best estimate	**R0120**			
Risk margin	**R0130**			
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		3,333,727	3,333,727
Total Recoverables from reinsurance/SPV and Finite Re after the adjustment for expected losses due to counterparty default	R0080		-90,241	-90,241
Best estimate minus recoverables from reinsurance/SPV and Finite Re - total	R0090		3,423,968	3,423,968
Risk Margin	R0100		1,833,962	1,833,962
Amount of the transitional on Technical Provisions				
Technical Provisions calculated as a whole	R0110			
Best estimate	R0120			
Risk margin	R0130			
Technical provisions - total	R0200		5,167,689	5,167,689

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**			
Amount of the transitional on Technical Provisions				
Technical Provisions calculated as a whole	**R0110**			
Best estimate	**R0120**			
Risk margin	**R0130**			
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		3,269,063	3,269,063
Total Recoverables from reinsurance/SPV and Finite Re after the adjustment for expected losses due to counterparty default	R0080		190,910	190,910
Best estimate minus recoverables from reinsurance/SPV and Finite Re - total	R0090		3,078,154	3,078,154
Risk Margin	R0100		519,902	519,902
Amount of the transitional on Technical Provisions				
Technical Provisions calculated as a whole	R0110			
Best estimate	R0120			
Risk margin	R0130			
Technical provisions - total	R0200		3,788,965	3,788,965

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 as a whole	R0050									
Technical provisions calculated as a sum of BE and RM										
Best estimate										
Premium provisions										
Gross	R0060	29,548	106,217	7,088	287,318	121,693	133,142	1,265,722	430,667	183,304
Total recoverable from reinsurance / SPV and Finite Re after the adjustment for expected losses due to counterparty default	R0140	0	-134	0	-14	1,135	4,971	87,789	234	-1,555
Net Best Estimate of Premium Provisions	R0150	29,548	106,351	7,088	287,332	120,558	128,171	1,177,933	430,433	184,859
Claims provisions										
Gross	R0160	168,677	537,519	132,989	2,294,283	1,071,233	897,476	5,264,305	3,917,224	1,209,450
Total recoverable from reinsurance / SPV and Finite Re after the adjustment for expected losses due to counterparty default	R0240	0	-221	7,123	11,394	11,641	277,713	688,399	37,990	-1,948
Net Best Estimate of Claims Provisions	R0250	168,677	537,740	125,865	2,282,889	1,059,591	619,763	4,575,906	3,879,234	1,211,398
Total Best estimate - gross	R0260	198,225	643,737	140,076	2,581,601	1,192,926	1,030,617	6,530,027	4,347,890	1,392,754
Total Best estimate - net	R0270	198,225	644,092	132,953	2,570,220	1,180,149	747,934	5,753,838	4,309,667	1,396,256
Risk margin	R0280	1,836	19,135	12,520	40,109	27,314	20,897	166,633	110,156	40,531

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
Amount of the transitional on Technical Provisions										
Technical Provisions calculated as a whole	R0290									
Best estimate	R0300									
Risk margin	R0310									
Technical provisions - total										
Technical provisions - total	R0320	200,061	662,871	152,596	2,621,710	1,220,240	1,051,514	6,696,659	4,458,047	1,433,285
Recoverable from reinsurance contract / SPV and Finite Re after the adjustment for expected losses due to counterparty default - total	R0330	0	-355	7,124	11,380	12,777	282,683	776,188	38,224	-3,503
Technical provisions minus recoverables from reinsurance / SPV and Finite Re - total	R0340	200,061	663,226	145,472	2,610,330	1,207,463	768,831	5,920,471	4,419,823	1,436,787

S.17.01.02: TP Non-Life,
page 3

		Direct business and accepted proportional reinsurance			Accepted non-proportional reinsurance				Total Non-Life obligation
		Legal expenses insurance	Assistance	Miscella-neous financial loss	Non-propor-tional health reinsu-rance	Non-propor-tional casualty reinsu-rance	Non-pro-portional marine, aviation and transport reinsu-rance	Non-propor-tional property reinsu-rance	
		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	8,405	-18,868	36,818	9,107	414,040	23,761	159,370	3,197,330
Total recoverable from reinsurance / SPV and Finite Re after the adjustment for expected losses due to counterparty default	R0140		0	72	-188	90	335	2,921	95,656
Net Best Estimate of Premium Provisions	R0150	8,405	-18,868	36,746	9,295	413,950	23,426	156,449	3,101,674
Claims provisions									
Gross	R0160	65,525	-409	242,542	1,391,303	7,572,542	908,183	5,840,525	31,513,367
Total recoverable from reinsurance / SPV and Finite Re after the adjustment for expected losses due to counterparty default	R0240		0	20,717	4,558	2,152	152,916	738,297	1,950,732
Net Best Estimate of Claims Provisions	R0250	65,525	-409	221,824	1,386,745	7,570,391	755,267	5,102,227	29,562,635
Total Best Estimate - gross	R0260	73,930	-19,277	279,360	1,400,410	7,986,582	931,944	5,999,895	34,710,697
Total Best Estimate - net	R0270	73,930	-19,277	258,570	1,396,041	7,984,340	778,693	5,258,677	32,664,309
Risk margin	R0280	1,665	69	5,180	57,104	216,474	17,336	86,686	823,644

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	Miscella-neous financial loss	Non-propor-tional health reinsu-rance	Non-propor-tional casualty reinsu-rance	Non-pro-portional marine, aviation and transport reinsu-rance	Non-propor-tional property reinsu-rance	
		C0110	C0120	C0130	C0140	C0150	C0160	C0170	C0180
Amount of the transitional on Technical Provisions									
Technical Provisions calculated as a whole	R0290								
Best Estimate	R0300								
Risk margin	R0310								
Technical provisions - total									
Technical provisions - total	R0320	75,596	-19,208	284,540	1,457,514	8,203,056	949,280	6,086,580	35,534,341
Recoverable from reinsurance contract / SPV and Finite Re after the adjustment for expected losses due to counterparty default - total	R0330		0	20,790	4,370	2,241	153,251	741,218	2,046,388
Technical provisions minus recoverables from reinsurance / SPV and Finite Re - total	R0340	75,596	-19,208	263,750	1,453,144	8,200,814	796,029	5,345,362	33,487,953

S.22.01.22: Impact of long term guarantees measures and transitionals

S.22.01.22: 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	44,490,996			568,851	
Basic own funds	R0020	17,514,035			-327,127	
Eligible own funds to meet Solvency Capital Requirement	R0050	17,514,035			-327,127	
Solvency Capital Requirement	R0090	**6,952,301**			**348,961**	

S.23.01.22: Own Funds

S.23.01.22: 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 (EU) 2015/35						
Ordinary share capital (gross of own shares)	R0010	120,597	120,597			
Non-available called but not paid in ordinary share capital at group level	R0020					
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					
Non-available subordinated mutual member accounts at group level	R0060					
Surplus funds	R0070					
Non-available surplus funds at group level	R0080					
Preference shares	R0090					
Non-available preference shares at group level	R0100					
Share premium account related to preference shares	R0110					
Non-available share premium account related to preference shares at group level	R0120					
Reconciliation reserve	R0130	13,650,756	13,650,756			
Subordinated liabilities	R0140	3,383,232		486,034	2,897,198	
Non-available subordinated liabilities at group level	R0150					
An amount equal to the value of net deferred tax assets	R0160	128,783				128,783
The amount equal to the value of net deferred tax assets not available at the group level	R0170					
Other own fund items approved by the supervisory authority as basic own funds not specified above	R0180					
Non available own funds related to other own funds items approved by supervisory authority	R0190					
Minority interests (if not reported as part of a specific own fund item)	R0200					
Non-available minority interests at group level	R0210	649,941	649,941			

S.23.01.22: Own funds, page 2

		Total	Tier 1 - unrestricted	Tier 1 - restricted	Tier 2	Tier 3
		C0010	C0020	C0030	C0040	C0050
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 shall 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					
whereof deducted according to art 228 of the Directive 2009/138/EC	R0240					
Deductions for participations where there is non-availability of information (Article 229)	R0250					
Deduction for participations included by using D&A when a combination of methods is used	R0260					
Total of non-available own fund items	R0270	649,941	649,941			
Total deductions	R0280	649,941	649,941			
Total basic own funds after deductions	R0290	17,514,035	14,002,020	486,034	2,897,198	128,783
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					
Non available ancillary own funds at group level	R0380					
Other ancillary own funds	R0390					
Total ancillary own funds	R0400					

S.23.01.22: Own funds, page 3

		Total	Tier 1 - unrestricted	Tier 1 - restricted	Tier 2	Tier 3
		C0010	C0020	C0030	C0040	C0050
Own funds of other financial sectors						
Credit Institutions, investment firms, financial insitutions, alternative investment fund manager, financial institutions	R0410					
Institutions for occupational retirement provision	R0420					
Non regulated entities carrying out financial activities	R0430					
Total own funds of other financial sectors	R0440					
Own funds when using the D&A, exclusively or in combination of method 1						
Own funds aggregated when using the D&A and combination of method	R0450					
Own funds aggregated when using the D&A and combination of method net of IGT	R0460					
Total available own funds to meet the consolidated group SCR (excluding own funds from other financial sector and from the undertakings included via D&A)	R0520	17,514,035	14,002,020	486,034	2,897,198	128,783
Total available own funds to meet the minimum consolidated group SCR	R0530	17,385,252	14,002,020	486,034	2,897,198	
Total eligible own funds to meet the consolidated group SCR (excluding own funds from other financial sector and from the undertakings included via D&A)	R0560	17,514,035	14,002,020	486,034	2,897,198	128,783
Total eligible own funds to meet the minimum consolidated group SCR	R0570	15,419,805	14,002,020	486,034	931,750	
Minimum consolidated Group SCR	R0610	4,658,752				
Ratio of Eligible own funds to Minimum Consolidated Group SCR	R0650	3.3099				
Total eligible own funds to meet the group SCR (including own funds from other financial sector and from the undertakings included via D&A)	R0660	17,514,035	14,002,020	486,034	2,897,198	128,783
Group SCR	R0680	6,952,301				
Ratio of Eligible own funds to group SCR including other financial sectors and the undertakings included via D&A	R0690	2.5192				

S.23.01.22: Own funds, page 4 / Reconciliation reserve

		C0060
Reconciliation reserve		
Excess of assets over liabilities	**R0700**	15,548,338
Own shares (held directly and indirectly)	**R0710**	
Foreseeable dividends, distributions and charges	**R0720**	767,593
Other basic own fund items	**R0730**	1,129,988
Adjustment for restricted own fund items in respect of matching adjustment portfolios and ring fenced funds	**R0740**	
Other non available own funds	**R0750**	
Reconciliation reserve	**R0760**	**13,650,756**
Expected profits		
Expected profits included in future premiums (EPIFP) - Life business	**R0770**	3,779,007
Expected profits included in future premiums (EPIFP) - Non- life business	**R0780**	
Total EPIFP	**R0790**	**3,779,007**

S.25.03.22: Solvency Capital Requirement – for Groups on Full Internal Models

Unique number of component	Components description	Calculation of the Solvency Capital Requirement
C0010	C0020	C0030
101	Market risk according to IM	5,175,558
102	Counterparty default risk according to IM	434,678
103	Life underwriting risk according to IM	2,509,950
104	Non-life underwriting risk according to IM	5,664,198
105	Operational risk according to IM	620,826
107	LAC TP according to IM	
108	LAC DT according to IM	-2,590,521

Calculation of Solvency Capital Requirement		C0100
Total undiversified components	R0110	11,814,688
Diversification	R0060	-4,862,387
Capital requirement for business operated in accordance with Art. 4 of Directive 2003/41/EC	R0160	
Solvency capital requirement excluding capital add-on	R0200	6,952,301
Capital add-ons already set	R0210	
Solvency capital requirement	R0220	6,952,301
Other information on SCR		
Amount/estimate of the overall loss-absorbing capacity of technical provisions	R0300	
Amount/estimate of the overall loss-absorbing capacity ot deferred taxes	R0310	-2,590,521
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 Requirement for matching adjustment portfolios	R0430	
Diversification effects due to RFF nSCR aggregation for article 304	R0440	
Minimum consolidated group solvency capital requirement	R0470	4,658,752
Information on other entities		
Capital requirement for other financial sectors (Non-insurance capital requirements)	R0500	
Capital requirement for other financial sectors (Non-insurance capital requirements) — Credit institutions, investment firms and financial institutions, alternative investment funds managers, UCITS management companies	R0510	
Capital requirement for other financial sectors (Non-insurance capital requirements) — Institutions for occupational retirement provisions	R0520	
Capital requirement for other financial sectors (Non-insurance capital requirements) — Capital requirement for non-regulated entities carrying out financial activities	R0530	
Capital requirement for non-controlled participation requirements	R0540	
Capital requirement for residual undertakings	R0550	

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