Group Annual Report 2022
Munich Re

Munich RE

Key figures (IFRS)[1]

Munich Re at a glance

		2022	2021	2020	2019	2018
Gross premiums written	€m	67,133	59,567	54,890	51,457	49,064
Net earned premiums	€m	63,462	55,202	51,223	48,280	45,735
Net expenses for claims and benefits	€m	–46,957	–45,383	–43,077	–39,685	–35,116
Net operating expenses	€m	–15,907	–13,674	–12,815	–13,056	–12,587
Operating result	€m	3,582	3,517	1,986	3,430	3,725
Taxes on income	€m	–580	–552	–269	–483	–576
Consolidated result	€m	3,419	2,932	1,211	2,707	2,275
Attributable to non-controlling interests	€m	–13	–1	0	–17	–34
Earnings per share	€	24.63	20.93	8.63	18.97	15.53
Return on equity (RoE)[2]	%	13.5	12.6	5.3	11.7	8.4
Return on investments (RoI)	%	2.1	2.8	3.0	3.2	2.8
Dividend per share[3]	€	11.60	11.00	9.80	9.80	9.25
Dividend payout[3]	€m	1,590	1,541	1,373	1,373	1,335
Share price at 31 December	€	304.00	260.50	242.80	263.00	190.55
Munich Reinsurance Company's market capitalisation at 31 December	€bn	42.6	36.5	34.0	38.0	28.5
Carrying amount per share	€	153.02	220.06	213.38	215.32	180.86
Investments	€m	219,797	240,300	232,950	228,764	216,852
Insurance-related investments	€m	11,128	12,283	11,033	9,163	8,424
Equity	€m	21,202	30,945	29,994	30,576	26,500
Off-balance-sheet unrealised gains and losses[4]	€m	5,494	18,888	21,298	19,913	16,067
Net technical provisions	€m	232,456	234,044	221,480	217,941	208,270
Balance sheet total	€m	298,570	312,405	297,946	287,553	270,168
Staff at 31 December		41,389	39,281	39,642	39,662	41,410

Reinsurance

		2022	2021	2020	2019	2018
Gross premiums written	€m	48,075	41,354	37,321	33,807	31,286
Investments (incl. insurance-related investments)	€m	97,714	103,226	94,631	92,429	85,605
Net technical provisions	€m	97,448	89,461	78,190	77,166	72,407
Major losses (net)	€m	–4,173	–4,304	–4,689	–3,124	–2,152
Natural catastrophe losses	€m	–2,430	–3,139	–906	–2,053	–1,256
Combined ratio property-casualty	%	96.2	99.6	105.6	100.2	99.4
Investment result	€m	1,520	3,422	3,193	3,318	2,543
Consolidated result	€m	2,593	2,328	694	2,268	1,864
Thereof: Reinsurance – Life and health	€m	737	325	123	706	729
Thereof: Reinsurance – Property-casualty	€m	1,856	2,003	571	1,562	1,135
Return on equity (RoE)[5]	%	13.8	13.4	4.1	13.3	

ERGO

		2022	2021	2020	2019	2018
Gross premiums written	€m	19,058	18,213	17,569	17,650	17,778
Investments (incl. insurance-related investments)	€m	133,211	149,357	149,352	145,497	139,671
Net technical provisions	€m	135,008	144,583	143,290	140,776	135,863
Combined ratio property-casualty Germany	%	90.6	92.4	92.4	92.3	96.0
Combined ratio International	%	94.3	92.9	92.7	94.3	94.6
Investment result	€m	3,383	3,734	4,206	4,504	3,983
Consolidated result	€m	826	605	517	440	412
Thereof: Life and Health Germany	€m	485	164	130	187	264
Thereof: Property-casualty Germany	€m	185	234	157	148	45
Thereof: International	€m	155	207	230	105	103
Return on equity (RoE)[5]	%	12.5	10.1	8.8	7.4	

1 You can download this information as an Excel file; please refer to the Financial Supplement under www.munichre.com/results-reports
2 We changed the calculation of RoE in 2020. The figure for 2019 was adjusted accordingly. Comparability with 2018 is thus limited. Further information about this indicator can be found in the combined management report in the sections "Strategy" and "Tools of corporate management and strategic financial objectives". Information about the calculation of RoE can be found in the Notes to the consolidated financial statements, in the section entitled "Segment reporting, Notes on determining the return on equity (RoE)".
3 Subject to approval by the Annual General Meeting.
4 Including those apportionable to minority interests and policyholders.
5 Since the publication of our Ambition 2025 in December 2020, RoE has now become a target figure for our fields of business. Further information about this indicator can be found in the combined management report in the sections "Strategy" and "Tools of corporate management and strategic financial objectives". Information about the calculation of RoE can be found in the Notes to the consolidated financial statements, in the section entitled "Segment reporting, Notes on determining the return on equity (RoE)". We do not report this indicator for 2018.

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More detailed lists of contents are provided on the pages separating the individual sections.

Due to rounding, there may be minor deviations in summations and in the calculation of percentages in this report.

This document is a translation of the original German version and is intended to be used for informational purposes only. While every effort has been made to ensure the accuracy and completeness of the translation, please note that the German original is binding.

1 The format of this publication does not correspond to the European Single Electronic Format (ESEF). The legally required preparation in ESEF format will be submitted to the authority responsible for operating the German Company Register and will be published in the Company Register.

Dr. Joachim Wenning
Chair of Munich Reinsurance
Company's Board of Management

Dear shareholders,

When we set out our result target for 2022, no one could have imagined the geopolitical and macroeconomic upheavals the year would have in store: the Russian war of aggression and the ensuing economic turbulence were not foreseeable. As a consequence, our investments in particular were subject to significant volatility. While the sharp increase in interest rates is welcome in the long run, it has wiped out hidden reserves and led to substantial impairment losses in the short term. Energy scarcity owing to the war further fuelled global inflation, which had already been on the rise; we have made provisions for increased claims expenditure as a result of rising inflation.

Despite the challenges, we delivered a profit of €3.4bn and thus even slightly exceeded our €3.3bn result target. With earnings per share increasing by 17.6%, a return on equity of 13.5% and a solvency ratio of 260%, we are on track to also meet the medium-term targets set out in our Ambition 2025.

The resilience of our business model is also recognised on the capital markets: despite a difficult stock market environment in 2022, Munich Re's shares ended the year with just shy of a 17% gain on the previous year. Only one DAX 40 company managed to outperform this increase. As regards total shareholder return, we occupied the top spot among the world's eight leading reinsurers and European primary insurers between 2019 and 2022. As usual, our shareholders will benefit greatly from our gratifying performance: we are proposing that the Annual General Meeting approve a dividend increase of 5.5% to €11.60 per share. In addition, we have now approved a new share buy-back with a volume of €1bn.

Russia's war against Ukraine has left its mark on Munich Re, too. We cancelled all new business in Russia and Belarus shortly after war broke out, and existing contracts have not been renewed. We took the same approach to our investments in the region. War-related expenditure across various lines of business amounted to €475m in 2022. The impact on our investment business was also pronounced: war-related write-downs of approx. €850m were necessary in 2022.

We are committed to alleviating the suffering of the people of Ukraine. Companies and employees around the world are involved in dozens of initiatives and have made numerous donations. In addition to this, Munich Re and MEAG are directly supporting the operations and humanitarian work of the Ukrainian Free University (UFU) in Munich, a Ukrainian university in exile. We are providing the UFU with over 1,000 square metres of rent-free space within the MEAG premises and had the area converted to make it suitable for teaching. Thanks to this project, approximately 150 students who have fled Ukraine have been able to continue with their studies in exile.

Amidst major crises in the past year, Munich Re has once again proven its social relevance and financial robustness. We owe this resilience primarily to the diversification of our business model and the operational strength of our individual fields of business.

In 2022, the ERGO field of business was once again able to improve its result contribution thanks to good operational development supported by a one-off effect. Generating a result of around €830m, ERGO significantly exceeded its target for the year. In the Property-casualty Germany segment, we were able to increase premium income substantially. Business growth was achieved in commercial/industrial business in particular, as well as in homeowners' insurance and motor insurance. In the ERGO Life and Health Germany segment, capital-efficient and biometric life products, considerable premium growth in travel insurance and higher demand for supplementary health covers contributed to growth. In international business, too, ERGO achieved higher gross premium income in 2022. Above all, growth in property-casualty insurance business in Poland and the Baltic states as well as the good performance of health business in Belgium supported this positive premium development.

Reinsurance continued to benefit from the ongoing hard market. Our renewals in 2022 generated premium growth of 11.9%, and prices rose by 0.5%. In times of elevated uncertainty, we were an especially sought-after partner for our clients thanks to our capacity and the strength of our balance sheet. On the claims side, Hurricane Ian – one of the costliest hurricanes of all time – was a poignant symbol of yet another year with high natural catastrophe losses. For the second year in a row and the fifth in the recent past, insured losses surpassed the €100bn mark – a figure that is becoming the new normal in times of climate change. Nevertheless, property-casualty business is proving to be robust in the face of high major losses – a mark of quality for our nat cat models in particular. At €2.6bn, the contribution to profits of the reinsurance field of business almost exactly matched our original target of €2.7bn. Life and health as well as our Risk Solutions business both made a very positive contribution to this result.

In asset management, we achieved a return on investment of 2.1% – despite an environment in which almost every asset class declined in value on average over the year. In particular, write-downs of Russian and Ukrainian bonds in the context of the war as well as of shares, derivatives and fixed-interest securities as a result of falling stock markets and the abrupt rise in interest rates weighed on investments. This was offset by balancing effects from rising interest rates on insurance business and the very high currency result of €676m, neither of which is included in the investment result for accounting reasons. In addition, rising interest rates are positive for insurers in the long term, as can already be seen from the significant increase in the reinvestment yield to 2.8%. We once again expanded our investments in renewable energies: now at €2.4bn, the investment volume climbed by around 40% year on year.

The strong results achieved by ERGO and life and health reinsurance compensated for the expenditure in property-casualty reinsurance and in asset management. And that is not simply a happy coincidence. Indeed, the strategic course we have set ourselves as part of our Ambition 2025 is already coming to fruition: the greater the profit generated by our less volatile fields of business, the less susceptible our consolidated result is to fluctuations.

As a logical consequence of this strategic orientation and on the basis of the Group's growth ambitions, Munich Re established a new Board division – Global Speciality Insurance – which commenced operations on 1 January 2023. The division comprises specialty primary insurance business, which has grown substantially in the USA and the London market and is set to continue to see strong growth going forward. Pooling the business in this way will strengthen both growth and earnings potential in this segment.

With two successful financial years behind us, we are well on track to achieve the five-year targets set out in our Ambition 2025. For 2023, we have set ourselves a profit target of €4bn – calculated on the basis of the new accounting standard IFRS 17. Insurance revenue, the IFRS 17 item that will supersede "premium income" in future, is expected to reach around €58bn; return on investment is anticipated to be above 2.2%.

We made an excellent start to the new year in our core business of reinsurance. In the January 2023 renewals, the positive trend was even stronger than we have seen in the renewal rounds in recent years. With premium growth of 1.3% and a price increase of 2.3%, we grew in the areas in which we generate the highest earnings, and successfully outpaced inflation to improve our margins. Furthermore, and unlike in the past few years, we are not expecting any further substantial losses attributable to the waning coronavirus pandemic.

Munich Re's pleasing performance goes hand in hand with the good progress we have made with our non-financial targets relating to environmental, social and governance (ESG) interests. In terms of environmental protection and given the pressing issue of climate change, the incremental decarbonisation of our investment and insurance portfolio is a particularly important objective. With regard to our targets for our investment activities, we lowered our greenhouse gas emissions by 46% in 2022 relative to 2019 (the base year for our Ambition 2025) – another 15 percentage points more than in the previous year. We were also able to quantify the effects in our insurance business for the first time, achieving a reduction of 29% for activities relating to coal-fired power plants, 37% for thermal coal extraction (mines) and 40% for property insurance business in oil and natural gas extraction. These figures already exceed or are within reach of our target values for 2025.

In addition, we issued new guidelines for insurance and investments associated with oil and gas in 2022. They will enter into effect on 1 April 2023 and, among other things, preclude Munich Re from investing in or insuring contracts or projects that relate exclusively to the planning, financing, construction and operation of new oil or gas fields. Instead, we will continue to step up our investment in renewables and support the energy transition by providing smart insurance solutions for environmentally friendly technology and products.

Alongside our climate action, we are committed to achieving greater diversity in our workforce as a further pillar of our ESG activities. In this respect, increasing the percentage of women we have in management positions is especially important to us. By appointing Clarisse Kopff and Mari-Lizette Malherbe to the Board of Management, we now have two women at the most senior level of leadership in our Group. More women also occupy positions at other management levels than in the previous year. In total, 38.5% of management positions Group-wide are now held by women, thus putting us close to reaching our target of increasing this figure to 40% by 2025.

Besides these specified non-financial targets, a whole host of further ESG initiatives and projects created added value for the environment, society and for our staff in 2022. One example is the Social Engagement Awards launched by the Board of Management last year. Open to everyone in the Group, the competition was an opportunity for staff to win additional funding for charitable projects they are involved in. A total of 114 projects were entered into the running and then evaluated in-house – 25 of which received donations ranging between €5,000 and €250,000. Winning submissions ranged from day trips for Ukrainian children affected by the war to solar-powered night schools for girls in rural India and sustainable community farming to fight climate change and hunger.

It's fair to say that 2022 was a value-creating year for our business and stakeholders alike. You can find further facts and figures in this report and in our Sustainability Report due for publication in April. This year's Annual Report is the last we will publish on the basis of the IFRS 4 accounting standard we have followed to date. With effect from 1 January 2023, Munich Re will be applying the new IFRS 17 standard.

The introduction of IFRS 17 will not make a difference to our profitability or impact our financial strength. What will change, though, is how we measure, present and disclose our insurance business. The new accounting framework introduces a more market-value-consistent regime to measure insurance contracts. IFRS 17 will increase the transparency of our financial reporting and render our diversified business model's financial performance substantially more visible in the financial world and among stakeholders in future.

As you can see, Munich Re remains an attractive and reliable investment – even in times of great uncertainty and change. On behalf of more than 41,000 staff members worldwide, I wish to thank you for the trust you place in our Group.

Yours sincerely,

Joachim Wenning

Combined management report

This report combines the management reports of
Munich Reinsurance Company and Munich Re.

Strategy

Munich Re operates an integrated business model that combines primary insurance and reinsurance. This model enables us to pool our industry-wide areas of expertise, share underlying know-how and data, and leverage synergies through risk diversification.

At the core of our business model, Munich Re is the risk carrier along the entire insurance value chain. We are happy to expand our primary insurance activities on the basis of their stable earnings and have a strategic interest in new business models. We prefer organic growth, but will engage in selected M&A activities in line with our strategic preferences. Our active, integrated capital management and risk management across the Group helps to create economic value for our shareholders, while safeguarding the fulfilment of our obligations towards clients and policyholders as well as protecting the reputation of Munich Re.

Our strategy follows the three guiding principles of Scale, Shape, and Succeed, which are key pillars of the Munich Re Group Ambition 2025.

Scale

Scale represents growth in the Group's core business. There are opportunities for organic growth in reinsurance in particular owing to recent improvements in market conditions. In asset management, we want to enhance performance and further optimise our risk-return profile in a setting characterised by higher interest rates.

Shape

Shape stands for Munich Re's mission to develop new business models throughout the value chain, in turn shaping markets. In this environment, innovative and digital solutions will give rise to additional business opportunities.

Succeed

Succeed symbolises the added value that Munich Re generates for all its stakeholders. For shareholders, this means the sustained financial success of their investments in Munich Re. Clients benefit from bespoke products. And for staff, Succeed connotes appealing long-term employment and good career prospects. A particular priority concerns women in management: by 2025, 40% of managers below the Board of Management are to be women. Last but not least, Succeed allows communities to benefit from, in particular, the Group's ambitious climate protection targets in its asset management, in the (re)insurance business and in its own business operations.

The success of the Munich Re Group Ambition 2025 will be measured using the following financial and non-financial targets:

Our pledge to shareholders

Improved RoE, 2025	EPS growth[1]	DPS growth[1, 2]	Solvency II ratio in optimal range
14–16%	≥ 5%	≥ 5%	175–220%
Decarbonisation targets for thermal coal, oil and natural gas			

1 Average annual growth rate 2020–2025 (earnings per share for 2020 as base year, per calculation of a normalised profit of €2.8bn; adjustment of +€1.6bn for COVID-19 and other factors).
2 In addition: dividend floor of at least previous year's DPS.

We want to generate an attractive return on equity (RoE)[1] which, following the transition to the new IFRS reporting standards, should be between 14% and 16% (as opposed to the previous target range of 12% to 14%) by 2025. That would establish Munich Re as one of the best in its peer group. The higher RoE achieved in the course of the strategy period to 2025, compared to our previous financial targets and after taking into account the new IFRS standards, will result from increased profitability, growth, and an improved return on investment.

Continued earnings growth is poised to translate into higher earnings per share, with a targeted average annual rise of 5% or more by 2025.

The implicit dividend commitment of recent decades is now an explicit target of the Munich Re Group Ambition 2025: in "normal" years, the dividend per share is to rise by 5% or more on average, similarly to the increase in earnings per share. In years with unusually high claims expenditure, it is expected that the dividend per share will at least remain the same.

The solvency ratio is to remain in the optimum range of 175–220%.

As an environmentally conscientious business, Munich Re will play its part in meeting the targets of the Paris Climate Agreement. The Group has therefore set itself ambitious climate protection targets for its investments, its (re)insurance transactions and its own business operations:

1 Further information about this indicator is provided in the combined management report in the section entitled "Tools of corporate management and strategic financial objectives".

Munich Re Group Ambition 2025 and beyond

	Investments		Insurance		Own operations
	Financed GHG[1] emissions		Insurance-related GHG emissions (primary insurance, direct and facultative (re)insurance)		GHG emissions from own operations
Today	**No investment in companies with** > 15% revenue from thermal coal[2] > 10% revenue from oil sands		**Thermal coal** No insurance for new coal mines or power plants, including infrastructure[3, 6]	**Oil and gas production** No insurance for new or existing oil sand sites, including infrastructure[6] and exposure as well as infrastructure in the Arctic[3, 7]	**Reducing our direct impact** > GHG-neutral in 2022 > Additional GHG reduction per employee in 2022
2025	**Total[4]:** Thermal coal[4]: Oil and gas[4]:	**−25% to −29% emissions** **−35% emissions** **−25% emissions**	**−35% emissions[5]**	**−5% emissions** Utilising the expertise of HSB Solomon	**−12% emissions** per employee of the Munich Re Group
2050	**Total:** Thermal coal:	**Net zero** by 2050 **Full exit** by 2040	**Full exit** by 2040	**Net-zero emissions** by 2050	**Net-zero emissions** by 2030

Leading with high and credible ESG[8] standards

1 Greenhouse gas emissions as measured using CO_2 equivalents.
2 Exceptions may be made on a case-by-case basis for companies that generate between 15% and 30% of their earnings from thermal coal, provided there is an active engagement dialogue with the company in question.
3 Our external auditor examined this information in the course of performing a limited assurance engagement on the non-financial statement.
4 Scope 1 and 2 financed GHG emissions from listed equities and corporate bonds; for the total reduction target also from direct real estate. The reduction relates to the 2019 base year.
5 "Metric tonnes of thermal coal produced annually in insured mining activities by insureds/installed operational capacity (in megawatts) of insured coal-fired power plants of insureds" (used as an equivalent for an approximate assessment of the GHG emissions resulting from our clients' activities, base year 2019).
6 For details on the scope of application, please see the section "Insurance" of our combined non-financial statement.
7 For stand-alone covers; for mixed covers, taking into account a threshold value.
8 This abbreviation stands for environmental, social, governance. Detailed information on all measures can be found in our combined non-financial statement.

More specifically, the relevant GHG emissions[4] in our investment portfolio are to be reduced by 25–29% by 2025, and, as part of our long-term ambition, brought down to net zero by 2050. Munich Re has already ceased to invest in companies that generate more than 15% of their earnings[2] from thermal coal or that generate more than 10% of their earnings from oil sands. As for the exploration and production of oil and natural gas (primary insurance and both direct and facultative reinsurance business), Munich Re will be reducing its climate-related industry exposure in such a way that there will be no associated net GHG emissions by 2050. In an initial phase, we aim to reduce emissions by 5% by 2025, compared to the base year 2019. At the same time, Munich Re will be reducing its coal-related exposure in its direct and facultative insurance business by 35% Group-wide by 2025 (compared to the base year 2019), before eliminating this exposure altogether by 2040. Munich Re has already stopped insuring new coal-fired power plants, coal mines, and oil sands mines.

With its Ambition 2025, Munich Re has set itself a further goal for reducing GHG emitted by its own operations. Current GHG emissions are to be reduced by a further 12% per employee by 2025 (base year 2019). Five years later, by 2030, the Group expects to achieve net-zero GHG emissions in its business operations. Unavoidable GHG emissions will be compensated for by purchasing certificates.

Reinsurance

Munich Re's strategic aim is to expand its position as a leading global reinsurer and, by means of Global Specialty Insurance, to further consolidate our success in primary insurance business through our special underwriting expertise.

Our reinsurance strategy likewise relies on the three pillars of Scale, Shape, Succeed – which define measures for achieving overarching objectives.

In traditional reinsurance, Munich Re is participating in the marked expansion of significant markets. Growth areas in our core business include the expansion of the market position in developed markets in North America, Europe, Asia and Australia – with a focus on risk expertise and underwriting quality. In the emerging markets of Asia, the Middle East and South America, Munich Re focuses on targeted growth through service provision for cedants.

A number of our digital underwriting services for cedants, which are part of our reinsurance business, have since reached a substantial size and show significant growth. Accordingly, Munich Re has combined Realytix, Risk Management Partners and Improvex in their own divisional unit, Digital Solutions Non-Life. Key goals include joint strategic development, a harmonisation of the technical infrastructure, further professionalisation of sales, and unit-wide coordination.

With regard to primary insurance business within reinsurance, Munich Re focuses on North America, the United Kingdom and Europe, and has set itself the goal of being one of the world's leading specialty insurers by 2025. The bundling of activities in the new Board division Global Specialty Insurance aims to bring about a stringent market and broker strategy, as well as the consistent management of previously independently operating units like American Modern Insurance Group Inc. (American Modern, the Hartford Steam Boiler Inspection and Insurance Company (HSB), Munich Re Specialty Insurance (MRSI), Munich Re Syndicate and Aerospace, and Great Lakes Insurance SE (GLISE). In this regard, Munich Re's goals are to create synergies in underwriting, sales and digitalisation, while also more effectively addressing the increased regulatory requirements for primary insurance business through its new positioning.

Munich Re's long-term competitiveness is particularly sustained by excellence in operations, the development of new product solutions, and the pursuit of new strategic options in our business activities.

The focus of the excellence initiatives is on first-class underwriting and risk management at the highest level, practised client orientation and outstanding client management, agile and efficient processes, and the exploitation of synergies within the Group – both in partnerships in product and market development, and in the use of service functions.

Both traditional reinsurance and Global Specialty Insurance are constantly defining new topic areas and solutions to further develop the business. For example, Munich Re is driving forward product innovations for cyber, flooding, parametric covers, credit insurance and financially motivated reinsurance by offering data-driven solutions and services under third-party brands, alongside its own reinsurance covers.

Our data strategy is a further, essential component. Following consistent investment in the area of data and analytics, both technologically and in terms of organisational and human resources, the future aim is to apply an enhanced business model to generate profits using data.

Munich Re's portfolio of key innovation areas in reinsurance is regularly reviewed, and adapted or expanded in line with trends and developments. Two examples of this are crypto technologies and artificial intelligence (AI) as the foundation for new business models.

Along with investing in innovation and digitalisation projects, the reinsurance field of business also operates as a venture capitalist. Beyond the objective of generating especially profitable returns on investment, the reinsurance field of business deploys venture capital to ensure the closest possible proximity to new technologies and emerging business models. The investment categories, which mirror the key areas of innovation, are closely interlinked in terms of structure and organisation.

ERGO

ERGO's strategic aim is to continue growing profitably through 2025 and, as regards return on equity (RoE), to become one of the top primary insurers in Europe. To this end, ERGO's portfolio of strategic measures likewise relies on the three pillars of Scale – Shape – Succeed, which define steps for achieving overarching objectives.

One of ERGO's aims is to further improve its market position and profitability in Germany, with a focus on further developing its underwriting capabilities and resolutely driving forward end-to-end process excellence, while reducing IT, sales and operating costs. In international business, ERGO concentrates on Europe and Asia, where high-growth markets such as India, China and Thailand offer particularly promising opportunities. Digital Ventures puts a clear focus on generating strong growth both with partners in multi-level sales (B2B2C) and through purely direct offers from digital insurers like nexible.

The ever-increasing changes in markets caused by digital transformation and new patterns of customer behaviour demand flexibility in both services and products. In this context, ERGO is focusing consistently on the needs of its customers, who are increasingly using traditional and digital channels in parallel when seeking advice and purchasing insurance products.

The ongoing modernisation of IT infrastructures continues to play a key role here. In addition, ERGO is seeking a leading role in digitalisation by consistently driving forward robotics, AI and voice technology, with an eye to continually enhancing customer experience. ERGO aims at further increasing its competitive strength by transferring technology-based solutions and enhancing cross-border synergies. ERGO will continue to rely on external and internal resources in generating innovative business ideas to further expand the business model along the entire insurance value chain and unlock growth potential in the digital world. There will be a particular emphasis on creating and expanding ecosystems – in mobility and travel, for example.

Tools of corporate management and strategic financial objectives

Munich Re's management philosophy – Based on value creation

The aim of Munich Re's entrepreneurial thinking and activity is to analyse risks from every conceivable angle and to assess and diversify them, creating lasting value for shareholders, clients, and staff in relation to the risks assumed. This is the aim of our active capital management and the consistent application of value- and risk-based management systems.

The framework for any business activity is our risk strategy, from which we derive various limitations and reporting thresholds. A key element is our economic capital resources, which we determine in accordance with the Solvency II supervisory regime. We observe a range of important additional conditions. These include national accounting regulations, tax aspects, liquidity requirements, supervisory parameters, and rating agency requirements.

Our value-based management is characterised by the following aspects:

- Risk capital, i.e. the capital required to cover the risks, is the basis of our value- and risk-based management. The capital requirement corresponds to the solvency capital requirement under Solvency II, as determined on the basis of our certified internal risk model. Information on the internal model is provided in the risk report, in the section entitled "Risks depicted in the internal model".

- Consequently, business activities are assessed not only according to their earnings potential, but also relative to the extent of the risks assumed. Only the risk-return relationship reveals how beneficial an activity is from the point of view of our shareholders.

- With value-based corporate management tools, we ensure an economic valuation and the comparability of alternative initiatives.

Contrasting aspects have to be evaluated when selecting suitable target figures. On the one hand, the often-complex economic environment should be reflected as realistically as possible in order to emphasise added value as the Group's overriding guiding principle. On the other hand, targets should be straightforward and understandable for investors, staff, and the public.

The Group's corporate management tools

Our key corporate management tools at Group level are economic earnings and the IFRS consolidated result. Together with the other performance indicators, they constitute the most important financial indicators of relevance for us. The introduction of IFRS 9 and IFRS 17 in 2023 will lead to changes for individual, IFRS-based financial indicators. However, the introduction of these standards will have no direct impact on the Group's corporate management.

The Group's corporate management tools

Economic earnings

IFRS consolidated result
(according to IFRS 9/17 from 2023)

Other performance indicators

- Gross premiums written (until 2022)
- Insurance revenue (from 2023)
- Combined ratio
- Technical result in life and health reinsurance including the result from insurance contracts with non-significant risk transfer (until 2022)
- Total technical result (from 2023)
- Return on investment (RoI)

Economic earnings

The starting point for value-based management is the economic value added, which we determine based on the key corporate management tool of economic earnings. These correspond with the change in eligible own funds under Solvency II, adjusted for items that do not represent economic value added – such as capital measures, and the change in regulatory restrictions.

In particular, economic earnings comprise the contribution to profits from our new business, and changes in the value of in-force business against the previous year's assessment on account of technical factors. The development of eligible own funds is also considered because of the effect of capital market parameters on the assets and liabilities sides of the solvency balance sheet.

With respect to the management of economic value added, we use conceptually consistent value-based and risk-capital-based measurement approaches that are individually geared to the characteristics of each respective field of business. Our approach for property-casualty reinsurance is the adjusted result, which comprises the anticipated discounted cash flows of underwriting and an adjustment for major claims. In life and health reinsurance, we apply value added by new business and the change in value of in-force business, which are based on the solvency balance sheet. As part of our asset-liability management, we consider the excess return from our investment operations in reinsurance. The management tool of economic earnings is used directly for ERGO.

IFRS consolidated result

We use the IFRS consolidated result as a standardised, accounting-based benchmark for the Group and its fields of business. The standardised approach of the IFRS consolidated result makes it easier for outsiders to understand and interpret the information in it; as such, it is a pivotal part of our financial reporting in capital markets. With effect from 2023, calculation of the IFRS consolidated result will be based on IFRS 9/17.

Other performance indicators

Gross premiums written

Gross premiums written comprise all premium income due for payment in a financial year. Increases in gross premiums written are the prime indicator of corporate growth at the Group and segment levels. However, increases in this performance metric are not an inherently meaningful target for our Group, as we must always consider premium growth as it relates to the profitability of the business we write. With the introduction of IFRS 9/17, gross premiums written will be superseded by insurance revenue under IFRS 17 as a key performance indicator.

Combined ratio

The combined ratio is regularly posted for property-casualty business. Calculated as the percentage ratio of the sum of expenses for claims and benefits plus operating expenses to earned premiums (all of which are net, i.e. after reinsurance cessions), the combined ratio is the sum of the loss ratio and the expense ratio. A combined ratio of 100% means that premium income was sufficient to cover claims and costs.[1]

When regarded in isolation, the combined ratio is not a sufficiently informative metric because it does not make it possible to assess economic profitability. It is also only of limited suitability for comparing the financial performance of competitors owing to differing calculation methods and portfolio mixes. Generally, we aim to keep the combined ratio as low as possible by means of good underwriting and claims management.

As a result of the introduction of IFRS 17, the combined ratio will reflect the percentage ratio of insurance service expenses to insurance revenue, which, as before, are both net. Given that the combined ratio is based on an estimate of the present value of future cash flows and adjustment for the uncertainty of those future cash flows, it will be possible in future to assess economic profitability on the basis of the combined ratio.

Technical result in life and health reinsurance including the result from insurance contracts with non-significant risk transfer

Owing to the long-term nature of business in life and health reinsurance, the combined ratio used in property-casualty insurance is only of limited use in this segment. We therefore track and post the technical result for life and health reinsurance. It shows the contribution made directly to the IFRS consolidated result and separates income derived from investment risk-taking from reinsurance business in particular. Some reinsurance operations are disclosed separately from the underwriting result owing to non-significant risk transfer. This part of the business and its contribution to the consolidated result is a further performance indicator for the life and health reinsurance segment.

The total technical result under IFRS 9/17 consistently combines underwriting business under IFRS 17 with insurance-related financial instruments[2] under IFRS 9 and, with effect from 2023, supersedes the “technical result including the result from reinsurance contracts with non-significant risk transfer” under IFRS 4.

1 Expenses for claims and benefits not taken into account in the calculation of the combined ratio are set out in the table “Notes on determining the combined ratio” in the Notes to the consolidated financial statements.

2 Mainly comprises insurance contracts with non-significant risk transfer under IFRS 9.

Return on investment (RoI)

This is a key indicator of investment performance for Munich Re, on the basis of external reporting. It is derived from the investment result and the average market value of our investment portfolio – including off-balance-sheet unrealised gains and losses.[1]

Strategic financial objectives as part of the Munich Re Group Ambition 2025

Munich Re publishes further performance indicators within the framework of its multi-year result ambition. Given the longer time horizon of several years and the greater uncertainties related to this, the result targets published for these performance indicators take the form of anticipated corridors or minimum targets only. You can find details of the objectives for the key indicators given here for the Munich Re Group Ambition 2025 in the "Strategy" chapter.

Strategic financial objectives as part of the Munich Re Group Ambition 2025

- Return on equity (RoE)
- Earnings per share
- Dividend per share
- Solvency ratio under Solvency II

Return on equity (RoE)

The RoE is an important profitability KPI, which is of relevance in particular in the medium term. It is calculated on the basis of the IFRS consolidated result in relation to the average IFRS equity at the beginning and end of the year. IFRS equity is adjusted for unrealised gains and losses, changes resulting from currency translation outside profit or loss and remeasurement gains/losses from cash flow hedges. The RoE is significantly influenced by the IFRS result. IFRS equity is affected by profits as well as by capital measures such as dividend payments and share buy-backs, in particular. The RoE is recognised for the Group and for the reinsurance and ERGO fields of business. The calculation of the RoE for the fields of business allows for further adjustments to equity in order to eliminate distortions attributable to intra-Group transactions.

The components of the return on equity, the consolidated result and average IFRS equity at the beginning and end of the year will be based on IFRS 9/17 with effect from 2023. The adjustments applied to average equity and the calculation of the return on equity will remain unaffected by the introduction of IFRS 9/17.

Earnings per share

The earnings per share figure reflects the IFRS consolidated result for a year in relation to the average number of outstanding shares at the beginning and end of the year. The earnings per share is essentially influenced by the IFRS consolidated result. The number of outstanding shares can change as a result of share buy-backs or other capital measures. Further information on the earnings per share is available under (52) Earnings per share in the Notes to the consolidated financial statements.

Dividend per share

The dividend per share reflects the dividends paid for one year in relation to the number of dividend-bearing shares. The number of shares can change as a result of share buy-backs or other capital measures.

Solvency ratio under Solvency II

The solvency ratio under Solvency II is the ratio of the eligible own funds to the solvency capital requirement. Information on solvency capital requirements and eligible own funds is available in the risk report.

1 The calculation of the RoI is described in the "Investment result" table in the section "Business performance of the Group and overview of investment performance" in the chapter "Business performance".

Macroeconomic and industry environment

The global economy's recovery from the recession triggered by the coronavirus pandemic slowed considerably in 2022. In Europe in particular, overall economic development was significantly affected by the Russian invasion of Ukraine. In consequence, and as a result of the economic sanctions imposed on Russia, extraordinarily high energy prices and uncertainty concerning the future energy supply hampered economic activity. Inflation reached record levels in many countries around the world and, combined with the considerable monetary tightening engaged in by many central banks, dampened economic growth. Rigorous state-imposed measures to control the coronavirus pandemic in China curbed economic activity there and contributed to disruptions in global supply chains.

Capital markets

Following a steep rise in inflation, major central banks put an end to the period of low interest rates in 2022, significantly tightening their monetary policy. The Federal Reserve in the United States ended its net asset purchases in March 2022 and raised the federal funds rate. Over the course of the year, it raised interest rates in large increments, such that the range of policy rates in December was 4.25–4.5%, 425 basis points above the level at the start of the year. Furthermore, the Fed began to reduce the size of its balance sheet halfway through the year. The European Central Bank also put an end to its net asset purchases in March 2022, though it did not start to raise interest rates until July. Its interest rate on the main refinancing operations was 2.5% at the end of the year, 250 basis points higher than at the beginning of the year.

Yields on ten-year government bonds in the USA and Germany rose sharply in 2022 as a result of high inflation and considerable monetary policy tightening. By the end of December, yields on US and German bonds were high compared to the previous several years.

Yields on ten-year government bonds

%	31.12.2022	31.12.2021
USA	3.9	1.5
Germany	2.6	–0.2

Volatility on the international financial markets was higher in the reporting year than in the previous year. Geopolitical uncertainty, extraordinarily high inflation, interest-rate hikes and fears of recession had adverse impacts. In the course of the year, important equity indices like the US Dow Jones and the Dow Jones (DJ) EURO STOXX 50 were at times more than 20% down on their levels at the end of 2021 and only made a partial recovery by the end of the reporting year.

Equity markets

	31.12.2022	31.12.2021
DJ EURO STOXX 50	3,794	4,298
Dow Jones Index	33,122	36,338

On the currency markets, fluctuations were more pronounced in 2022 than in the previous year. At the end of December, the US dollar was significantly higher and the pound sterling significantly lower against the euro compared with the end of 2021, while the Canadian dollar had returned to approximately the same level at which it began the year. The annual average values against the euro, however, were higher in 2022 than in 2021 for both the Canadian dollar and the pound sterling. At €0.95, the average value of the US dollar in the reporting year was significantly higher than in the previous year (€0.85). Further information on exchange rates can be found in the section "Currency translation" in the Notes to the consolidated financial statements.

Insurance industry

According to current extrapolations, premium income in the German insurance sector saw a slight drop in 2022. Premium income growth in property-casualty insurance and in private health insurance was higher than the long-term average. Premiums in life business, on the other hand, were down significantly owing to a slump in single-premium business.

On a global level, a number of major property-casualty primary insurance markets experienced strong growth in 2022, resulting in a slight increase in global premium income, even when adjusted for high inflation. Overall, the trend toward higher prices continued in the renewal rounds for property-casualty reinsurance contracts. However, this trend varied significantly among regions and classes of business – depending on claims experience, loss expectations and the individual market situation.

Munich Re Group

Munich Re is one of the world's leading risk carriers and provides both insurance and reinsurance under one roof. This enables the Group to cover large stretches of the value chain in the risk market. Almost all reinsurance units operate under the uniform brand of Munich Re. The ERGO Group (ERGO) is active in nearly all lines of life, health and property-casualty insurance. The majority of Munich Re's investments are managed by MEAG, which also offers its expertise to private and institutional investors outside the Group. For up-to-date information about Munich Re, visit www.munichre.com.

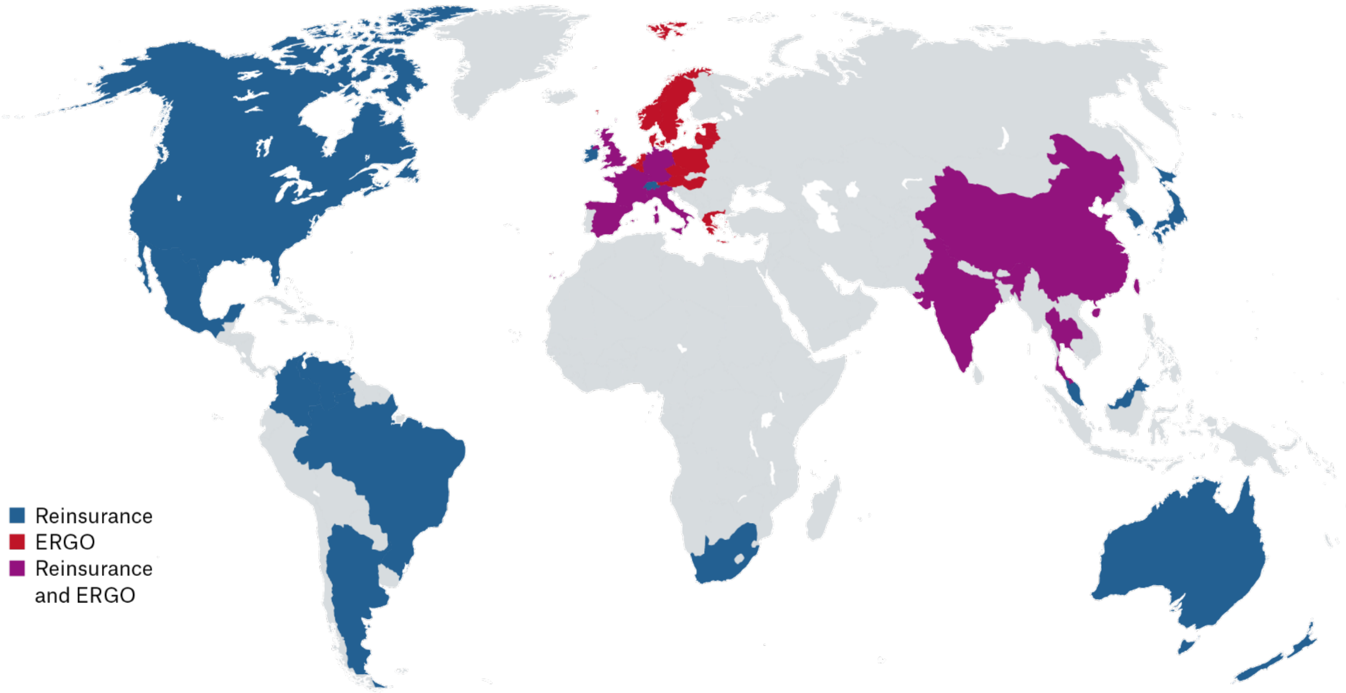
Group structure

The reinsurance companies of the Group operate globally and in virtually all classes of business. Munich Re offers a full range of products, from traditional reinsurance to innovative solutions for risk assumption. Our companies conduct their business from their respective headquarters and via a large number of branches, subsidiaries and affiliated companies. The reinsurance group also includes specialty primary insurers, whose business requires special competence in finding appropriate solutions.

In ERGO, we combine Munich Re's primary insurance activities. Some 68% of gross premiums written by ERGO derive from Germany, and 32% from international business – mainly from central and eastern European countries. ERGO also operates in Asian markets, particularly in India, China and Thailand.

Overview

	Munich Re Group				
Fields of business	Reinsurance		ERGO		
Segments	Life and health	Property-casualty	Life and Health Germany	Property-casualty Germany	International
Markets, divisional units and divisions	– Asia Pacific, Middle East, Africa – North America – Europe and Latin America – Financial Solutions	– Global Clients and North America – Europe and Latin America – Asia Pacific and Africa – Global Specialty Insurance (as of 1 January 2023)	– Life Germany – Health Germany – Digital Ventures	– ERGO Versicherung Aktiengesellschaft, Düsseldorf offering property-casualty insurance for retail, commercial and industrial customers	– Life insurance – Property-casualty insurance – Health insurance



Locations in which Munich Re conducts (re)insurance business via business units[1]. (As at 31 December 2022):

Africa
South Africa

Asia
Bahrain
Greater China
India
Japan
Malaysia
Singapore
South Korea
Thailand

Australia and New Zealand

Europe
Austria
Belgium
Czech Republic
Denmark
Estonia
France
Germany
Greece
Hungary
Ireland
Italy
Latvia
Lithuania
Luxembourg
Malta
Netherlands
Norway
Poland
Spain
Sweden
Switzerland
United Kingdom

Latin America
Argentina
Brazil
Colombia
Mexico
Venezuela

North America
Canada
USA

1 Including affiliated companies, associates, joint ventures and branches of (re)insurance companies of Munich Re.

Munich Reinsurance Company and ERGO Group AG are under unified control within the meaning of the German Stock Corporation Act (AktG). The relevant statutory regulations, control agreements and Group directives govern the distribution of responsibilities and competences for key decisions between Group management and ERGO. Control and profit-transfer agreements are in place with many Group companies, especially between ERGO Group AG and its subsidiaries.

Reinsurance

In reinsurance, we operate in life, health and property-casualty business. Under reinsurance, we also include not only specialised primary insurance activities that are handled by the reinsurance organisation but also business from managing general agents. Organisationally, we have pooled worldwide IoT activities into the divisional unit "Global IoT".

As reinsurers, we write our business in direct collaboration with primary insurers, but also via brokers and within the framework of strategic partnerships. In addition to traditional reinsurance business, we also operate as a primary insurer, participating in insurance pools, public-private partnerships and business in specialist niche segments. We also offer our clients a wide range of special products, customised insurance solutions and services, which we manage from within our reinsurance organisation. Our clients thus have direct access to the expertise, innovative strength and capacity of a leading global risk carrier. Thanks to our capital management know-how, we are in demand as a partner for products geared to our clients' balance-sheet, solvency and rating-capital requirements, as well as their risk models.

Focus of life and health reinsurance operations

Our international life and health reinsurance business is written in the Life and Health division. This is split into three geographical regions and one international unit that develops specialised solutions for savings and annuity products. The focus of the division's business activities is on traditional reinsurance solutions that concentrate on the transfer of mortality risk. Moreover, we are active in the market for living benefits products. These include products such as occupational disability, long-term care, and critical illness, which have seen increased demand. We also offer capacity for longevity risks.

Besides assuming underwriting risks, we support our clients in developing new life insurance products. Moreover, we offer clients a wide range of increasingly digital services, from medical expertise to automated risk assessment and claims handling solutions.

In addition, we continuously expand our tailor-made structured concepts for clients seeking to optimise their capitalisation, liquidity, or key performance indicators.

Demand for reinsurance is also growing with regard to the capital market risks often embedded in savings products. We provide our clients with comprehensive advice on product design while offering hedging for embedded options and guarantees linked to the capital markets. Our own exposure is transferred back to the capital markets.

In order to ensure proximity to our clients, we are represented in many markets with local subsidiaries and branches. We write the main portion of our business via our Canadian branch and our subsidiary in the USA. In Europe, we have operations in Germany, the United Kingdom, Switzerland, Spain and Italy. At the same time, we have a strong local presence in Australia and South Africa, and in all important growth markets in South America, the Middle East and Asia. Asian business is centrally managed by a dedicated branch in Singapore, which underlines the strategic importance of this region for life and health reinsurance.

The property-casualty reinsurance divisions

The Global Clients and North America division handles our accounts with major international insurance groups, globally operating Lloyd's syndicates and Bermuda companies. It also pools our reinsurance know-how in the North American market in the area of property-casualty business, in particular that of our Munich Reinsurance America Inc. subsidiary domiciled there, as well as in the field of global large-risk business, which is pooled in our Facultative & Corporate unit.

Our Europe and Latin America division is responsible for property-casualty business with our clients from Europe, Latin America and the Caribbean. Business units – for example, in London, Madrid, Paris and Milan – afford us market proximity and regional competence. In the Latin American markets, our Brazilian subsidiary Munich Re do Brasil Resseguradora S.A. headquartered in São Paulo and our liaison offices in Bogotá and Mexico City help to ensure client proximity. The division also includes the divisional unit Financial Risks, and New Reinsurance Company Ltd., which is domiciled in Zurich.

The Asia Pacific and Africa division conducts property-casualty reinsurance business with our clients in Africa, Asia, Australia, New Zealand and the Pacific Islands. Branches in Mumbai, Beijing, Seoul, Singapore, and Tokyo, along with liaison offices in Bangkok and Taipei, as well as a subsidiary in Sydney, allow us to take full advantage of opportunities in the rapidly growing Asia-Pacific insurance market. In the African market, we are represented by our subsidiary Munich Reinsurance Company of Africa Ltd., headquartered in Johannesburg. These units and other liaison offices guarantee our competitiveness in these key markets.

With effect from 1 January 2023, the Global Specialty Insurance (GSI) division comprises worldwide special-lines business, such as marine, aviation and space, along with specialty property-casualty business. The two large subsidiaries domiciled in the USA and operating in the field of specialised insurance activities – HSB and American Modern – are allocated to this division, as are MRSI, Munich Re Specialty Group (MRSG) and the specialty insurance business produced by GLISE. The GSI units HSB and American Modern specialise in products for which client proximity and – like in reinsurance – risk understanding as well as insightful claims handling are paramount. MRSI offers various specialty commercial insurance products in the North American market to better tap into the business potential in this market segment. MRSG, in turn, is a leading provider of marine insurance and insurance solutions for the aviation industry. GLISE, which has its headquarters in Munich and operates branches in various locations – including London and Dublin – enables and facilitates the Group's ability to provide compliant insurance solutions in the aforementioned areas.

ERGO

Munich Re's second pillar is primary insurance business.

Four separate units operate under the umbrella of ERGO: German business is concentrated in ERGO Deutschland AG. ERGO International AG manages international business. ERGO Digital Ventures AG is responsible for digitalisation, while ERGO Technology & Services Management AG manages all of the technology activities.

ERGO offers products in all the main classes of insurance: life insurance, health insurance, and in nearly all lines of property-casualty insurance, including travel insurance and legal protection insurance. With these products – in combination with the provision of assistance, other services and individual consultancy – ERGO covers the needs of retail and corporate clients. ERGO serves some 39 million mostly retail customers in around 25 countries, with the focus on Europe and Asia. The latest information on ERGO can be found at www.ergo.com.

ERGO Versicherung AG is one of Germany's largest providers of property-casualty insurance across nearly all classes of business, offering a wide range of products for retail, commercial and industrial clients. ERGO Vorsorge Lebensversicherung AG is ERGO's life insurer for capital-market-linked and biometric products. It offers solutions for all three types of old-age provision, mainly based on innovative and flexible unit-linked insurance products. ERGO Lebensversicherung AG and Victoria Lebensversicherung AG are concentrating on running off their traditional life insurance portfolios. DKV Deutsche Krankenversicherung AG offers a full portfolio in the healthcare sector: comprehensive private health insurance, products designed to supplement statutory health cover, and company health insurance. ERGO Krankenversicherung AG focuses on products that supplement statutory health insurance, especially supplementary dental plans. The specialist travel insurer ERGO Reiseversicherung AG is a market leader internationally as well as in Germany.

In Germany, ERGO's tied agents (agency sales) and ERGO Pro (structured sales force) are bundled under one roof in ERGO Beratung und Vertrieb AG. The latter is managed by ERGO Deutschland AG together with direct sales. ERGO Deutschland AG manages its broker and partner sales in its Property-casualty, Health Germany and Life Germany divisions, depending on class of business.

All of ERGO's German sales organisations were developed further in 2022 – in particular with regard to digitalisation and implementation of the "hybrid customer" business model, which offers customers an essentially identical range of products via all online and offline channels. ERGO is thus making integrated use of various channels – such as face-to-face consultation, internet, online chat, email, telephone or even video consultation – to leverage new potential.

ERGO International AG is mainly responsible for monitoring, coordinating and managing ERGO's international activities. The focus is on profitable organic growth in European core markets and selected growth markets in Asia. In the reporting year, ERGO International AG further developed its business in core markets in Europe by growing in new fields of business and using new distribution models, thus maintaining its good position in the respective markets. ERGO International AG has operations in Asia, including in China, India and Thailand. In 2022 in China, ERGO continued to pursue a number of growth activities in the life insurance market with the ERGO China Life Insurance Co., Ltd. joint venture. In the Chinese property insurance market, ERGO is striving for strong growth and a simultaneous boost in profitability through its stake in Taishan Property & Casualty Insurance Co., Ltd. The Indian joint venture HDFC ERGO General Insurance Company Ltd. also performed strongly in the past year and improved its market position overall; it now ranks fourth in the non-life insurance market. In 2022 in Thailand, ERGO concentrated on the property insurance market, which is not only the largest in Southeast Asia but also shows significant growth potential. By taking on a majority shareholding in ThaiSri Insurance Public Co. Ltd. and acquiring Nam Seng Insurance Public Co. Ltd. at the beginning of January 2023, ERGO achieved an important milestone on its path towards expanding its market position in Thailand.

ERGO Digital Ventures AG is responsible for digital transformation at ERGO. It provides support via innovative sales strategies, manages the fully digital player nexible, and is setting up new technologies, such as robotics, artificial intelligence, voicebots, process mining and virtual reality. ERGO Digital Ventures AG is also responsible for further developing ERGO Reiseversicherung AG's business, and driving ahead its digitalisation. ERGO Mobility Solutions seeks to establish partnerships and alliances with vehicle manufacturers, dealerships and mobility service providers, and to further develop its mobility technology centre, which was set up in 2022. Examples of ERGO Mobility Solutions' alliances include a strategic cooperation with Great Wall Motors in Europe and a partnership with the mobility provider Sixt that was established in 2022. ERGO Digital Ventures AG is also responsible for the embedded insurance field of business, where it cooperates with partners such as Amazon and Revolut.

ERGO Technology & Services Management AG is a dedicated arm of ERGO Group AG in charge of providing digital platforms, solutions and services. It has a global remit and supports ERGO in designing optimum insurance products and fostering the most effective customer channels. It consists of ITERGO GmbH in Germany, ERGO Technology & Services S.A. in Poland and ERGO Technology & Services Private Limited in India, which was founded in early 2022.

Our brands

Munich Re Group

- The Hartford Steam Boiler Inspection and Insurance Company
- New Reinsurance Company Ltd.
- American Modern Insurance Group, Inc.
- Digital Partners
- Bell & Clements Ltd.
- Groves, John & Westrup Ltd.
- MedNet Holding GmbH
- NMU Specialty Ltd.
- Parachute Digital Solutions, Inc.
- Relayr Inc.
- Roanoke Insurance Group Inc.

- German and international insurance companies
- German and international travel insurance companies
- German and international health insurance companies
- D.A.S. Rechtsschutz-versicherung International
- Nexible

- MUNICH ERGO AssetManagement GmbH

The detailed breakdown of participations can be seen in the list of shareholdings in the Notes to the consolidated financial statements.

Combined non-financial statement

Munich Re's guiding principle has always been to act in a farsighted and responsible manner, to add value for and together with our stakeholders.

Our Ambition 2025 sustainability strategy, which applies across the Group, aims to create long-term value for our shareholders, clients and staff – and for society as a whole. Ambition 2025 commits us to constantly improving and expanding our ESG agenda. The main focus of this strategy is on decarbonising our investments, our insurance activities, and the emissions from our own operations.

You will find a complete description of our Group strategy and the required disclosures under Section 289c(3) and 315c(1) and (2) of the German Commercial Code (HGB), as well as further details about our Munich Re Group Ambition 2025, in the "Strategy" section.

In the following statement we report on those sustainability issues which – based on the materiality analysis performed – are particularly relevant for Munich Re and its stakeholders, and we explain the corresponding goals, concepts and results in detail. Details about the materiality analysis can be found at the end of the combined non-financial statement.

The following topics were found to be particularly relevant in the 2022 reporting year: sustainability in investment and insurance activities, customer orientation and satisfaction, environmental management in our own operations, human rights, employee matters, compliance and responsible digital transformation, data protection and information security.

Sustainability in investment and insurance

Investment

Strategy and objectives

As global investors, at Munich Re we integrate ESG aspects into our investment policy. In addition, we have committed to moving our portfolio towards a net-zero climate target. When choosing asset managers, we take their experience in integrating ESG aspects into account. All of our measures are aimed at identifying ESG-related risks and opportunities, and including them in our investment decisions.

Munich Re was one of the first signatories of the Principles for Responsible Investment (PRI), which remain the foundation of our sustainable investment approach. In 2020, Munich Re joined the Net-Zero Asset Owner Alliance (NZAOA). Based on these two programmes, we have introduced our Responsible Investment Guideline, which covers the PRI, NZAOA and ESG criteria that apply to our investment management. Moreover, Munich Re has joined the Taskforce on Nature-related Financial Disclosures (TNFD), whose recommendations we take into account in our investment activities and in our insurance business.

As outlined in the "Governance" section, our strategic decisions on sustainable investment are taken by the Board of Management's ESG Committee, together with the ESG Management Team. In addition, the ESG Investment Committee specifically focuses on applying the ESG strategy to our investments, which is the responsibility of Group Investment Management (GIM). Furthermore, the newly created GIM Reputational Risk Committee supports our sustainability ambitions by analysing and assessing reputational risks in our investment activities.

The Chief Investment Officer (CIO) is the Board member responsible for the Group's investment management. GIM, which reports to the CIO, is responsible for the sustainability of the Group's investment strategy as the asset owner, and has set up its own ESG team for this purpose. ESG multipliers throughout GIM support the ESG team in establishing sustainability as an important consideration throughout the entire value chain.

This structure is also reflected at MEAG, whose Asset Management handles the majority of our investments. MEAG ensures targeted implementation of the ESG strategy through its membership on GIM's ESG Investment Committee, ongoing coordination among the ESG teams, and the ESG multipliers in the various portfolio-management teams. Regular training is offered to increase and improve awareness of ESG issues, for example on regulatory topics or ESG trends. In 2022, MEAG's own ESG governance structure was improved by the establishment of a MEAG ESG Committee at management level and a MEAG ESG Management Team.

Our investments are managed based on four pillars: systematic integration of ESG criteria in GIM's and MEAG's investment processes, engagement dialogues, defined exclusion criteria and ESG-focus investment areas such as renewable energy and green bonds. In addition, we demand that all of our asset managers apply ESG criteria when handling their portfolios.

Our goal is to decarbonise our investment portfolio, reaching net zero by 2050. In that context, we have committed to divest from thermal coal by 2040. Furthermore, we have adopted the Munich Re Group Ambition 2025, a climate strategy for our investments that provides clear targets for our contribution to climate change mitigation. It includes reducing, in an intermediate step, our entire scope 1 and 2 financed GHG emissions[1] from listed equities, corporate bonds and direct real estate by 25–29% compared to the 2019 base year, by 2025. In addition, we have set specific sector targets for listed equities and corporate bonds: we intend to reduce financed GHG emissions from investments in thermal coal – in particular mining and/or power generation – by more than 35% by 2025, and for investments in oil and gas – in particular drilling and production, refining and distribution – by more than 25%, respectively compared to the 2019 base year.

In a further step towards reaching our net-zero target, in October 2022 we communicated that new restrictions had been added to our guidelines in the oil and gas sector: as of 1 April 2023, in the direct alternative investment segment, we will no longer invest in projects specifically for new oil or gas fields, new oil-fired power plants, or midstream oil infrastructure. This applies to oil and gas fields that were not already producing, and to power plants or infrastructure that were not under construction or already operating, as at the deadline of 31 December 2022.

In addition, as of 1 April 2023 we will no longer directly invest in equities or corporate bonds from listed oil and gas companies whose business model specialises in oil and gas. We define oil and gas companies in this respect as publicly-traded companies listed under the Global Industry Classification Standard (GICS) Oil and Gas sub-sectors, with the exception of Integrated Oil & Gas.

According to the Intergovernmental Panel on Climate Change (IPCC)[2], there is a direct (inverse) correlation between climate change and biodiversity. Munich Re is therefore actively working towards factoring biodiversity into our ESG approach and our investments.

In addition, we intend to increase the share of "ESG-focus" investments in our asset portfolio, as expressed in our goal of increasing our renewable energy holdings to €3bn by 2025.

Measures

In 2019, Munich Re stopped investing directly in listed companies that generate more than 30% of their earnings from thermal coal. Since 2021, companies that generate 15% to 30% of their earnings from thermal coal have also been excluded from our investment universe or, in individual cases, encouraged actively to transition to renewables in the context of an engagement dialogue. Three specific engagement dialogues with coal companies that we started in the previous reporting period were continued in the reporting year. Through the investor-led Climate Action 100+ initiative, aimed at ensuring the world's largest corporate GHG emitters take necessary action on climate change, we, along with other investors, participated in 4 further engagement dialogues in 2022 – bringing our total to 11 since 2020. Direct investment in listed companies that generate more than 10% of their earnings from oil sands are also excluded. We also exclude the following from our direct investment universe:

- Investment in companies that manufacture controversial weapons (cluster bombs and land mines)
- Government bonds and notes from government-related institutions with an MSCI ESG rating of CCC
- Trade and investment in food commodities (e.g. grains/ oilseeds, dairy products).

Our ESG-focus investments specifically target assets that make a positive contribution to our ESG strategy. This currently includes investment in renewable energy, certified managed forests, certified buildings and green bonds.

In this context, renewable energy refers to investments in energy production facilities that use renewable energy sources such as the sun, wind, geothermal energy or hydroelectric power. It includes the associated infrastructure for producing electricity and heat, as well as for storage and transportation.

Our standard for sustainable forest investment requires a certificate from the Forest Stewardship Council (FSC), the Programme for the Endorsement of Forest Certification Schemes (PEFC), or an equivalent certification.

Direct real estate is deemed certified if it features an environmental seal or other recognised certification from, for example, the Building Research Establishment Environmental Assessment Method (BREEAM), the Leadership in Energy and Environmental Design (LEED) or the German Sustainable Building Council (DGNB).

1 Scope 1 GHG emissions: Direct emissions from primary energy consumption (natural gas, heating oil, emergency generators, fuel for company cars);
Scope 2 GHG emissions: Indirect emissions from procured energy (purchase of electricity, district heating and district cooling).
2 www.ipcc.ch/publication/climate-change-and-biodiversity-2/

The classification of our green bond holdings is based on an assessment of the emissions documentation from WM Datenservice.

By issuing the Munich Re subordinated green bonds, our goal is to support the drive towards a climate-friendly transformation of the economy. In 2022 we issued another subordinated bond in the amount of US$ 1.25bn. Munich Re will use the capital raised with the subordinated green bond to finance or refinance suitable projects, in accordance with our Green Bond Framework. Projects include investments of equity and debt in renewable energy, energy efficiency, clean transportation, green buildings, sustainable water management, the eco-efficient and/or circular economy, and the environmentally sustainable management of resources and land.

Furthermore, integrating ESG criteria is a key component of our investment strategy. As a result, MEAG takes ESG risks and specifically determined ESG criteria into account in its investment decisions in the following asset classes:

ESG criteria as an important component of our investment strategy

Asset classes	Equities and bonds		Alternative investments		
	Equities and corporate bonds	Government bonds	Infrastructure (incl. renewable energy) and forestry	Real estate acquired as direct investments	Private equity, private debt and infrastructure funds
ESG criteria	– Defined exclusion criteria – Availability of MSCI ESG ratings – Impact through engagement dialogues and proxy voting	– Defined exclusion criteria – Availability of MSCI ESG country ratings	Assessment of ESG aspects (prior to submission of a binding offer)	Consideration of – Eco-labels – Certificates – Energy efficiency and building materials on new investments	PRI commitment by funds manager or adherence to ESG principles and guidelines (required for the majority of new investments), if possible inclusion of additional restrictions in agreements

In addition to our ESG targets, we also report on our ESG-focus investments and the rating coverage of liquid asset classes. The MSCI ESG rating coverage of the liquid asset classes equity, corporate and government bonds and covered bonds is over 80%.

In order to keep improving our sustainability strategy, through our PRI membership Munich Re is in constant dialogue with the PRI managers and also took part in selected conferences and workshops.

With reference to our PRI assessment 2020 discussed the previous year, PRI adapted the rating system for the 2021 reporting cycle. No assessment was performed by PRI in 2022.

Metrics

In order to meet our environmental objectives, we determine metrics based on the goals of the Munich Re Group Ambition 2025. The defined metrics are all shown compared to the 2019 base year. Any additional metrics are shown in comparison to the previous year.

The following table illustrates the development of scope 1 and 2 financed GHG emissions from listed equities, corporate bonds and direct real estate. We use data from the external provider ISS ESG to measure the financed GHG emissions from listed equities and corporate bonds. The calculation for direct real estate is based on defined data which is processed using a method developed by MEAG.

Absolute financed GHG emissions (scope 1 and 2)[1]

t CO_2e	31.12.2022	Prev. year
Listed equities, corporate bonds and direct real estate	3,113,093	3,963,799
Listed equities and corporate bonds from companies in the thermal coal segment – in particular mining and/or power generation	269,179	272,660
Listed equities and corporate bonds from companies in the oil & gas segment – in particular drilling and production, refining and distributing	734,197	890,016

1 For listed equities, corporate bonds based on the available CO_2e emissions from the data provider ISS ESG (usually CO_2e emissions from the previous year). For direct real estate, CO_2e emissions for the 2022 financial year are approximated due to a lack of available data at the time of publication. They are based on available CO_2e emissions from last year and CO_2e-emission reductions as a result of implemented savings measures, provided they can be verified and measured.

Development of GHG emissions (scope 1 and 2) compared to the 2019 base year (Munich Re Group Ambition 2025)[1]

%	31.12.2022	Prev. year
Listed equities, corporate bonds and direct real estate	-45.7	-30.8
Listed equities and corporate bonds from companies in the thermal coal segment – in particular mining and/or power generation	-47.5	-46.8
Listed equities and corporate bonds from companies in the oil & gas segment – in particular drilling and production, refining and distributing	-28.9	-13.8

1 For listed equities, corporate bonds based on the available CO_2e emissions from the data provider ISS ESG (usually carbon emissions from the previous year). For directreal estate, CO_2e emissions for the 2022 financial year are approximated due to a lack of data at the time of publication. They are based on available CO_2e emissions from last year and CO_2e-emission reductions as a result of implemented savings measures, provided they can be verified and measured.

Regarding the total absolute financed GHG emissions, 0.5 percentage points of the year-on-year reduction are attributable to updated emissions data that we received from our data provider.

Interest-rate increases on the markets lead to a reduction in the fair value of debt instruments and thus in total absolute financed GHG emissions. If we were to use the nominal value instead of the market value for debt instruments, the reduction would have been 37.7% (instead of 45.7%) relative to the 2019 base year.

A further metric for assessing our targets with regard to listed equities, corporate bonds and direct real estate is the relative CO_2e footprint (t CO_2e/€m invested). The financed GHG emissions from this portfolio are shown in proportion to the market value of our investments. The amount was 76 (t CO_2e/€m invested) on 31 December 2021; as at 31 December 2022, it was 75 (t CO_2e/€m invested).

In addition to decarbonisation targets, the financing of sustainable business activities plays an important role, particularly for the financial services industry. We provide information on our issued volume of green bonds in this context. We issued a green bond in US dollars for the first time this reporting year.

Green bonds

	31.12.2022	Prev. year	Change
Volumes of green bonds issued in €m	2,250	2,250	0.0
Volumes of green bonds issued in US$ m	1,250	0	–

The following table provides an overview of our ESG-focus investments. They are shown together with the respective sum of their market values in the applicable asset class.

ESG-focus investments

	31.12.2022	Prev. year	Change
€m			%
Green bonds	2,326	2,206	5.4
Renewables	2,368	1,724	37.4
Certified real estate	2,633	2,228	18.2
Certified forestry management	1,537	1,143	34.5

As an indicator of the availability of ESG ratings, and to analyse ESG risks and opportunities, we calculate the share of the liquid asset classes equities, corporate bonds, covered bonds and government bonds covered by MSCI ESG ratings, compared to the total volume of such liquid assets, on the basis of market values.

Rating coverage of liquid asset classes

%	31.12.2022	Prev. year
Rating coverage of liquid asset classes	95.4	96.1

To provide a standardised and transparent overview of the sectors that Munich Re invests in, in accordance with the Global Industry Classification Standard (GICS) we report the market values of the various asset classes for each industry sector.

Investments by asset class and sector

€m		31.12.2022	Prev. year	Change
Sector acc. to GICS per asset class				%
Equity				
Energy	10	252	411	-38.7
Materials	15	572	1,121	-49.0
Industrials	20	1,210	2,103	-42.5
Consumer discretionary	25	664	1,548	-57.1
Consumer staples	30	1,169	1,192	-1.9
Healthcare	35	1,094	1,558	-29.8
Financials	40	2,174	3,280	-33.7
Information technology	45	1,037	1,425	-27.2
Communication services	50	439	1,015	-56.7
Utilities	55	529	1,035	-48.9
Real estate	60	135	356	-62.1
Corporate bonds				
Energy	10	2,042	2,602	-21.5
Materials	15	1,131	1,418	-20.2
Industrials	20	2,782	3,073	-9.5
Consumer discretionary	25	1,978	2,515	-21.4
Consumer staples	30	2,202	2,399	-8.2
Healthcare	35	1,790	2,101	-14.8
Financials	40	38,692	45,481	-14.9
Information technology	45	1,272	1,411	-9.9
Communication services	50	2,501	3,100	-19.3
Utilities	55	3,091	3,614	-14.5
Real estate	60	808	941	-14.1
Derivatives				
Financials	40	4,962	4,660	6.5
Mortgage loans				
Real estate	60	7,561	7,905	-4.4
Real estate				
Real estate[1]	60	8,719	8,527	2.3

1 Measured at book values.

As in the previous year, we are reporting on the proportions of our taxonomy-eligible economic activities in investment and insurance, as per EU Regulation 2020/852 (EU Taxonomy Regulation). The EU Taxonomy Regulation aims to set up a standardised system for classifying what business activities can be qualified as sustainable, and under what conditions. The EU Taxonomy Regulation continues to focus on the environmental objectives of climate change mitigation and climate change adaptation.

Based on information about the taxonomy eligibility of the companies we invest in, for which data has become available for the first time this year, our current focus with regard to the taxonomy remains recording the relevant metrics. At the same time, we are following regulatory developments very closely, particularly concerning the treatment of the insurance industry under the EU Taxonomy Regulation.

In accordance with the provisions of Art. 8 of the EU Taxonomy Regulation, in combination with Delegated Regulation (EU) 2021/2178 (Delegated Taxonomy Regulation 2021/2178), in the following we report metrics concerning the share of our taxonomy-eligible assets.

We have made some adjustments to our calculations of the metrics compared to the previous year, due to the differing interpretations of the requirements of the EU Taxonomy Regulation observable on the market, as well as an improved data basis.

Therefore, the calculations are now based for the first time on the taxonomy-eligible turnover and taxonomy-eligible capital expenditure (CapEx) of the reporting companies that we have invested in – and which we have disclosed as taxonomy eligible accordingly. The percentages of our direct real estate used by third parties, and other investments in non-financial assets, are also allocated to these shares in the 2022 financial year.

A company's economic activities are taxonomy-eligible if they are listed in the Delegated Regulation (EU) 2021/2139 (Commission Delegated Regulation 2021/2139), supplementing the EU Taxonomy Regulation. Taxonomy-eligible activities are deemed to be generally suitable for making a positive contribution to the respective environmental objective.

The extent to which this general suitability actually materialises, i.e. whether a business activity actually makes a positive contribution towards the respective environmental objective, and at the same time causes no significant harm to a different environmental objective, is determined on the basis of technical screening criteria. If the "substantial contribution" criteria defined there and the principle of "do no significant harm" are fulfilled, the respective business activity is deemed to be "taxonomy aligned". Financial undertakings need to provide information on taxonomy alignment only as of the 2023 financial year, since it is based particularly on reports from non-financial undertakings that will only be published for the first time for the 2022 financial year.

In terms of our investments, this means that, right now, the economic activities of the companies we invest in need to be analysed with regard to their taxonomy eligibility, and in future with regard to their taxonomy alignment.

The key metric for assessing taxonomy eligibility is the share of taxonomy-eligible assets ("eligibility share") in proportion to the total assets that fall under the scope of application of the taxonomy KPIs.

For the portion of our portfolio that represents an investment in the activities of companies obliged to publish a non-financial statement, we disclose both a turnover-based and a CapEx-based share. The shares reflect the taxonomy-eligible turnover and the taxonomy-eligible capital expenditure, respectively, that we finance through our investments at the reporting companies. The denominator accordingly constitutes the total of all investments in the scope of application of the taxonomy KPIs.

As in the previous year, we have undertaken our own classification for our real estate and other investments in non-financial assets. In the assumption that these assets are either fully taxonomy-eligible or taxonomy non-eligible, we have allocated them equally to the turnover-based and the CapEx-based shares for the 2022 financial year. Since the information is not yet available, we have done the same for our investments in financial institutions and asset managers: the previous year's shares have thus been allocated equally to the CapEx- and turnover-based shares. With regard to investments in other primary insurers and reinsurers, the share of taxonomy-eligible insurance activities is considered as a turnover-based share and the share of taxonomy-eligible investments is allocated to the CapEx-based share accordingly.

All assets that are theoretically able to finance economic activities fall within the scope of the taxonomy-eligibility KPIs. This mainly includes the balance sheet items Investments and any receivables from insurance contracts with non-significant risk transfer disclosed under Miscellaneous receivables. Since the intangible assets that we hold and the real estate that we use, as well as further property, plant and equipment, are not held for the purpose of financing economic activities, they have not been included – contrary to the previous year. All other balance sheet items have been excluded from the metrics like in the previous year, for example insurance items that are classified as assets for accounting purposes, or cash resources such as cash at banks, cheques and cash in hand. These items are included in Other assets in the table below. Furthermore, Investments in governments, central banks and supranational issuers are also outside the scope of application for taxonomy eligibility. In our interpretation, investments in governments are deemed to also include investments in German federal states (*Bundesländer*), regions, municipalities, cities and communities. Contrary to the previous year, issuers with EU state guarantees have no longer been allocated to the Investments in governments, central banks and supranational issuers, but have been examined for taxonomy-eligibility instead.

These methodological adjustments affect the line items Assets within the scope of application used to assess taxonomy eligibility, Investments in governments, central banks and supranational issuers, and Other assets, and they apply prospectively.

The following table shows the scope of application of the taxonomy KPIs, based on the IFRS carrying amounts in proportion to the balance sheet total, for the current year compared to the previous year.

Scope of application of the taxonomy KPIs as per Art. 8 of the EU Taxonomy Regulation

	31.12.2022		Prev. year		Change
	€m	%	€m	%	%
Assets within the scope of application of the taxonomy KPIs	147,352	49.4	152,841	48.9	–3.6
Assets within the scope of application used to assess taxonomy eligibility[1]	45,829	15.4	60,570	19.4	–24.3
Assets within the scope of application not used to assess taxonomy eligibility	101,523	34.0	92,271	29.5	10.0
Assets in companies that are not obligated to publish a non-financial statement	96,180	32.2	87,600	28.0	9.8
Share of derivatives	5,343	1.8	4,671	1.5	14.4
Assets not within the scope of application of the taxonomy KPIs	151,218	50.6	159,564	51.1	–5.2
Investments in governments, central banks and supranational issuers[2]	80,940	27.1	101,126	32.4	–20.0
Other assets	70,278	23.5	58,438	18.7	20.3
Balance sheet total	**298,570**	**100.0**	**312,405**	**100.0**	**–4.4**

1 The difference from the previous year is mainly due to changes in methodology.
2 The change is mainly due to lower book values resulting from an increase in interest rates.

Derivatives classified as assets for the balance sheet, as well as investments in companies which are themselves not obligated to publish a non-financial statement (for example companies whose registered seat is outside the EU), are not included in the actual assessment of taxonomy eligibility, even though they theoretically fall within the scope of application. We mainly use data from the provider ISS ESG to identify such companies.

When assessing the taxonomy eligibility of investments in companies, information may be used only if it is based on actual information provided by the underlying investee undertaking engaged in the economic activities to be classified. As a financial undertaking, we therefore mostly rely on taxonomy information published by the companies that we are invested in. These companies also only reported under the EU Taxonomy Regulation for the first time for the 2021 financial year, meaning that the data they reported was available to us for the 2022 financial year. Given this improved data basis, assets that in the previous year were shown as “Assets within the scope of application whose taxonomy-eligibility can only be estimated” were this year able to be allocated to either the taxonomy-eligible/non-eligible assets, or to the assets in companies that are not obligated to publish a non-financial statement. The required taxonomy-eligibility data was also made available to us from the provider ISS ESG.

Since the previous year’s taxonomy KPIs consisted exclusively of real estate and other investments in non-financial assets, the data basis for this financial year’s taxonomy KPIs was thus significantly broader. Mortgage loans to private households continue to be classified as eligible in this regard, since they can be categorised on the basis of their contractually agreed use of proceeds, according to the technical screening criteria used for taxonomy assessments. Similarly, this year mortgage loans to companies will be assessed for taxonomy eligibility as well. Where the contractually agreed use of proceeds is unspecified, loans to only those companies are included which are required to publish a non-financial statement.

As for unconsolidated funds, a “look-through” to the assets they contained was undertaken by us already in the previous year. This year, we additionally looked through the assets in infrastructure investments held via holdings or special-purpose vehicles (SPVs) for taxonomy eligibility, together with the provider TAUW.

We have reported both our investments in asset-backed securities (ABS) as well as in private equity under Assets in companies that are not obligated to publish a non-financial statement. Based on the regional distribution of our ABS portfolio as well as random samples of originators known to us, we came to the conclusion that the majority consisted of companies not required to publish. Because insufficient data was available, we were also unable to make an assessment of the ultimate beneficiaries for a large portion of our investments in ABS. Our review also found that our private equity holdings mostly consisted of investments in SMEs, which are accordingly not obligated to publish non-financial information.

Our look-through of holdings and SPVs increased the taxonomy-eligibility figure, since particularly those indirectly held investments in environmentally sustainable activities such as renewable energy, as well as investments in forests, are included therein.

Taxonomy-eligible assets as per Art. 8 of the EU Taxonomy Regulation for the financial year 2021

		31.12.2021
	€m	%
Taxonomy-eligible assets	13,893	9.1
Taxonomy-non-eligible assets	1,167	0.7
Assets within the scope of application whose taxonomy eligibility can only be estimated	45,510	29.8
Assets within the scope of application not used to assess taxonomy eligibility	92,271	60.4
Assets within the scope of application of the taxonomy KPIs	**152,841**	**100.0**

Taxonomy-eligible assets as per Art. 8 of the EU Taxonomy Regulation for the financial year 2022

	31.12.2022	
	€m	%
Turnover-based figures[1]		
Taxonomy-eligible assets	29,986	20.4
Taxonomy-non-eligible assets	13,003	8.8
Assets from financial investee undertakings not used to asses taxonomy eligibility[2]	2,840	1.9
CapEx-based figures[1]		
Taxonomy-eligible assets	30,370	20.6
Taxonomy-non-eligible assets	11,997	8.1
Assets from financial investee undertakings not used to asses taxonomy eligibility[2]	3,462	2.3
Assets within the scope of application not used to assess taxonomy eligibility	101,523	68.9
Assets within the scope of application of the taxonomy KPIs	**147,352**	**100.0**

1 Real estate used by third parties and other direct investments in non-financial assets as well as mortgage loans are allocated equally to both the Turnover- and CapEx-based figures since, according to our own assessment, each asset is either fully eligible or non-eligible.
2 It corresponds to our investee undertakings' investments in derivatives and in undertakings that are not obliged to publish a non-financial statement and which are not part of the eligibility assessment performed by our investee undertakings.

The rise in taxonomy-eligible assets from 9.1% to 20.4% (turnover-based) or to 20.6% (CapEx-based) is mainly attributable to the look-through applied to assets in infrastructure investments and the eligibility review (based on the use of proceeds) of mortgage loans where the counterparty is an undertaking. Both of these examinations were undertaken for the first time in the reporting year. Our taxonomy-eligible assets also increased as a result of the availability of information on taxonomy-eligible turnover and/or taxonomy-eligible capital expenditure from investee companies that only reported under the EU Taxonomy Regulation for the first time for the 2021 financial year.

Similarly, there was an increase in our non-taxonomy-eligible assets, mainly due to the first-time availability of information on non-taxonomy-eligible turnover and/or non-taxonomy-eligible capital expenditure from our investee companies.

The technical screening criteria for nuclear and gas-related activities will apply as of 1 January 2023 (Delegated Regulation (EU) 2021/2139). Nevertheless, the nuclear and gas-related activities defined there are wholly allocated to the taxonomy-non-eligible assets for the 2022 financial year. This is due to the fact that our investee companies will take the technical screening criteria into account only as of 2023, in their reporting for the past financial year. For investments in assets that we have assessed ourselves, €590m (0.4 percentage points of the taxonomy share) are associated with gas-related activities. They consist exclusively of investments associated with the construction or operation of power-generation plants that produce electricity from gaseous fossil fuels as per Section 4.29 of Annexes I and II of the Delegated Regulation (EU) 2021/2139. We have classified them as taxonomy eligible in their entirety.

As a result of the broader scope of companies that are required to publish a non-financial statement, and the trend towards better data resources, we assume that our share of taxonomy-eligible assets as well as the taxonomy eligibility in the market will continue to improve.

Insurance activities

Strategy and objectives

The main pillar of our corporate responsibility is the taking and diversification of risks in primary insurance and in reinsurance. Our objective – to create sustainable economic value – is enshrined in the key principles of our Group-wide corporate strategy, in our Munich Re Group Ambition 2025 and in our sustainability strategy.

Our dedication to conducting our business responsibly is underlined by our commitment to key industry initiatives, including the Principles for Sustainable Insurance (PSI) and the Net-Zero Insurance Alliance (NZIA), and by signing the UN Global Compact.

Strategic sustainability objectives are defined by the Board of Management's ESG Committee mentioned earlier. The individual divisions are responsible for implementing these strategic targets and achieving the objectives for the business they underwrite. To implement the strategic targets, the respective divisions regularly report to the ESG Management Team.

In our insurance business, we take account of ESG aspects in underwriting. In addition to defining exclusion criteria in mandatory guidelines, we aim to support the mitigation of climate change by insuring new, climate-friendly technologies. Our insurance solutions aim to make those technologies more attractive and financially viable for investors. In addition, the insurance products we offer increase resilience to the economic consequences of natural catastrophes.

In order to help achieve the goals of the Paris Agreement, in July 2021 we undertook, in the context of our NZIA membership, to lower emissions associated with our business to net zero by 2050. Corresponding global calculation and reporting methods, as a basis for the measurement, were published by the Partnership for Carbon Accounting Financials (PCAF) for the first time in November 2022. Their application to derive quantitative targets will only be possible in the future and, in accordance with the Target Setting Protocol published by the NZIA in January 2023, can be expected at the latest by July 2024. We aim to continually expand the availability and quality of the internal and external data necessary for this purpose in the coming years.

As part of our Munich Re Group Ambition 2025, in 2020 we set ourselves our own emission reduction targets with respect to thermal coal and oil and gas production in our primary insurance and facultative and direct (re)insurance business. This also encompasses treaty-like business in the form of facultative facilities if it includes the option to decline individual risks. Our reduction targets are based on approaches we developed ourselves, since global calculation standards did not yet exist at the time of publication in late 2020.

Moreover, we have undertaken to phase out the (re)insurance of thermal coal activities altogether in our primary insurance and facultative and direct (re)insurance business by 2040. We aim to reduce the GHG emissions from insured activities related to our insureds' thermal coal production (mines) and coal-fired power plants by 35% by 2025, relative to the base year of 2019. We explain the metrics used to estimate the development of the GHG emissions as part of our metric reporting.

In addition, Munich Re has also committed to phase out insuring thermal coal in its reinsurance treaty business by 2040. We are maintaining our cooperation with the NZIA and the PCAF in order to define necessary methods to measure emissions and, on that basis, define approaches to decarbonisation targets in treaty reinsurance.

With respect to quantitative decarbonisation targets, we have also set ourselves targets – in both our primary insurance and facultative and direct (re)insurance business – for our operational property business covering oil and gas production. In addition to our long-term objective of net zero by 2050, we have also committed to a short-term emissions reduction, namely to lower our self-calculated GHG emissions associated with our business by 5% by 2025 relative to the base year of 2019.

We want to make a positive contribution to our strategic decarbonisation targets particularly by applying restrictions on underwriting fossil fuels, as described as follows.

Measures

Guidelines, processes and tools have been developed and put in place to implement ESG aspects in our insurance business. These include ESG criteria applicable across the Group, which we apply throughout our insurance activities. Mandatory underwriting guidelines govern the Group-wide handling of sensitive issues by all business units that underwrite corresponding risks. These include rules on thermal coal activities in connection with new thermal coal mines, power plants or infrastructure, oil and gas activities in connection with new oil and gas fields and/or new oil infrastructure and oil-fired power plants, oil sands, controversial weapons and Arctic oil and gas activities. Our stance on other sensitive topics, such as mining and fracking, is determined by Group-wide position papers.

A special ESG tool helps our reinsurance underwriters to factor ESG criteria into their risk assessment. In addition, for ESG risk assessment we also make use of the expertise contained in renowned external ESG databases.

Our processes stipulate that individual transactions that are potentially critical from an ESG-related or other perspective be submitted to Reputational Risk Committees, which are in place for every field of business (at ERGO, handled by the Reputation and Integrity Committee). These committees review if a planned transaction is appropriate, and it is their responsibility to make sure that no decisions are made that carry material reputational risks.

We also hold regular information sessions and training courses as part of our responsible approach to handling ESG aspects. In the seminars and client events we conducted in the 2022 financial year, we provided information about current climate and sustainability criteria to more than 2,600 (1,700) employees from our operating divisions as well as to more than 600 (600) clients. A video published Group-wide in April 2022, entitled "ESG basics", is aimed at providing all staff of the Munich Re Group with an awareness of the need to take sustainability aspects into account in their daily work. In addition, dedicated sustainability teams in the primary insurance and reinsurance fields of business support the operating divisions by providing tailored ESG advice.

Specific underwriting guidelines restrict writing business in fossil fuels. In facultative and direct (re)insurance, we already committed in September 2018 to no longer insure single-location stand-alone risks in the planning, financing, construction or operation of new thermal coal mines, coal-fired power plants and the related infrastructure where construction, preparatory work for coal production or operation began after 1 September 2018. Multi-location covers are treated like single-location risks if the majority of the locations or insured risks qualify as "new". We also ceased insuring related single risks in primary insurance in 2018. A complete ban on underwriting new coal-related risks has applied at ERGO since 2021.

For oil and natural gas production, we have put exclusions in place for the insurance of oil-sand extraction and the related infrastructure. For example, in facultative and direct (re)insurance it has been prohibited since 2019 to cover new or existing oil-sand sites, or new or existing oil-sand-related infrastructure. Our guidelines apply to single locations and stand-alone risks. The exclusion also applies to mixed policies with exposure above a set threshold of 20% of the sum insured or revenue.

In December 2021, we reinforced our guidelines on Arctic oil and gas drilling, including directly related infrastructure, for all Group entities that underwrite business of this kind. We no longer accept any corresponding single-risk stand-alone covers. This also applies to mixed covers and treaty reinsurance business, where the exposure is above a defined single-digit percentage threshold. The new guidelines apply to renewals of existing reinsurance treaty business as of the 2023 financial year. The definition of the Arctic in this regard is based on the internationally recognised definition by the Arctic Monitoring and Assessment Programme (AMAP), with a few exceptions in the Norwegian sector below the Arctic circle, since Arctic conditions do not prevail there.

We announced our most recent addition in October 2022, namely to no longer support contracts and projects on a single-risk, single-location basis which exclusively insure new oil and gas fields, new oil-fired power plants or new so-called midstream oil infrastructure, and the associated planning, financing, construction or operation. This applies to our primary insurance business and our facultative and direct (re)insurance business effective 1 April 2023. Our rules prohibit the above-mentioned measures and activities, unless the oil and gas fields were already producing, or construction on or operation of the corresponding power plants or infrastructure had already begun, as at 31 December 2022. The same applies where such risks or projects are contained or bundled in one cover together with other risks (e.g. existing oil or gas fields), where the cover is mainly designed to insure one or more of such new risks.

Any exceptions to the guidelines mentioned above must be approved by the respective Board Committee.

Munich Re continues to work towards taking further ESG aspects into account in its (re)insurance business. We have identified a set of generally applicable ESG aspects that need to be taken into account in our insurance business underwriting, including the aspect of “natural resources and biodiversity”. We are aware of the crucial role of biodiversity in maintaining the delicate balance between human, environmental and climatic ecosystems. In 2022, we began to examine how we can further integrate biodiversity aspects into our core business processes, while taking the general developments and recommendations (such as the Task Force on Nature-related Financial Disclosures [TNFD] framework) into consideration.

In the context of our decarbonisation targets, we are preparing to reach the defined milestones by implementing dedicated action plans in the business units concerned, and by regularly monitoring progress. Reductions in GHG emissions can be achieved through activities undertaken by our clients first-hand, as well as through our own portfolio management measures (including discontinuation of business). To support the necessary transition as best we can, we initiate dialogue with our clients.

Also with regard to our treaty reinsurance business, we are actively engaged in dialogue with our clients to obtain transparency about the extent of the insured activities in the thermal coal and oil and gas (fossil fuel) segments, and to gain better insights into the insurers’ own potential decarbonisation strategies.

To make a positive contribution to decarbonisation and support investment in low-emission technologies, we offer dedicated green tech solutions. In the context of these insurance solutions, we assume a share of the technology-specific risks in order to support the development of renewables and low-carbon technology. Our focus in that regard is on photovoltaics, wind power, battery storage systems and hydrogen technologies. We also offer innovative risk-transfer solutions for electromobility and the circular economy.

A concrete example of low-emission technology is green hydrogen, which can replace fossil fuels in the energy, industrial, transport and heating sectors. Our Green Tech Solutions unit has developed guarantee cover for hydrogen production facilities that helps manufacturers, operators and investors to manage the associated availability and performance risks.

With innovative risk-transfer solutions of this kind, we shift the boundaries of insurability. For example, by offering long-term performance covers for green technologies, we reduce both the business risk for manufacturers and the risk for energy-project investors and operators. Supported by the European Commission (the UN’s Sustainable Energy for All initiative), the KfW banking group, the European Investment Bank and a local primary insurer – the African Trade Insurance Agency, we offer insurance coverage for political risks, such as those connected with government failure to fulfil power purchase agreements, expropriation, breach of contract, war and civil unrest; specifically, those connected with renewable energy projects in sub-Saharan Africa. The African Energy Guarantee Facility provides customised insurance solutions that facilitate investment in primarily long-term energy projects.

In our primary insurance business, too, we support the transition to sustainable energy and mobility. By offering special covers, for example against the failure to meet any predicted annual energy outputs, ERGO promotes solar power generation. To satisfy the requirements specific to electromobility, ERGO offers insurance add-ons for electric and hybrid vehicles, to cover, for example, battery damage and peripherals such as the client's battery-charging station.

In addition, by providing insurance against natural disasters, we increase the resilience of vulnerable groups. An example is the expertise and reinsurance capacity Munich Re provides to support the Southeast Asia Disaster Risk Insurance Facility (SEADRIF). SEADRIF is an insurance institution headquartered in Singapore and supported by the World Bank and the Monetary Authority of Singapore (MAS). SEADRIF helps protect Laos against catastrophic flood events. If a catastrophic event occurs, funds from the insurance facility are used to finance disaster relief operations for the affected populations. The objective set by those countries and donors supporting SEADRIF is to successively expand the insurance programme to other countries in Southeast Asia.

Metrics

At Munich Re we attach great importance to transparency for our stakeholders. In the following, we therefore provide information about how our most important sustainability-related metrics are progressing in our (re)insurance business.

We assess risks as part of our Group-wide risk management. A key figure in this respect is the probable maximum loss (PML) to our insurance portfolio from climate-related natural catastrophes for a 200-year return period, which we calculate on the basis of natural catastrophe modelling in our internal risk model. In the following table, we illustrate the value at risk of the economic profit and loss distribution over a one-year time horizon with a confidence level of 99.5%. The net perspective after external retrocession is shown for Munich Re's largest climate-related natural catastrophe exposures:

Value at risk

€m	2022	Prev. year	Change
Natural disasters – scenario (net)			%
Atlantic Hurricane (North America)	10,035	8,210	22.2
Winter Storm (Europe)	5,497	4,022	36.7
Severe Thunderstorm (USA)	1,250–2,250	1,000–2,000	
Wildfire (USA)	750–1,750	500–1,500	

We explain how we manage climate risks in the risk report.

The actual loss from natural catastrophes for the full year 2022 mostly comes from property business and totals €2,430m (€3,139m) for the reinsurance business after external retrocession. This corresponds to 7.5% (12.0%) of net earned premiums and takes into account major losses exceeding €10m.

Like in the previous year, for the 2022 financial year we are again reporting on the share of our taxonomy-eligible (re)insurance activities as per the EU Taxonomy Regulation. (Re)insurance activities can accordingly be deemed taxonomy eligible if the following criteria are fulfilled: on the one hand, the (re)insurance activities must fall within one of the non-life (re)insurance lines of business defined by the regulator, and on the other climate-related perils must be covered.

To calculate the metric, the sum of IFRS gross premiums related to the coverage of climate-related perils is calculated as a ratio of the gross total of all non-life (re)insurance premiums. The former figure encompasses the total gross premiums of those regulatory lines of insurance business that are listed in the EU Delegated Taxonomy Regulation 2021/2139, and which cover climate-related perils. In this regard, we consider climate-related perils to be covered when the line of business includes products that explicitly price climate perils, or that cover such perils in the terms and conditions. As a result, the figure provides information about the basic suitability of the (re)insurance activities in the respective lines to eventually be classified as taxonomy aligned if the technical screening criteria of the EU Delegated Taxonomy Regulation 2021/2139 are fulfilled. As in the previous year, we have correspondingly classified the following four lines of business as taxonomy eligible, and applied them when calculating the taxonomy-eligibility metric: workers' compensation insurance; other motor insurance; marine, aviation and transport insurance; and fire and other damage to property insurance. The following shows the change in the metric from the previous year.

(Re)insurance KPIs as per Art. 8 of the EU Taxonomy Regulation

	2022		Prev. year		Change
	€m	%	€m	%	%
Taxonomy-eligible (re)insurance activities	23,854	54.9	20,305	54.5	17.5
Taxonomy-non-eligible (re)insurance activities	19,594	45.1	16,980	45.5	15.4

The metric exclusively reflects contributions to the climate objective of adaptation to climate change, as per the EU Taxonomy Regulation. As insurers, we contribute both to the adaptation to climate-change risks and to the mitigation of climate risks. The EU rules do not classify insurance activities that promote climate protection, such as insurance products for renewables, as taxonomy eligible, and such activities are therefore not included in the metric above. As a result, our efforts in the renewable energy sector are not reflected in the illustrated share of our taxonomy-eligible (re)insurance activities. As at 31 December 2022, our Green Tech Solutions unit alone insured renewable energy in around 900 (850) projects and manufacturers from around 80 (80) countries, for a total nominal output of around 55 (over 50) gigawatts. Our products consist of newly developed insurance solutions that particularly address performance, longevity and financing risks.

We measure the achievement or our climate targets in primary insurance and facultative and direct (re)insurance in the Munich Re Group Ambition 2025 based on the following metrics:

In the thermal coal sector, the quantitative emissions-reduction targets are derived from the following key metrics as the basis for evaluating the development of GHG emissions associated with the insured business of our clients: annual tonnes of thermal coal produced from mines, and installed operational capacity in megawatts of our clients' thermal coal power plants. The base year is 2019; for all active risks as at 31 December 2019. Given that the reduction targets are applicable across all non-life lines of insurance, and that our goal is to completely discontinue insuring these business activities by 2040, our clients' GHG emissions associated with our insured business are – as described above – fully taken into account regardless of the specific type and amount of our (re)insurance coverage. As a result, the metrics for the base year and the reporting year, which are calculated to measure the reduction as at the given reporting date, are always based on 100 percent figures at client level across the relevant insurance lines. The figures therefore refer to our clients' production of thermal coal or their power plant capacity, while avoiding double counting at the client level across the various relevant lines of insurance.

1 Scope 3 GHG emissions: other indirect emissions from activities in the value chain.

Development of approximated GHG emissions in primary insurance and facultative and direct (re)insurance business, relative to the 2019 base year (Munich Re Group Ambition 2025)

%	31.12.2022
Thermal coal mining[1]	–37.3
Coal-fired power plants[2]	–28.6

1 The development of the metric tonnes of insured thermal coal produced each year by insureds is used as an equivalent for an approximate development of the GHG emissions. These are based on the reported actual data of the insured.
2 The development of the installed operational capacity (in megawatts) of the insured coal-fired power plants of our insureds is used as an equivalent for an approximate development of GHG emissions. These are based on the latest available data from an external data provider.

The reductions are mainly due to active portfolio management measures, including discontinuation of business. Less significant external developments, including positive effects from our clients' transformation activities, also contributed to the result.

In the area of (conventional and unconventional) oil and gas production, the quantitative emissions-reduction target refers directly to the GHG emissions, calculated by our clients, from their insured oil and gas production that are associated with our property insurance business. We calculate the figure ourselves, by first determining our clients' scope 1 to 3[1] life-cycle GHG emissions associated with the produced amounts of oil and gas. For these calculations, we use the expertise of our subsidiary HSB Solomon Associates LLC, who themselves use the integrated open-source tool The Oil Climate Index + Gas. We associate these emissions with our (re)insurance policies in the amount that the (re)insurance capacity provided by Munich Re contributes to the total insurance ceiling (client's deductible + total insurance capacity) known to us. The base year is 2019; for all active risks as at 31 December 2019.

Development of self-calculated scope 1, 2 and 3 life-cycle GHG emissions (CO_2e) associated with our operational property business in primary insurance and facultative and direct (re)insurance, relative to the 2019 base year (Munich Re Group Ambition 2025)[1]

%	31.12.2022
Oil and gas production	–40.2

1 The oil and gas production volumes used in the calculation are based on the latest available data from an external data provider.

The reduction is mainly due to portfolio measures, significantly influenced by radically changed conditions, including sanctions. The restrictions we imposed with regard to oil sand sites and related infrastructure also made a positive contribution.

Customer orientation and satisfaction

Strategy and objectives

Maintaining a close relationship of trust with our clients is a key element towards the success of our business. That is why we want to understand our clients' needs and develop the best possible solutions for them, in a joint dialogue.

We apply a differentiated management approach under our business model, which applies both to our reinsurance clients and to our primary-insurance customers and reflects their different demands and needs accordingly. Responsibilities lie with the respective Board members and/or executives, as well as within the various international companies. The topic's importance is reflected, among other things, in its having been enshrined in our Munich Re Group Ambition 2025.

At Munich Re, we manage the dialogue with our clients, and the solutions we correspondingly offer, on the basis of our clients' needs and growth ambitions. The process includes an analysis of the market and the most important players, as well as the implementation of tailored insurance solutions, products and services for our clients. Client managers in reinsurance are supported by a central sales unit that ensures transparency in our Group-wide product and service palette. This unit is also responsible for two event formats that take place annually as a platform for in-depth dialogue with representatives of our key clients: the "CDays" conference and "Advance", an exclusive six-week programme aimed at expanding participants' expertise and leadership skills, and at further developing the industry. ERGO particularly supports its independent sales partners with various offers, for example advisory tools and concepts, and professional development training. The local companies individually tailor these offers to their respective needs.

Measures

At Munich Re, we have defined numerous monitoring processes to measure our performance in terms of customer satisfaction and orientation.

We apply the Net Promoter Score (NPS) to measure customer satisfaction both in primary insurance and in reinsurance business.

Every two years, we undertake a global customer-satisfaction survey among all of our reinsurance clients. The survey measures the NPS and customer satisfaction in various aspects of the business relationship. Our goal is to maintain a stable, positive NPS in reinsurance.

Our last global satisfaction survey of reinsurance clients was conducted in May 2022. In addition, data is entered into a reputation management system which regularly tracks our reputation among various stakeholders. This allows us to identify any changes in how our reinsurance products are perceived, at an early stage, and make any adjustments accordingly.

In primary insurance, we measure NPS continuously throughout the year, both at the transactional level (bottom-up) and the relationship level (top-down). When measuring NPS at the relationship level, we also benchmark against our peers and the market. We express the result in terms of the number of countries in which the relationship NPS meets or exceeds the market average.

The results of our monitoring identify any potential for both improvement and differentiation in the specific divisions, platforms, services, products and customer groups. In the form of initiatives, this information is then input into our strategy to meet our Munich Re Group Ambition 2025, i.e. to remain a long-term partner for our clients.

In addition to our regular client satisfaction surveys, in reinsurance we have implemented a number of measures aimed at consolidating our client relationships. And our operational units regularly request feedback from their clients to complement the centrally organised survey. In order to better respond to our clients' suggestions for improvement, we offer a comprehensive training programme to all staff who have direct contact with clients. The aim is for them to develop an understanding of our clients' strategies and needs so that we can develop solutions together.

In primary reinsurance, our advice to customers of our independent sales partners in Germany is provided using a standardised approach (ERGO Kompass) to ensure that quality is consistently high. ERGO also uses a variety of tools to obtain direct feedback about new products and services, but also about overarching strategic issues. The main focus is its in-house market research panel (ERGO Kundenwerkstatt) of around 6,800 customers. Alone in 2022, ERGO conducted 36 projects and/or surveys among the panel members. ERGO also handles and analyses customer complaints. The feedback is used as a basis for improvements in the various areas.

ERGO's goal is to become one of the leading digital insurers by 2025 – both in Germany and in its core international markets. This reflects our customers' desire to purchase insurance and receive customer service digitally. ERGO is driving topics such as robotics, artificial intelligence and voice technology in Germany and internationally, and is expanding its digital business models and ecosystems, as well as its annex business.

It has already established numerous customer-oriented services and digital processes that help customers contact ERGO, and more are planned. For example, ERGO's customers in Germany can use its "EasyClaim" web app to receive a calculation of the loss amount within two hours of uploading their images and vehicle information. Another example is online claims notification in property insurance (such as third-party liability, personal belongings, motor, etc.), which allows customers to record their losses online and, for example in motor insurance, choose their garage and order the repairs directly from the online claims notification system. We offer our health insurance customers the option of submitting their invoices directly online as well and, in Germany, provide them access to the nationwide network of medical professionals.

ERGO is also constantly working on modernising its products with simple and intuitive products for both its private and commercial customers.

Metrics

Net Promoter Score

	2022	Prev. year[3]
Reinsurance (absolute)[1]	60	56
ERGO (number of countries at or above country average)[2]	In 6 of the 10 considered countries	In 8 of the 10 considered countries

1 The NPS has a scale of −100 to 100.
2 To reduce the susceptibility to random fluctuations, a significance test was integrated into the calculation system and the disclosure logic was adjusted. The previous year's figure was adjusted accordingly.
3 For reinsurance, the NPS is only measured every two years; accordingly, the previous year's figure here refers to 2020.

The NPS of 60 for reinsurance is very high – even higher than the 2020 figure. In terms of primary insurance, ERGO's customer orientation is illustrated by the fact that its score meets or exceeds the market average in six out of ten countries surveyed.

Environmental management in own operations

Strategy and objectives

Munich Re has adopted a holistic approach with its Munich Re Group Ambition 2025, and also takes the direct climate-related impacts of the GHG emissions from its own operations into account, in addition to selected indirect effects from investments and (re)insurance products. This also includes the monitoring of our Group-wide activities to mitigate the impacts of our own GHG emissions on the environment and the climate, and our corresponding reduction and decarbonisation targets. Our goal is to make a contribution toward meeting the requirements set out in the Paris Agreement.

Our targets and actions to lower our GHG emissions focus on reducing our consumption of energy and other resources such as water and paper, avoiding waste, and making our business travel as environmentally friendly as possible. To this end, we strive to increase our staff's awareness of environmental issues.

Under the Munich Re Group Ambition 2025, we have set targets for ourselves for our own GHG emissions from operational business processes. As a result, we intend to reduce our own GHG emissions per staff member by 12% by 2025, as compared to the base year 2019.

In terms of the unavoidable GHG emissions from our own direct and indirect energy consumption (scope 1 and 2), as well as selected scope 3 emissions such as paper, water, waste and business travel, we intend to successively transition from Munich Re's GHG neutrality to net-zero GHG by 2030. This means that we intend to remove the unavoidable CO_2e from the atmosphere, for example by purchasing CO_2 certificates from suitable projects such as afforestation. The projects from which we obtain certificates for our GHG neutrality avoid using fossil fuels, for example, or contribute to energy efficiency. When selecting the certificates, we place value on internationally recognised certification standards such as the Gold Standard. Certifications verify whether projects' sustainability standards are upheld and rate how well a given project avoids GHG emissions. In addition to the avoidance of GHG emissions, the Gold Standard also rates whether a project contributes to sustainable development and reaching the Sustainable Development Goals (SDGs). For 2022, all of the Group's recognised, unavoidable GHG emissions from operational processes were made GHG neutral, and the Group headquarters in Munich brought to GHG net zero.

The responsibility for our Group-wide environmental and climate strategy, the targets under the Munich Re Group Ambition 2025, and the associated measures, lies with the Board of Management or the corresponding committees with ESG duties. Implementing the strategy and target-achievement measures takes place at Group level, in the respective divisional units, and locally.

Measures

We focus on measures that provide good leverage in reducing our GHG emissions. Our key metric is the change in GHG emissions in terms of a CO_2e footprint per staff member. Improving energy efficiency in the operation of our buildings and replacing fossil fuels with renewable energy are important action items for us. In 2022, 90% of the energy we purchased was produced from renewable sources. Our goal is to purchase 100% green energy throughout the Group by 2025. Also, when undertaking business travel, we exercise the option of using environment-friendlier rail travel, or hybrid or electric vehicles. In 2022, the share of such vehicles in the fleets of those companies included in our environmental reporting increased by over 50%. Moreover, by increasingly digitalising our communication and transforming our workplaces and ways of working, as well as divesting from buildings that are no longer needed, we expect future GHG emission reductions of 3–4% by 2025, relative to the base year of 2019.

And we are working locally to save resources such as water and paper at our various locations, as well as to reduce waste. We use sustainable consumer materials where possible, for example providing reusable containers in our food and drink service for staff.

We encourage our staff to participate in selected environmental projects, for example tree-planting activities, to increase awareness. In order to contribute to climate-protection activities, Munich Re supports both local climate organisations such as the Klimapakt München as well as national initiatives such as the Development and Climate Alliance. In 2022, around 49% (46%) of Munich Re staff were involved in an ISO 14001- or EMAS-certified environmental management scheme that systematically monitors and assesses the implementation of applicable environmental criteria in operations and product development.

Metrics

We calculate the GHG footprint per staff member from our business activities by measuring the annual GHG emissions resulting from our consumption of energy, paper and water, waste, and business travel. Any consumption data that was not available by the reporting date has been estimated. GHG emissions are calculated in accordance with internationally recognised methods and conversion factors, such as the Greenhouse Gas Protocol, and extrapolated to 100% of Group staff who work for a fully consolidated entity and held an employment contract as at 31 December 2022. In 2022, we collected data for about 76% (81%) of staff.

We have been able to reduce our own GHG emissions per staff member by 22% (25%) since 2019. These values must be considered – as was the case in the previous year – against the background of the effects of the coronavirus pandemic. Our energy-saving measures lowered our absolute energy consumption by around 10% compared with the previous year. Emissions from business travel rose in 2022 compared to 2021, due to the easing of coronavirus-related restrictions. The volume of emissions from business travel nevertheless remained below 2019 levels. The slight increase in water consumption resulted from the larger number of staff working at the office. Details about the relevant metrics are provided in the following tables.

GHG emissions

Scope	Source of emission	2022	Prev. year	Change
		t CO_2e	t CO_2e	%
Scope 1	GHG emissions from direct energy consumption	43,664	47,598	-8.3
	Thereof from business trips with company cars	12,330	11,378	8.4
Scope 2	GHG emissions from indirect energy consumption (market-based)[1]	18,310	19,677	-6.9
Scope 3	Other indirect GHG emissions	3,130,824	3,969,814	-21.1
	GHG emissions from upstream activities	17,731	6,015	194.8
	Thereof excluding business trips with company cars that are reported within scope 1	14,479	2,509	477.1
	Thereof from paper	1,014	1,407	-27.9
	Thereof from waste	1,903	1,796	6.0
	Thereof from water	335	303	10.6
	GHG emissions from downstream activities	3,113,093	3,963,799	-21.5
	Thereof financed GHG emissions[2]	3,113,093	3,963,799	-21.5
Scope 1–3 – Own operations	**Total GHG emissions, scope 1–3 own operations, scope 2 market-based**	**79,705**	**73,289**	**8.8**
Scope 1–3 – Total	**Total GHG emissions, scope 1–3, scope 2 market-based**	**3,192,798**	**4,037,088**	**-20.9**

1 GHG emissions from indirect energy consumption (location-based) in metric tonnes of CO_2e: 41,770 (previous year: 47,751).
2 See "Investment" section under Listed equities, corporate bonds and direct real estate.

GHG intensity

		GHG emissions/Employee					GHG emissions/Gross written premiums		
		2022	Prev. year	Change	Base year 2019	Change	2022	Prev. year	Change
Scope	Source of emission	t CO_2e/ Headcount	t CO_2e/ Headcount	%	t CO_2e/ Headcount	%	t CO_2e/€m	t CO_2e/€m	%
Scope 1	GHG emissions from direct energy consumption	1.05	1.21	-12.8	1.11	-5.0	0.65	0.80	-18.6
	Thereof from business trips with company cars	0.30	0.28	6.4	0.29	2.7	0.18	0.19	-3.8
Scope 2	GHG emissions from indirect energy consumption (market-based)	0.44	0.50	-11.5	0.69	-35.9	0.27	0.33	-17.4
Scope 3	GHG emissions from upstream activities	0.43	0.15	185.6	0.68	-37.0	0.26	0.10	161.6
	Thereof business trips (excluding those with company cars that are reported within scope 1)	0.35	0.06	483.0	0.57	-38.6	0.22	0.04	412.0
	Thereof from paper	0.02	0.04	-38.8	0.03	-18.4	0.02	0.02	-36.1
	Thereof from waste	0.05	0.05	-8.0	0.07	-34.3	0.03	0.03	-6.0
	Thereof from water	0.01	0.01	-19.0	0.01	-32.5	0.00	0.01	-1.8
Scope 1–3 – Own operations	**Total GHG emissions, scope 1–3 own operations, scope 2 market-based**	**1.93**	**1.87**	**3.0**	**2.48**	**-22.3**	**1.19**	**1.23**	**-3.5**

Water consumption

		2022	Prev. year	Change
				%
Water used	m^3	476,997	431,593	10.5
Water used/Employee	m^3/Headcount	12	11	4.8
Water intensity	m^3/€m gross premiums written	7	7	-1.9

Energy consumption

	Energy consumption			Percentage of energy consumption		Energy intensity		
	2022	Prev. year	Change	2022	Prev. year	2022	Prev. year	Change
	MWh	MWh	%	MWh	%	MWh/ Headcount	MWh/ Headcount	%
Natural gas	153,307	177,622	-13.7	48.9	51.1	3.7	4.5	-18.1
Thereof natural gas for cogeneration	126,293	145,454	-13.2	40.3	41.9	3.1	3.7	-17.6
Electricity	102,313	96,452	6.1	32.6	27.8	2.5	2.5	0.7
Thereof electricity from renewable sources	92,518	88,567	4.5	29.5	25.5	2.2	2.3	-0.9
District heating	51,638	67,989	-24.0	16.5	19.6	1.2	1.7	-27.9
District cooling	5,371	4,481	19.9	1.7	1.3	0.1	0.1	13.8
Liquid fuel for emergency power	1,069	927	15.3	0.3	0.3	0.0	0.0	7.6
Total	**313,698**	**347,471**	**-9.7**	**100.0**	**100.0**	**7.6**	**8.8**	**-14.3**

Human rights

Strategy and objectives

The respect for human rights is a part of our management approach to include economic, environmental and social challenges in our definition of success. The Board of Management has accordingly issued a declaration to respect and protect human rights, which we have published on the Munich Re website (www.munichre.com/sustainability/download). This statement underscores Munich Re's commitment to human rights, as defined in the Declarations from the United Nations (UN) or the International Labour Organization (ILO).

Munich Re has undertaken to apply its respective due diligence and to respect internationally recognised human rights. By signing the UN's Global Compact in 2007, we have committed ourselves to the following principles:

- Promoting and protecting internationally recognised human rights within our scope of activity
- Taking precautions designed to prevent Munich Re from contributing to human rights violations, for example human trafficking
- Upholding the freedom of association and the effective recognition of the right to collective bargaining
- Supporting the elimination of any kind of forced or child labour
- Helping to put an end to discrimination in hiring and employment

These principles are also enshrined in our Code of Conduct, the compliance with which is mandatory for all Munich Re staff. We are thereby aiming to create a Group-wide understanding of the value of human rights.

In addition, we are also committed to safeguarding human rights as set out in the UN's Guiding Principles on Business and Human Rights, international human rights treaties and the ILO's declaration on fundamental principles and rights.

In accordance with international rules, we have published a statement signed by the Board of Management on the UK Modern Slavery Act every year since 2017, and since 2021 we have issued a declaration under the Australian Modern Slavery Act as well.

Munich Re's management is committed to preventing its business from potentially negatively affecting human rights. In order to systematically monitor any such effects, the following four aspects have been defined: staff, procurement, our core business of reinsurance and primary insurance, and investments. We have introduced instruments for each of these aspects, which allow us to manage our respective decision-making processes in terms of human rights. This enables us to eliminate any risk of human rights violations as far as possible.

In addition, Munich Re has developed a human-rights-based strategy for using artificial intelligence in compliance with European Commission guidelines, which covers data protection, monitoring, discrimination, bias, unintended consequences, and intentional abuse.

We also strive to improve the guarantees of fundamental rights, which also include human rights. We do this, among other ways, by offering tailor-made insurance products. For example, we provide innovative risk solutions to ensure that underinsured people in Asia have the basics needed to live. Special financial solutions aim to close the coverage gap for populations and companies at risk, and to guarantee swift and targeted payments. Fundamental rights and guarantees are also the focus of many of our fundraising and sponsorship projects.

Further information can be found in our Sustainability Report, our annual Communication on Progress to the UN Global Compact, and our annual reports on the PSI and the PRI.

Measures

In 2018, we developed the following processes to fulfil our human rights due diligence, which are reviewed annually:

- Undertaking by management to comply with human rights
- Identifying and assessing risks with regard to human rights violations
- Implementing and monitoring measures
- Reporting and communication
- Support and grievance mechanism

Staff and external consultants can use Munich Re and ERGO's whistleblowing portals to report possible or actual human rights violations. If a human rights violation is reported, or we otherwise learn of one, Munich Re's dedicated Compliance units will investigate. Every potential case is investigated in accordance with a procedure set out in internal guidelines. Every potential case of misconduct will be investigated and resolved. If we learn of human rights violations in an existing contractual relationship, we decide on appropriate and effective remedial action in dialogue with the responsible parties.

Staff

As employers, we undertake to comply with international standards of human rights and to provide adequate working conditions for our staff.

Our Code of Conduct explicitly states that Munich Re does not tolerate any discrimination. In Germany, we have set up an official department for complaints as provided for in Section 13 of the General Equal Treatment Act (AGG).

Procurement

Our goal in procurement, when making decisions and taking action, is to comply with our principles and thus assume corporate responsibility along the entire supply chain. Avoiding ESG risks is pivotal in our procurement of goods and services. We had previously required our suppliers to accept the principles of the UN Global Compact. Now we have made our expectations in terms of respecting human rights even clearer, by adopting a Group-wide Code of Conduct for suppliers. The structured risk analysis process that we are currently introducing will allow us to even better identify potential human rights breaches in future, and to mitigate or avoid them accordingly.

Insurance activities

Munich Re has adopted underwriting guidelines to specify how underwriters and client managers are to handle ESG risks in insurance business. If any human-rights-related risks are identified during the underwriting risk-assessment process, our goal is to discuss and agree on mitigation measures in a dialogue with the corresponding contracting party.

In the insurance business, sensitive business issues or sectors have been identified in which social aspects, including human rights, are to be taken into account in the risk assessment. Mandatory guidelines and best practices relevant to human rights, among others, have been developed for these issues.

If the assessment of a potential transaction concludes that there is significant reputational risk, the issue is escalated to the respective reputational risk committee for a decision.

Investments

For the purposes of sustainable investment, government bonds and notes from quasi-governmental institutions rated CCC under the MSCI ESG system are excluded due to high risks related to socio-economic or political factors. These MSCI government ratings also take human rights into account. Moreover, in late 2022 the Responsible Investment Guideline was updated to include human rights standards, among other criteria.

As responsible investors, we also support the international conventions related to controversial weapons (anti-personnel mines and cluster munition), and exclude any direct investment in equities or bonds from companies active in those sectors.

Appraisal

In May 2022, the ESG Committee resolved to further refine the Group's human-rights-related risk management. To fulfil its due diligence obligation, Munich Re is currently setting up Group-wide processes to even better identify, analyse and assess potential risks to human rights, and to implement suitable measures to avoid and mitigate such risks.

Since the end of 2022, the function of a dedicated human rights officer has been introduced both in reinsurance and at ERGO, to monitor risk management to fulfil our due diligence obligations with regard to human rights and environmental aspects under the German Supply Chain Due Diligence Act (LkSG).

In 2022 we improved our due diligence processes in procurement and human resources in accordance with the LkSG, so that they now include, in addition to risk analysis, the introduction of preventative measures, the definition of remedial measures in case of a human rights violation, and an appropriate monitoring system.

We aim to continually improve our processes to fulfil our duty to respect human rights, and to expand our risk analysis.

Employee matters

For Munich Re as a knowledge-based Group, talented and high-performing staff with their expertise form the basis for our success. Attracting, developing and retaining them is one of the two key objectives of our human resources policy. The second key objective is to promote diversity, equity and inclusion (DEI) as a strategic success factor for Munich Re. Thus, employer attractiveness, staff development, and DEI were once again identified as material topics for Munich Re in the area of employee matters.

Strategic approaches are first developed by dedicated functions in HR with Group-wide responsibility in cooperation with the Group's strategy department, and then incorporated into the human resources strategies of reinsurance, ERGO and MEAG via policies (for example on diversity) or interlinked projects.

As part of the Munich Re Group Ambition 2025, employee matters are embedded in our business strategy. In this respect, Munich Re is pursuing the goal of significantly increasing the proportion of women in management positions. At the same time, Munich Re is committed to positioning itself as an employer of choice offering attractive, long-term jobs and excellent development opportunities. Moreover, we place great emphasis on the topic "Driving Digital Culture".

Our goal is to implement our business strategies in the Group as well as possible while acknowledging the respective client, competitor and staff environments that reinsurance, ERGO and MEAG face. Our operational human resources management is closely linked to the specific needs of the respective business models and is thus explicitly decentralised. In this regard, adjustments to central requirements and individual solutions regarding employee matters can be created for the fields of business where appropriate.

Employer attractiveness

Strategy and objectives

Munich Re's human resources work is guided by the goal of being and remaining an attractive, fair and responsible employer. Attracting, developing and retaining employees with substantial expertise and broad experience worldwide are key elements in this regard. We encourage a future-focused and appreciative work culture, in which cooperation in our global organisation and in external knowledge networks leads to the best solutions for our clients.

Corresponding frameworks are in place in all fields of business to set out rules for the various human resources topics. In Germany, these are complemented by internal company agreements.

Measures

We aim to remain attractive to our employees by offering secure jobs, transparent remuneration conditions, a broad corporate health management system with a variety of health benefits, comprehensive employee assistance programmes, as well as flexible working conditions and working time models.

With a focus on occupational health management, in 2022 a Group-wide project set the basis for the introduction of a Health, Safety and Wellbeing Statement. This statement covers four topic areas: mental health, physical health, social connectedness and work environment.

Based on the experience from the coronavirus pandemic, particularly with regard to trust-based working, employee autonomy and work-life-balance aspects, concepts for "New Work" were developed and tested in reinsurance, at ERGO and at MEAG in 2022. These concepts include new workplace designs and frameworks for hybrid working.

In reinsurance, we actively shape the change of our work culture within the "Together@Work" initiative. Global core principles around flexibility, empowerment, inclusion and trust are the basis for a hybrid working mode and set the scene for New Work projects. These projects focus on the topics of workplace, work mode and qualification measures for hybrid working. Various entities within the reinsurance group enable their employees to work abroad on a mobile basis as part of pilot projects. In Germany, an internal company agreement – limited to one year – was introduced as of 1 April 2022 to test a more flexible handling of mobile working as part of the hybrid working model in a discovery phase. In this context, mutual trust, business interests and responsibility for the employees are core elements of a future hybrid work model.

At ERGO, the regulations of the Group internal company agreement on mobile working came into effect in late May 2022. Since then, all employees covered by the agreement may opt to work remotely for 40% of their monthly working hours. In addition, a pilot agreement has also been launched entitling staff in operational units to spend 60% of their hours working remotely. In the course of this pilot agreement, hybrid collaboration formats were established, in which some parts of the workforce work remotely while others work from the office. In this regard, the technical equipment available to staff, the office space concept as well as the approaches to management and teamwork have been adapted accordingly to meet these changed requirements. A comprehensive change management concept is in place to guide the organisation through the adjustments associated with these measures.

The aim of the New Work@MEAG project is to create a flexible and attractive working environment that promotes excellence, innovation and cohesion, while breaking down silos and encouraging new ways of working together. On pilot floors, employees were able to test the new office space concept and provide feedback to help shape it. Almost 50% of employees tested the concept and were involved in the design. All floors will be gradually renovated and modernised by the end of 2023.

In addition to its focus on New Work, MEAG introduced a new remuneration model in 2022 to help increase the transparency of remuneration conditions.

In addition to the aforementioned topics, another focus was on Munich Re's positioning in the external labour market. In this context, reinsurance uses the employer value proposition "Push boundaries. With us." It presents reinsurance as an employer that provides talented staff with the creative space they need, to achieve more together, while supporting and encouraging them in the process. ERGO positioned itself on the external labour market in 2022 with the employer value proposition "ERGO. Grow together." The implementation is based on the four employer qualities of diversity, development, success and collegiality. With "ERGO. Grow together.", ERGO is demonstrating both its strengths and its ambition. We want to achieve even more in the future, and will meet the increasing demands in the market with confidence. At ERGO, we focus on joint growth while offering room for individual development. To achieve this, we are looking for employees who want to contribute to our development and grow together with us.

In addition to the needs-based recruiting of experts and managers, Munich Re is constantly looking for junior staff, such as students, graduates and young professionals. Excellent university graduates are offered the opportunity to start a career at Munich Re by joining the Group's "EXPLORE" trainee programme, the International Graduate Trainee Programme in reinsurance, MEAG's "Futures", or ERGO's "RISE" programmes. The programmes' goal is to systematically develop participants' professional, social and personal skills to prepare them for the various challenges within the Group. As at 31 December 2022, there were 10 (10) candidates participating in the Group trainee programme, 63 (96) in reinsurance and 12 (9) at MEAG. In 2022, 10 young people started their careers at ERGO joining the first cohort of the RISE programme.

To measure our attractiveness as an employer, we participate in external rankings, such as Trendence. In the latter we are regularly ranked as "attractive" by students. On the Kununu rating portal, the scores from our employees and applicants are in the medium range for reinsurance and ERGO. We are perceived as attractive employers on the "glassdoor" portal. In 2022, we were also rated a "leading employer" in Germany by the Institute of Research & Data Aggregation GmbH.

Metrics

Munich Re is characterised by high staff retention, a long average length of company service, and low rates of voluntary turnover and absenteeism. The slight increases in the voluntary turnover and sickness rate can be attributed to the coronavirus pandemic. Compared to the previous year, we offered fringe benefits, such as access to company preventive healthcare, mobile working options and flexible working hours, to a larger number of employees. Moreover, the percentage of permanent employees remains high.

Employer attractiveness

		2022	Prev. year	Change
Munich Re				%
Average length of company service (as at 31.12.)	Years	13.5	13.9	-2.9
Voluntary turnover rate	%	6.3	5.6	
Sickness rate	%	4.5	3.7	
Employees with the option of sabbaticals or (un)paid leave (as at 31.12.)	%	67.0	67.3	
Employees with access to medical care via company doctor or private health insurance (as at 31.12.)	%	95.8	82.2	
Employees with the option of mobile working (as at 31.12.)	%	97.3	90.3	
Employees with flexible working hours (as at 31.12.)	%	82.0	78.5	
Permanent employees (as at 31.12.)	%	96.2	96.2	
Munich Reinsurance Company				
Average length of company service (as at 31.12.)	Years	13.9	14.0	-1.0
Voluntary turnover rate	%	2.7	2.2	

Staff development

Strategy and objectives

Our learning and development objectives and content are based on the core skills that are relevant for our employees across the Group. The curriculum is also regularly updated to meet current and future demands. The development of digital skills is significantly changing many aspects of the way our employees work worldwide.

Responsibility for the training measures is decentralised and lies with the individual fields of business. In this regard, the human resources department is primarily responsible for training measures in the areas of social skills, methods and leadership skills, as well as languages. Technical training measures and e-learning formats on topics such as compliance, data protection and information security are in the remit of the respective departments.

In all fields of business, talent programmes systematically support employees in their careers, and prepare them for future challenges. Moreover, a Group function steers the strategic management development and succession planning for the top management level. Continuous talent development is key in achieving the strategic goals of Munich Re Group Ambition 2025.

An objective of Munich Re Group Ambition 2025 is to build and enhance the digital expertise of our employees. To this end, we are continuously expanding our digital training curricula, so that our staff master the tools and methods required to drive the digital transformation in our respective fields of business.

Measures

Munich Re offers a comprehensive range of training measures for the development of our employees.

The development of talented staff is of major importance for the sustainable success of our Company. We develop particularly talented employees both professionally and personally with various business-field-specific and Group-wide development programmes. At the Group level, our Group Management Platform is primarily aimed at networking our management and providing further training on current leadership topics. Thereby, we also lay a foundation for succession planning at this level. In 2022, we accompanied 137 (132) members of the programme. In reinsurance, two programmes identify and promote talent. “Hydrogen” is a three-year programme that prepared 88 (80) participants for a more advanced global role in 2022. “Oxygen” prepares candidates for an initial leadership role at the regional level within one to two years, with 195 (132) participants in 2022. The talent management process “ERGO Grow” is aimed at employees who aspire to an initial or more advanced leadership or project-management role at ERGO. In 2022, 166 (141) candidates were identified and accompanied for this purpose. The “ERGO Leadership Programme” is a talent programme for senior managers at ERGO. The third cohort of the programme will start at the beginning of 2023.

In addition to these talent programmes, we have various centralised training offerings for all employees, with a focus on promoting a digital culture. In reinsurance, “LinkedIn Learning” and the “Digital School”, a platform with a wide range of learning content and formats, are available globally and enable self-directed knowledge building. LinkedIn Learning, in particular, is used extensively around the world because of its flexibility and wide range of digital topics. This is reflected not only in the approximately 7,500 (6,100) activated licences, but also in more than 172,000 (228,000) completed learning videos. The 2,090 (1,450) visits to the

Digital School in 2022 underline the relevance and attractiveness of the offering. ERGO also offers support measures to help employees deal with the digital transformation and build up the relevant skills. With the digital learning platform "e-campus", ERGO provides self-learning opportunities in video and audio formats. The "digital morning", a monthly virtual employee event for all ERGO employees, is also firmly established. MEAG is also focusing on the rapid expansion of digital formats in the area of training, for example in the recruiting and onboarding process. Since 2021, MEAG has offered a virtual learning programme on the topics of Development & Career, Skills & Methods, Transformation, Leadership, and Innovation & Digitalisation.

Metrics

We measure the success of our efforts through employee surveys and the metrics presented below. This also provides guidance to our management.

In 2022, a Group-wide approach was established to measure the sustainable engagement of our employees based on nine core questions.

Our success in developing internal talent is primarily reflected in the number of management positions filled internally. In 2022, this figure was at 77.7% (82.6)% in Germany and at 53.6% (64.1%) globally. Moreover, we continue to supplement our management with external recruits. Across all hierarchical levels, 34.6% (33.9%) of vacancies worldwide were filled with internal candidates in 2022. When it comes to external recruitment, it is important for us to keep bringing new perspectives into the Company.

Compared to the previous year, we can report an increase in (virtual) training days and training costs per employee. The slight decrease in the proportion of employees with at least one (virtual) training course is mainly due to a change in the training cycle of the training courses that are compulsory for all ERGO employees in Germany.

Training and development activities

		2022	Prev. year	Change
				%
Employees completing at least one training[1]	%	89.5	95.1	
Employees completing at least one virtual training[1]	%	85.8	91.6	
Training days per employee[1]	Days	2.6	2.4	10.3
Virtual training days per employee[1]	Days	1.4	1.1	27.3
Average training costs per employee[1]	€	858	757	13.4

1 Only includes centrally managed training programmes. Department-specific training measures organised by a particular department are not included. The analysis of training days shows a trend towards shorter training formats.

Diversity, equity and inclusion (DEI)

Strategy and objectives

We are convinced that the diversity of our employees' mentalities, ideas, ways of thinking, experiences and levels of knowledge is a key success factor for Munich Re, and have anchored its development as a strategic focus in Munich Re Group Ambition 2025. Today, Munich Re already employs more than 100 different nationalities at over 50 locations worldwide. Since 2012, Munich Re has been a signatory to the Diversity Charter and has established a Group-wide diversity policy. Employee characteristics such as gender, age and internationality – as well as other criteria such as religion, disability, culture, social origin and sexual orientation – play a special role in our activities.

Diversity, Equity & Inclusion (DEI) initiatives are strategically managed by a Group-wide function. The HR departments of the business units are responsible for the operational implementation in the respective locations and business units. In 2022, Munich Re created the basis for the implementation of Group-wide DEI governance, which will consist of the DEI Management Team, the DEI Council, the Strategy Committee and the Munich Re Board of Management. Together, these will represent the voice of the management and the voice of the employees to develop the DEI strategy, share knowledge and best practices, and create a culture of continuous learning and growth.

In addition to meeting the legal requirements in Germany, our goal is to achieve 40% female representation at all management levels worldwide by 2025.

Measures

Munich Re takes a clear stand against racism, inequality and discrimination of any kind. Our Group-wide Code of Conduct, which is binding on all employees, prohibits discrimination, social misconduct and harassment. In Germany, employees receive regular mandatory training on the German Equal Treatment Act (AGG) and the Code of Conduct to promote understanding and compliance. An escalation process for reporting incidents is clearly defined and complaints offices have been established in the event of discrimination.

There are different measures in place to increase the proportion of women in management positions: these include a requirement for diversity in candidate lists and selection committees Group-wide, strict oversight of senior appointments by the Board of Management, an even stronger focus on equality in talent development and Group-wide monitoring of progress in gender diversity. These key figures are integrated into the quarterly Group-wide reporting process of our business figures.

To achieve this goal, Munich Re has created a supportive environment and implemented numerous measures to promote the personal development of all employees. Established support measures were continued in 2022. These include mentoring programmes, coaching, networks for different employee groups, and individual part-time and parental-leave models. Several family support services in the areas of childcare, eldercare and career counselling complement these offerings. In addition, new and innovative programmes are regularly developed and introduced individually in the regions of the fields of business.

Further measures to support gender diversity include, for example: participating in the “break the bias” project on International Women’s Day, various women’s networks, (for example “EFEU” and the Women’s Inclusion Network (WIN) in reinsurance, or win@m at MEAG), or the mentoring programme for ambitious women and the “Frauen im Vertrieb” project at ERGO.

The 10 (12) women’s networks had 2,073 (2,217) members in 2022. A total of 2,567 (2,814) participants attended events during the business year.

Beyond the gender initiatives, many other measures took place. The following activities reflect the strong commitment of Munich Re employees to DEI topics in 2022:

A total of 16 (20) events were held worldwide in the 4 (4) networks of the LGBTIQ+ community.

Reinsurance continued its collaboration with Prout at Work. In addition, a range of learning programmes are provided through LinkedIn Learning and the Catalyst learning resource and are open to all employees globally. These offerings were promoted on World Cultural Diversity Day and during Pride Month – the awareness month for the LGBTIQ+ community – in June. A specific goal set by the reinsurance units in the US was to reach 55% diverse employees by 2023 – diverse referring to employees with underrepresented identities. This goal was already reached in 2022.

To address the issue of unconscious bias, ERGO conducted a “Diversity Day” in Germany in 2022. Two e-learning formats were launched to coincide with the event. They show how unconscious bias occurs and provide numerous examples and strategies on how to avoid such patterns of thinking. In addition, the “Digital Diversity Map” introduced in 2019 has been expanded in collaboration with the international organisation. The “Digital Diversity Map” provides transparency on the most crucial diversity metrics and offers insights into the activities of the foreign subsidiaries. Since its launch, ERGO’s “Digital Diversity Map” has been expanded every year with new statements and updated figures. It currently contains 90 videos from 20 companies in 16 different countries with statements and messages around DEI.

In our various talent programmes, we continue to particularly emphasise balanced diversity.

Metrics

At the end of 2022, the proportion of women in management positions worldwide was 38.5%, a further increase compared to 2021, but still 1.5 percentage points short of our target. Progress was also made in the two management levels below the Board of Management and in the quotas for women at Munich Reinsurance Company.

The following proportions of women were achieved in the talent programmes: Group Management Platform/Group 41% (38%), Hydrogen/reinsurance 42% (38%), Oxygen/reinsurance 49 (47%), ERGO Grow 50% (38%). The proportion of women in the trainee programmes was as follows: EXPLORE/Group 60 (60)%, International Graduate Trainee Programme/reinsurance 54% (51%), RISE/ERGO 60% and Futures/MEAG 33% (56%).

Further information on women in management positions (targets and status) is provided in the Corporate Governance Statement pursuant to Sections 289f and 315d of the German Commercial Code, in the section “Equal participation of women and men in management positions”.

An increase in the internationality of the talent programmes was also achieved, as measured by the distribution of participants between Germany and abroad. The following results were attained: Group Management Platform/Group 58% (45%), Hydrogen/reinsurance 76% (73%), Oxygen/reinsurance 78% (83%).

Diversity, equity, inclusion (DEI)

		31.12.2022	Prev. year	Change
Munich Re				%
Women in the workforce	%	52.5	52.6	
Women in management positions, Management Levels 1–4	%	38.5	37.8	
Women in management positions, Management Level 1	%	32.0	31.6	
Women in management positions, Management Level 2	%	34.5	32.3	
Nationalities	Number	123	114	7.9
Women's networks	Number	10	12	-16.7
LGBTIQ+ networks	Number	4	4	0.0
International participants in talent programmes	%	49.9	36.1	
Munich Reinsurance Company				
Women in the workforce	%	45.8	44.8	
Women in management positions, Management Level 1	%	16.7	14.0	
Women in management positions, Management Level 2	%	26.5	24.1	

In summary, progress was again realised on the 2022 reporting topics, and strategic decisions were made that set the direction and ambition for the coming years. In doing so, we will continue to foster Group-wide approaches to specific topics and establish different operational implementations within the organisation that can optimally support the respective business model and the respective employee structure.

Governance

In this section, we report on the topics of compliance as well as responsible digital transformation, data protection and cyber security.

Compliance

Strategy and objectives

How Munich Re is perceived by the public and our business partners depends on each and every member of our staff. Our actions are guided by the principles and values detailed in our Code of Conduct, and we strive to maintain our stakeholders' trust and protect Munich Re's reputation. Appropriate conduct plays an important role in this regard. This means that Munich Re aims to comply with all applicable statutory, supervisory and other external rules and standards, particularly those related to the insurance and investment business, and with all internal regulations on avoiding material compliance risks in all of our business activities.

Compliance is the responsibility of every employee. Based on the Code of Conduct and other commitments to responsible conduct (e.g. the UN Global Compact), all staff have undertaken to act honestly and dependably. They are to make business decisions in accordance with the law, statutes and internal regulations, and avoid any conduct that could be harmful to Munich Re. Our Board of Management and managers are particularly responsible for implementing compliance as an integral part of our business processes. Our managers are role models for our staff and have a duty to ensure that business within their sphere of responsibility is conducted in accordance with the law, statutes and internal regulations.

Understood correctly, for us compliance means acting in accordance with the law, statutes and internal regulations, such as the Code of Conduct, which apply to operating an insurance and investment business. Compliance is thus a key element of our business processes and allows us to fulfil our responsibilities and to embody integrity.

Providing quality advice to customers is a top priority at Munich Re. At ERGO this can be seen, for example, in its having signed in 2012 the Code of Conduct issued by the German Insurance Association (GDV) for the sale of insurance products. This Code obliges the signatory insurers and their brokers to not only comply with high standards of advice and brokerage, but to also have this compliance regularly checked by independent auditors. In 2020, for the third time, KPMG confirmed that ERGO was effectively implementing the contents of the Code. The next audit is scheduled for 2023.

We have set ourselves the goal of enabling our staff to conduct themselves ethically and legally through a defined reference framework, including a Group-wide Code of Conduct, guidelines and standards. Training, advice from managers and staff, and proper communication of corresponding content also play important roles in this regard.

Moreover, we aim to identify, monitor and investigate key compliance risks using Group-wide methodology, which also uses a set framework concept to evaluate the controls, and also to investigate potential violations that may occur despite these appropriate measures.

A further goal is to continually improve the Compliance Management System, eliminate and resolve violations, and regularly report to the appropriate parties.

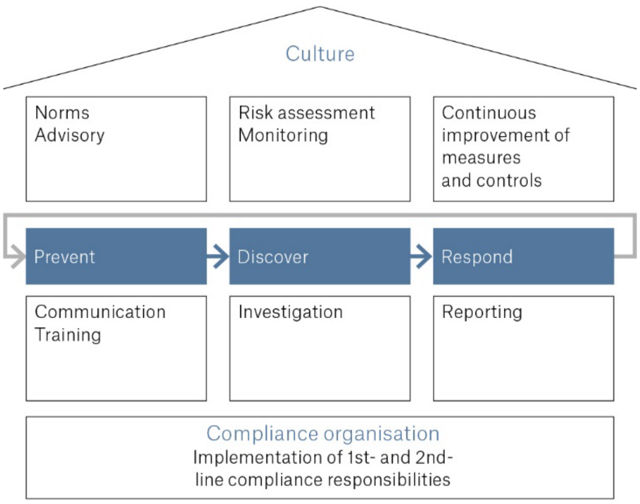
In order to meet these goals, we define, among other things, Group-wide standards and monitor compliance risks. These particularly include corruption and bribery, which are not tolerated (zero-tolerance policy) at Munich Re; money-laundering provisions and antitrust law; product sales and design (sales compliance) that allow a relationship of trust and fairness with our clients; and data protection, to ensure that data entrusted to us is handled securely. Complying with financial sanctions and constantly keeping up with the most recent geopolitical developments was particularly important in 2022. The latest regulatory standards are constantly monitored and integrated into the Company, for example in ESG.

Measures

Compliance Management System (CMS)

The compliance function is responsible, among other things, for establishing and monitoring the necessary organisational measures to ensure compliance on the part of Munich Re, its management and its staff. We have developed a CMS for this purpose that meets external compliance standards – such as ISO 19600 and IDW PS 980 from the German Institute of Certified Accountants (IDW) – and was carefully tailored to meet Munich Re's needs. The CMS constitutes the methodological framework for the structured implementation of the early-warning, risk-control, advising and monitoring functions.

Munich Re's CMS is geared to the aforementioned goals and is designed as follows:



The scope and means of implementing compliance activities with regard to the above-mentioned CMS elements are guided by the risk profile of the respective Group company, though the implementation of minimum standards is mandatory for all entities.

Basis

Our business activities are embedded in a compliance culture based on our core values, which are particularly reflected in the Munich Re Code of Conduct, our main standard for staff behaviour.

Compliance organisation involves designing the structure of the compliance function, which includes determining the tasks, responsibilities and processes with regard to compliance measures and interfaces. Our compliance unit manages compliance activities through Group-wide standards and a network of regional and local compliance officers.

Prevention

The compliance norms specify principles and minimum standards for preventing and avoiding material compliance risks.

The advisory function responds to compliance-related questions from staff, provides advice on specific cases, issues general recommendations, and shows senior management, managers and staff how to assess and avoid compliance risks, but also how to avoid potential external and internal breaches and react accordingly.

Our Group-wide communication and training are aimed at increasing awareness of compliance risks and dealing with them effectively. Both are aimed at and tailored to the needs of the various German and international Group companies and their respective business models. Staff and management are obligated to regularly attend training – either in the classroom or via IT-supported programs – on the Code of Conduct and selected compliance topics, such as preventing corruption, ensuring compliance with antitrust law, and data protection. Mandatory tests help participants grasp and internalise the content long-term, especially in the case of online material.

Detection

The assessment of compliance risks includes the systematic identification, analysis and mitigation of such risks. The process is based on a Group-wide methodology used to identify, assess and document risks. Munich Re's main compliance risks and the corresponding mitigation measures are analysed and reported to management at least once a year. The main risk areas include data protection, financial sanctions, antitrust law, money laundering, sales compliance, corruption, and ESG. The management of changes to the law is part of our risk assessment, in order to evaluate in good time any possible effects of changes in the legal environment.

Monitoring consists of evaluating whether the implemented measures for mitigating material compliance risks are appropriate and effective. Monitoring includes, among other aspects, reviewing the defined frameworks and assessing the design and effectiveness of the controls implemented.

Internal investigations are conducted by the compliance function if there are allegations or suspicions of illegal activity and/or misconduct within the company. We have set up a comprehensive whistleblower system for reporting suspicious activity.

Response

Continuous improvement means regularly reviewing our CMS and compliance measures on the basis of risk assessments, monitoring and other relevant information from the various departments (audit reports, legal changes, organisational changes, etc.), and making adjustments if necessary. In this regard, the maturity of the CMS is assessed on an annual basis using quantitative and qualitative checks and metrics. These include completion of mandatory online training sessions, for example on anti-corruption, antitrust law, data protection and the Code of Conduct. The same applies to the number of whistleblowing complaints and other allegations received, as well as to the number, type and severity of compliance violations identified.

Compliance reports are submitted to the Board of Management and the Audit Committee every six months, and ad hoc when required. Reporting includes, but is not limited to, information on significant compliance risks and mitigating measures, compliance-related violations and statements regarding the maturity of the CMS, as well as an overview of the adequacy and effectiveness of the procedures implemented to comply with external requirements. Reporting also includes regularly communicating with supervisory authorities such as the Federal Financial Supervisory Authority (BaFin).

Selected compliance programmes

We have set up dedicated compliance programmes as minimum standards for compliance risks of Group-wide relevance, for example corruption and bribery, compliance with financial sanctions, money laundering rules and antitrust law, sales compliance and data protection. Monitoring the implementation of these programmes is the responsibility of the respective local compliance organisation.

Due to its international activities, Munich Re is also subject to foreign corruption-prevention laws such as the UK Bribery Act and the Foreign Corrupt Practices Act in the United States. Accordingly, we have adopted Group-wide minimum standards on appropriate conduct regarding invitations, gifts, donations and sponsorships, as well as on interacting with public officials. Fighting corruption is a compliance programme that is subject to a zero-tolerance policy at Munich Re.

Munich Re is also committed to fighting money laundering and terrorist financing. The companies that are subject to the German Money Laundering Act (GWG) have been set up accordingly; officers responsible for money laundering issues, and their deputies, have been appointed where mandated by the GWG. ERGO and MEAG have, through in-house anti-money-laundering policies, set up fundamental standards for their staff in the relevant companies to prevent money laundering and terrorist financing. Identification of customers, service providers and suppliers is done in accordance with the know-your-customer principle and the process is integrated into corresponding due-diligence reviews.

Whistleblowing portal

We maintain a Group-wide reporting system for violations of the law and other regulations. Staff can report potential violations to Group Compliance & Legal or their line manager. In addition, they can contact an external, independent ombudsman. The compliance whistleblowing portal is available to all staff and external parties for reporting violations. This allows allegations to be reported securely, anonymously and confidentially. Any reports received are forwarded to Group Compliance & Legal or the responsible local compliance organisation. The platform can be used to report potential violations relating to financial crime (corruption, financial sanctions, fraud), regulatory requirements, money laundering, tax law, antitrust law, insider trading, sales compliance, data protection, human rights (and other ESG matters), gender discrimination, sexual harassment, diversity and violations of equal-treatment provisions. The anonymity protection function of Munich Re's compliance whistleblowing portal has been externally certified under ISO 27001.

Munich Re's whistleblowing portal complies with the new standards of the EU Whistleblowing Directive 2019/1937 and is complemented by local whistleblowing systems.

Metrics

Munich Re records any violation of purely internal policies, statutory or regulatory rules, supervisory requirements, or other external rules or standards (hereinafter: "external requirements"), as a compliance incident. Such incidents constitute an essential component of our reporting to the Boards of Management and Supervisory Board Audit Committees of Munich Re companies.

In 2022, 443 (652) allegations of potential misconduct were received through the various reporting channels at Munich Re. All allegations were carefully and impartially investigated, while maintaining the anonymity and protection of the whistleblower, upon request. No violations with a material financial impact or systematic vulnerabilities were identified.

Details about the allegations and violations appear in the following tables. Information about allegations and violations concerning data protection can be found in the "Responsible digital transformation, data protection and information security" section.

Allegations of possible misconduct and violations

	Number		Share		
	2022	Prev. year	2022	Prev. year	Change
					%
Total	**443**	**652**	**100.0**	**100.0**	**-32.1**
Non-confirmed violations	109	334	24.6	51.2	-67.4
Ongoing investigations	202	116	45.6	17.8	74.1
Confirmed violations	132	202	29.8	31.0	-34.7
Thereof violations of purely internal requirements[1]	39	124	29.5	61.4	-68.5
Thereof violations of external requirements[1]	93	78	70.5	38.6	19.2

1 The previous year's figures have been adjusted.

The violations of external requirements fall into the following categories:

Confirmed violations of external requirements

	Number		Share		
	2022	Prev. year	2022	Prev. year	Change
					%
Regulatory requirements	15	44	16.1	56.4	-65.9
Tax law	6	13	6.5	16.7	-53.8
Offences to the detriment of third parties or the Company	29	9	31.2	11.5	222.2
Sales- or product-related requirements	36	7	38.7	9.0	414.3
Human resources	6	3	6.5	3.8	100.0
Unfair competition and antitrust law	1	2	1.0	2.6	-50.0
Money laundering	0	0	0.0	0.0	–
Financial sanctions	0	0	0.0	0.0	–
Human rights or other ESG aspects	0	0	0.0	0.0	–
Insider trading and market manipulation	0	0	0.0	0.0	–
Corruption	0	0	0.0	0.0	–
Total	**93**	**78**	**100.0**	**100.0**	**19.2**

Of the total of 93 (78) confirmed violations of external requirements, a total of 19 (13) were sanctioned with disciplinary action.

The findings from our investigations of suspected and actual compliance violations are used to continually improve the CMS.

Responsible digital transformation, data protection and information security

Strategy and objectives

Digitalisation and the challenges it entails for staff with regard to data protection, information security and the responsible use of artificial intelligence (AI) continue to gain in importance. Their importance has particularly increased during the COVID-19 pandemic. Transformation efforts towards digital and data-driven processes have significantly accelerated in many insurance companies as well. It is important for Munich Re to ensure that digital data and technologies are used responsibly, and to remain a trusted partner on the market by offering innovative solutions for our clients. Against this backdrop, we have made responsible and ethical digitalisation an essential component of our business strategy, and are making targeted investments in technology and staff.

Due to the nature of its business, Munich Re comes into contact with a large amount of data. Protecting this data is important to us, especially given the fact that increasing digitalisation means that many business processes handle personally identifiable information. Compliance with data protection regulations is also a significant element of maintaining Munich Re's reputation and the trust of our business partners. In the area of data protection, compliance with national and international regulatory requirements such as the EU General Data Protection Regulation (GDPR) is one of the main drivers for the development of our management approach. Moreover, in the various fields of business, data-protection management systems have been implemented to systematically monitor and control how we handle personally identifiable information.

At the same time, we consistently apply the three pillars of protection in the information security field: confidentiality, availability and integrity of our information. The requirements in this regard are driven by statutory and supervisory regulations, and are an integral component of Munich Re's corporate strategy. Accomplishing these objectives constitutes a key factor to our business success. Our goal in this regard is to tailor the levels of protection of our data and information to the respective risk, in the context of the increasing digitalisation of our business processes. When defining our level of ambition, we took both the findings from our review of supervisory requirements (for example, the "Supervisory Requirements for IT in Insurance Undertakings" – *VAIT*) as well as benchmark comparisons into account.

Munich Re's Code of Conduct and various business-field-specific standards include mandatory rules for all staff and are intended to ensure that data protection and information security are dealt with consistently.

For Group companies situated within the European Union and the European Economic Area (EU/EEA) the rules regarding data protection refer primarily to the GDPR. Based on the GDPR, Munich Reinsurance Company, ERGO and MEAG have each adopted a data protection policy covering their activities in the EU/EEA in order to ensure a consistent, mandatory level of protection across these fields of business. For our intra-Group data sharing with reinsurance companies situated outside the EU/EEA, binding corporate rules on data protection aim to ensure an appropriate level of data protection at our locations worldwide.

Where necessary, data protection officers have been appointed to handle data protection in reinsurance, ERGO and MEAG. The Group's data protection organisation is centrally coordinated by the Group Compliance & Legal division. Among other tasks, the data protection officers and experts work in their respective areas of responsibility to ensure compliance with the data protection regulations, monitor the lawfulness of IT-supported data processing, advise the respective companies on their duties under the applicable data protection regulations, answer staff questions on data protection, and serve as a first point of contact in communications with the supervisory authorities. Reports are made at least once a year to Munich Reinsurance Company's Board of Management concerning significant data protection issues and improvements to Munich Re's data protection management systems.

Particularly complex and risky data protection concerns at Munich Re are handled by the Data Strategy and Governance department, which is overseen by the Compliance and Legal division and serves as a centre of excellence. All Munich Re staff can benefit from the department's data protection expertise.

Management of information security risks is the responsibility of the Group Chief Information Security Officer (Group CISO). This involves defining, updating and implementing the information security strategy, which includes numerous measures and projects executed by the Group CISO.

To support this, within the Group we have also implemented guidelines on information security and business continuity management for relevant companies; these guidelines set binding targets, minimum requirements, responsibilities, processes and reporting procedures as to information security and business continuity.

The idea of "responsible artificial intelligence" is the foundation of our work in the field of artificial intelligence. It is based on the seven Ethics Guidelines for Trustworthy Artificial Intelligence elaborated by an expert group at the European Commission.

Munich Re's main goal when using AI in reinsurance is to offer solutions that are tailored to our clients' needs, for example by making it easier and quicker for them to assess risks, settle claims, or insure new types of risk. Moreover, Munich assumes the performance risk associated with AI-based models through innovative insurance products such as aiSure™.

In primary insurance, data and artificial intelligence are also key factors driving digital transformation, particularly though intelligent process automation and strong, individualised client service.

Measures

To continuously improve our digitalisation processes, we implemented numerous measures in the reporting year.

Munich Re staff receive regular training on the GDPR, mandatory internal data protection regulations and information security with the aid of e-learning programs. All new staff are also required to complete the e-learning programs during their onboarding period. Moreover, division-specific online courses were added in the reporting year.

We continue to offer training courses, for example our data analytics curriculum, that are targeted to specific groups of staff, such as developers, users and managers. We have also expanded our training programme with regard to trustworthy artificial intelligence.

In order to provide transparency about data protection risks and information security risks, and to fulfil its own data protection accountability in this regard, every instance of IT-supported processing of personally identifiable information at Munich Reinsurance Company is reviewed using a defined process. Any data processing that entails a high risk of violating an individual's rights or restricting their freedoms is identified and monitored through a privacy impact assessment. ERGO and MEAG comply with their accountability obligations under data protection law with the help of corresponding processes. In addition to the aforementioned data-protection risk reviews, every new instance of IT-supported data processing is reviewed – depending on the protection needs of the processed data – for compliance with information security requirements.

The data-protection and information security processes are continually refined so as to integrate them in future into an overarching governance, risk and compliance platform and into a third-party risk management system.

It is our declared goal to avoid any type of discrimination through AI, which could for example arise through the use of historical data. In addition, we check that our data resources cover all relevant demographic groups where possible, for example as to age, sex, nationality or ethnic background. At the same time, we bear in mind the legal, social and cultural standards of every country in which we do business. Moreover, making our algorithms as transparent as possible is a matter we take seriously. Through partnerships with the scientific community and academic institutions, we have access to the latest techniques for illustrating the behaviour of AI systems.

Appraisal

In 2022, as in the previous year, no material data protection events as defined in the Solvency II Group Compliance Policy were identified anywhere in our Group worldwide, nor were any material proceedings for breach of data protection regulations initiated. Nevertheless, Munich Re is increasingly the target of cyber attacks, which threaten the confidentiality, integrity and availability of our information and business processes. As a result, measures that both prevent such attacks and facilitate their identification are being continually improved, particularly in this area. We are also optimising the systematic management of any such incidents.

Further details

In the following section, we provide further information under the German Commercial Code (HGB) about our business model, our management's involvement, and about non-financial risks and how we deal with them, for a fuller understanding of the sustainability of our actions.

Details on the business model

Munich Re is one of the world's leading providers of reinsurance, primary insurance and insurance-related risk solutions. The information about Munich Re's business model, required under Sections 289c(1) and 315c(1) of the German Commercial Code (HGB), is published in the Group section.

Sustainability governance structure

We have clearly defined organisational responsibilities for sustainability throughout the Group. Fundamental strategic decisions are taken by the Board of Management, or, more specifically, by the ESG Committee, a subcommittee of the Strategy Committee. The ESG Committee is supported by the ESG Management Team, which is composed of the heads of the central divisions and departments responsible for important ESG topics, as well as the chief underwriting officers from reinsurance and ERGO, and which is responsible for implementing and monitoring the Group-wide ESG strategy. The ESG Committee's objective is to strengthen the Group's ESG management and accentuate the strategic importance of ESG topics for the Group. The Group's Sustainability department supports the ESG Committee and the ESG Management Team; it also coordinates sustainability initiatives within the Group. This department is part of the Economics, Sustainability & Public Affairs (ESP) central division, which reports directly to the CEO. In addition, we have been integrating ESG criteria into the Board of Management's remuneration system since 2012. This grants the Supervisory Board latitude to factor in aspects of sustainability when it considers remuneration. And from the 2022 financial year, at least one concrete ESG target is to be agreed for the multi-year bonus. Further information is available online at www.munichre.com/board-of-management.

The Supervisory Board addresses significant sustainability issues at least three times a year: based on the combined non-financial statement, through regular updates on ESG strategy and implementation measures, and upon presentation of the annual personnel report. Several members of the Supervisory Board possess significant ESG expertise and are thus qualified to assess the information. Moreover, the Praesidium and Sustainability Committee regularly scrutinises ESG issues as part of its fundamental responsibility. Further information on the Supervisory Board's responsibilities and those of its committees can be found in the Supervisory Board Report.

Risk analysis

For us as risk carriers, risk management constitutes a key element of responsible and sustainable corporate governance. In the context of sustainability risks, we differentiate between "outside-in" and "inside-out" perspectives. Outside-in risks refer to ESG events or conditions that could have real or potential negative consequences on investments or liabilities. We address the management of outside-in risks in the risk report.

By contrast, inside-out risks are potential consequences that our business could have on ESG aspects, and thus correspond to the risks mentioned in Sections 289c(3) and 315c of the German Commercial Code (HGB) – risks to society and the environment, for example. Munich Re's business operations, unlike those of other sectors, normally do not result in any material risks that could very likely have grave consequences on the aspects named in Section 289c(2) of the HGB. Nevertheless, risks that can be categorised as sustainability risks may indirectly arise from investments or our insurance business, e.g. through covering major infrastructure projects.

We are aware of our corporate responsibility for these risks, and manage them accordingly. We describe our strategic approach to sustainability, and how we handle specific ESG aspects such as climate change, in various sections of the non-financial statement.

Non-compliance with ESG criteria could also damage Munich Re's reputation. As a result, where societal and environmental risks are not already subject to specific operational standards, they are assessed by our reputational risk management and rejected if necessary. We identify, analyse, assess and monitor reputational risks with the aid of qualitative methods. Specific guidelines and process descriptions define how we deal with reputational and sustainability risks. Various measures raise our staff's awareness of reputational and ESG considerations, which in turn helps to mitigate risks. Reputational risk committees (RRCs) in the fields of investment, reinsurance and primary insurance (in the latter called the Reputation and Integrity Committee) assess concrete reputational concerns and any potential reputational or sustainability risks of individual transactions. The reviewed incidents are documented. We established uniform, Group-wide processes for handling reputational risks in the RRCs of the individual fields of business in late 2021. Moreover, we created an RRC in the Group Investment Management divisional unit in early 2022. As a result, the 2022 table does not provide any case numbers from the previous year for comparison.

Outcome of assessment by RRC of transactions submitted for review of critical reputational risks

	2022
Denied due to critical reputational risk	4
Accepted, no critical reputational risk identified	8
Accepted under specified terms	2

No reportable sustainability risks were identified in the 2022 reporting year.

About this statement

Statutory requirements

In the combined non-financial statement, we report in accordance with the requirements of the European Non-Financial Reporting Directive (NFRD) and the corresponding commercial law provisions of Sections 289b and 315b of the German Commercial Code. This statement combines the consolidated non-financial statement of the Munich Re Group and the non-financial statement of Munich Reinsurance Company. All content contained in the statement applies both to the Group and to Munich Reinsurance Company, unless otherwise noted.

In preparing the non-financial statement, we bore in mind the Global Reporting Initiative (GRI) standards, particularly when analysing the material issues and describing the concepts. An exhaustive report is published separately in the Sustainability Report, which is available at www.munichre.com/s-report.

Moreover, our sustainability reports have followed the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) since 2020. In the risk report, which includes a more detailed description of non-financial risks, our reporting on risks for insurance and investments resulting from climate change is also based on the TCFD recommendations.

Moreover, the standards issued by the Sustainability Accounting Standards Board (SASB) have provided guidance since 2021 in compiling the non-financial statement – as acknowledgement of the increasing significance of SASB standards to investors.

An overview of the relevant information about the TCFD and the SASB can be found in the TCFD, SASB Index 2021 under www.munichre.com/sustainability/download.

Our goal is to continue improving the transparency of our reporting and to keep meeting updated requirements.

Ernst & Young GmbH Wirtschaftsprüfungsgesellschaft was tasked with the assurance audit of our combined non-financial statement in 2022. All information in this statement was subjected to a limited assurance audit. Any references to information outside the combined management report constitute outside information and are thus not part of the combined non-financial statement; they are not covered by the audit.

Materiality analysis

The materiality analysis determines which sustainability topics are of special importance for Munich Re and its stakeholders, and therefore should be focused on in our sustainability management and reporting. In order to comply with both regulatory standards and best practices when reporting, we conducted an extensive materiality analysis in 2021 to identify the significant and material topics to be reported on. We then reassessed the materiality analysis in 2022. The materiality analysis that we completed was based on the concept of materiality as defined by Section 289c of the HGB and takes the recommendations of the GRI standard into account.

Identifying the material topics to report on was done in three main steps:

- Pre-selection based on the topics identified in the previous materiality analysis,
- A field analysis; determination of the business relevance of the topics and Munich Re's impact on the topics, and
- Validation by both internal expert committees and an external expert, as well as final approval of the reportable topics by the Munich Re ESG Committee.

The following stakeholder groups were included in the analysis:

- Clients
- Staff
- Investors
- Representatives of wider society

The findings of the 2021 materiality analysis were subjected to validation in 2022. To this end, a field analysis and workshop were conducted – featuring representatives from the relevant departments. No significant changes to the 2021 findings were identified; the findings were then confirmed for 2022 reporting by the ESG Committee.

The following matrix presents the results of the materiality analysis's validation. The relevance of Munich Re's impact on the criteria is illustrated horizontally, while the relevance of the individual topics for Munich Re's business is presented vertically. The size and colour of the circles represent the opinions of the external stakeholders, i.e. the topics' relevance to the people in question.

Given the increasing awareness of human rights, it was decided to report on this topic again this year. Although the topic of "environmental management in own operations" is not as significant as in other industries, given our business activities, we have nevertheless set clear goals for ourselves here as well and report on them in a separate section.

Business performance

Overall assessment by the Board of Management on the business performance and situation of the Group

Munich Re generated a consolidated profit of €3.4bn in 2022, thus exceeding our profit guidance from the beginning of the financial year in spite of the difficult market environment. Gross premiums written rose by 12.7% to €67,133m (59,567m). This significant increase was mainly due to organic growth in the property-casualty reinsurance segment and positive currency translation effects.

The reporting year was greatly influenced by geopolitical and macroeconomic turbulence. The military conflict between Russia and Ukraine accelerated global inflation, in particular owing to energy scarcity caused by the war. As a consequence, central banks significantly increased their key interest rates. Group investments were therefore subject to fluctuations.

In the property-casualty reinsurance segment, the combined ratio amounted to 96.2% (99.6%) of net earned premiums and thus fell marginally short of the adjusted target value from the third quarter (97%). The segment generated a lower profit of €1,856m (2,003m). Major-loss expenditure totalled €4,173m (4,304m). This corresponds to 12.8% (16.5%) of net earned premiums, marginally below the long-term average expected value of 13%. Man-made major losses amounted to €1,742m (1,165m). The increase was partly due to expenditure of around €475m related to the war of aggression in Ukraine. Conversely, we generated income from the net release of claims reserves for COVID-19 totalling €142m, although IBNR remained high. By contrast, in 2021 we still had to cope with claims expenditure of €212m, mainly on account of the cancellation or postponement of major events. Major losses from natural catastrophes dropped to €2,430m (3,139m). The largest natural catastrophe for Munich Re in 2022 was Hurricane Ian, with losses of around €1.6bn.

Life and health reinsurance contributed €737m (325m) to the consolidated result, thus significantly exceeding the previous year's result. The technical result including insurance contracts with non-significant risk transfer (which are not recognised in the technical result), amounted to €918m (218m). COVID-19-related expenditure fell year on year to €344m (797m[1]).The Russian war of aggression did not have a direct impact on the segment's technical result.

In the ERGO field of business, our profit of €826m (605m) exceeded the previous year's result by a significant margin. This substantial increase was chiefly attributable to operative improvements, backed by a positive one-off effect in the ERGO Life and Health Germany segment. Premium income climbed in all three segments, with the ERGO Property-casualty Germany segment posting very pleasing growth that outperformed expected market growth. Profit increased substantially in the ERGO Life and Health Germany segment. The reasons for this increase to €485m (164m) were good operating performance, a high currency result and the positive one-off effect attributable to updated assumptions regarding the appropriation of profit under IFRS. In the ERGO Property-casualty Germany segment, we posted a profit of €185m (234m). A reduced investment result and a significantly lower currency result were responsible for the decline, which was partially offset by a strong improvement in the technical result. The ERGO International segment generated a profit of €155m (207m), which was influenced by a declining investment result and currency result. The segment's technical result came very close to that of the previous year. The war between Russia and Ukraine did not have a significant impact on ERGO's technical result.

Munich Re's investment result (excluding insurance-related investments) was €4,903m (7,156m). Overall, this represents a return of 2.1% (2.8%) on the average market value of the portfolio. The 2022 investment result was negatively impacted by write-downs of Russian and Ukrainian bonds amounting to around €850m, among others. Losses on interest-rate derivatives due to higher interest rates also had a detrimental impact on the investment result.

1 A further slight adjustment was made to the internal allocation.

Comparison of the prospects for 2022 with the result achieved

Munich Re

Comparison of prospects for Munich Re in the 2021 annual report with results achieved

		Target 2022	Adjustment 2022	Result 2022
Gross premiums written	€bn	61	67	67.1
Technical result life and health reinsurance[1]	€m	400	800	918
Combined ratio property-casualty reinsurance	%	94	97	96.2
Combined ratio ERGO Property-casualty Germany	%	91	91	90.6
Combined ratio ERGO International	%	92	94	94.3
Return on investment[2]	%	over 2.5	over 2.0	2.1
Consolidated result	€bn	3.3	3.3	3.4
Economic earnings	€bn	over 3.3	over 3.3	2.8

1 Including the result from insurance contracts with non-significant risk transfer.
2 Excluding insurance-related investments.

The economic environment in 2022 was marked by inflation, increasing interest rates, volatile capital markets and negative impacts owing to the Russian war of aggression, and is posing challenges for the entire insurance industry.

The adjustments to the targets originally forecast for the year 2022 were primarily the result of good business performance that had led to an increase in premium income. As a result, we were able to increase the target values for gross premiums written in the first and third quarters of the year. In the third quarter, we increased the projected value for the technical result, including the result from insurance contracts with non-significant risk transfer, in life and health reinsurance. The projections for the combined ratio were increased in property-casualty reinsurance owing to the high natural catastrophe losses in the third quarter and in ERGO International due to developments in Poland and Spain. We had to reduce the target value for the return on investment due to impairment losses on shares and fixed-interest securities in the second quarter.

At the beginning of the year, we had projected gross premium income of around €61bn for Munich Re for the 2022 financial year. After a very pleasing performance in the first nine months, especially the considerable gains in property-casualty reinsurance, we raised our forecast – which had already been increased after the first quarter to €64bn – once more, to €67bn. With gross premium income of €67.1bn, we surpassed our adjusted target by around €0.1bn.

We had anticipated a consolidated result of around €3.3bn for the 2022 financial year at the beginning of the year. Despite geopolitical and macroeconomic turbulence, we were able to exceed our profit target, posting profits of €3.4bn. This result was attributable to pleasing operating performance in our segments and a highly positive currency result.

At the beginning of the year, we had forecast a return on investment of above 2.5%. Owing to high impairment losses on equities and fixed-interest securities, in particular write-downs of Russian and Ukrainian bonds, in the first half of 2022 we reduced our forecast for return on investment to above 2.0%. The 2022 investment result generated an overall return of 2.1% in relation to the average market value of our portfolio. We therefore surpassed our adapted target by a small margin.

For the 2022 financial year, we had set the target for economic earnings at over €3.3bn. They amounted to €2.8bn in the financial year and were impacted by the development of important capital market parameters. Losses from fixed-interest investments and declining share prices in light of rising interest rates as well as negative inflation effects led to adverse market variances that could not be offset by foreign currency gains. Despite high natural catastrophe losses in the third quarter and expenditure related to the war in Ukraine, major-loss expenditure was lower than expected. Consequently, operating performance in both fields of business reflected a positive value added by new business and positive variances.

Reinsurance

At the beginning of the financial year, we had aimed at gross premiums written of around €42.5bn for the reinsurance field of business. We raised our forecast to €45bn after the first quarter and, after a pleasing performance in the third quarter, we raised the forecast to €48bn. At €48.1bn, we were able to surpass this higher target value by a small margin. We saw significant growth in premium volume, predominantly in property-casualty reinsurance, thanks to an expansion of existing business across almost all lines and regions as well as to currency translation effects, primarily due to a strong US dollar. The main growth drivers were the expansion of existing business and the acquisition of new business with selected clients – particularly in our primary insurance units in

North America – and growth in Europe, South America, Asia and Australia.

At the beginning of the year, we had projected a technical result, including the result from insurance contracts with non-significant risk transfer, of around €400m in life and health reinsurance. Owing to gratifying business performance in the third quarter in particular, we significantly raised our expectation for the full-year technical result, including the result from insurance contracts with non-significant risk transfer, to about €800m. With a result of €918m, we easily surpassed this target. At €344m, COVID-19-related losses in life and health reinsurance were slightly higher than our original expectation of around €300m. The Russian war of aggression did not have an impact on the technical result.

At the beginning of the financial year, our declared goal was to achieve a combined ratio of 94% of net earned premiums in property-casualty reinsurance. Due to the high losses from natural catastrophes in the quarter, upon publication of the third-quarter results we retracted this target, raising it to around 97%. At the end of the reporting year, the ratio – at 96.2% – was better than the revised target. Amounting to 12.8% of net earned premiums, major-loss expenditure was somewhat lower than our expectation of 13%. Expenditure totalled €1,742m for man-made major losses, including expenditure of €475m related to the Russian war of aggression in Ukraine. Conversely, we generated income from the net release of claims reserves for COVID-19 totalling €142m, although IBNR remained high.

At €2,593m, the consolidated result for reinsurance as a whole in 2022 was above the forecast, which we had reduced from €2.7bn to €2.5bn following the first three quarters.

ERGO

For the ERGO field of business, we had projected gross premiums of around €18.5bn at the beginning of the year. Following good business performance in the first nine months of the year, we increased our target for the full year to €19bn. With gross premiums of €19.1bn, we marginally surpassed this target.

At the beginning of the year, we forecast a combined ratio of around 91% in the ERGO Property-casualty Germany segment – assuming that major losses remained within normal bounds. Despite the fact that major-loss expenditure was actually higher, the combined ratio of 90.6% at the end of the year was slightly better than expected thanks to persistently high premium growth and the favourable development of basic losses throughout the course of the year.

In the segment ERGO International, we had aimed for a combined ratio of around 92% at the beginning of the year, provided major losses remained within normal bounds. Developments in Spain and Poland prompted us to raise our projected combined ratio for the full year to 94% in the third quarter. With a ratio of 94.3%, we were slightly above the revised expectation.

At the beginning of the year, we had aimed at a profit target of around €0.6bn for the ERGO field of business. Following good results in the first nine months of the year, we raised our guidance in the third quarter to an annual profit of around €0.8bn. With its consolidated result of €826m, ERGO achieved the significantly higher forecast. In addition to good operating performance, a high currency result and a one-off effect in the ERGO Life and Health Germany segment contributed to the pleasing result for the year. COVID-19 and the Russian war of aggression did not lead to a substantial impact on the technical result.

Business performance of the Group and overview of investment performance

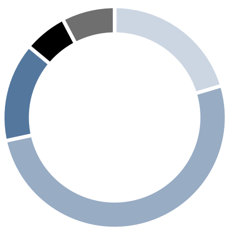
Key figures

		2022	Prev. year	Change
				%
Gross premiums written	€bn	67.1	59.6	12.7
Combined ratio				
Reinsurance property-casualty	%	96.2	99.6	
ERGO Property-casualty Germany	%	90.6	92.4	
ERGO International	%	94.3	92.9	
Technical result	€m	4,032	1,927	109.2
Investment result	€m	4,903	7,156	–31.5
Insurance-related investment result	€m	–994	1,119	–
Operating result	€m	3,582	3,517	1.8
Currency result	€m	676	262	157.9
Taxes on income	€m	–580	–552	–4.9
Economic earnings	€bn	2.8	8.1	–64.9
Solvency II ratio	%	260	227	
Return on equity (RoE)[1]				
Group	%	13.5	12.6	
Reinsurance	%	13.8	13.4	
ERGO	%	12.5	10.1	
Consolidated result	€m	3,419	2,932	16.6
Investments	€bn	219.8	240.3	–8.5
Insurance-related investments	€bn	11.1	12.3	–9.4
Net technical provisions	€bn	232.5	234.0	–0.7
Equity	€bn	21.2	30.9	–31.5
Earnings per share	€	24.63	20.93	17.6
Dividend per share	€	11.60	11.00	5.5

1 Information on the calculation of this indicator can be found in the Notes to the consolidated financial statements, in the section "Segment reporting – Notes on determining the return on equity (RoE)".

Munich Re's gross premiums written, at €67,133m, were significantly higher year on year (€59,567m). This was mainly due to organic growth in the property-casualty reinsurance segment and positive currency translation effects.

Group premium income



	Life and health reinsurance	20%	(21%)
	Property-casualty reinsurance	51%	(48%)
	ERGO Life and Health Germany	14%	(15%)
	ERGO Property-casualty Germany	6%	(7%)
	ERGO International	8%	(9%)

Economic earnings are mainly attributable to factors from new and in-force business deriving from underwriting, and to the impact of capital market parameters on assets and liabilities. Favourable operational value creation in reinsurance and primary insurance, with major-loss expenditure somewhat lower than expected, had a positive influence on economic earnings. However, developments in the capital markets had a significant adverse impact on economic earnings in the financial year. In terms of market variances, especially losses from fixed-interest investments, negative result effects from trends in equity markets and from inflation had a reducing effect on the result and were not offset by the appreciation of important foreign currencies against the euro.

The investment result (excluding insurance-related investments) fell considerably year on year to €4,903m (7,156m). This decline was primarily attributable to the high impairment losses on equities as a result of the worldwide fall in stock markets, and to impairment losses on fixed-interest securities as a result of the Russia/Ukraine war. Losses on interest-rate derivatives due to higher interest rates also had a detrimental impact on the result.

The currency result increased to €676m (262m), mainly on account of currency gains against the US dollar. Our effective tax rate was 14.5% (15.9%). The somewhat lower effective tax rate in 2022 was mainly attributable to tax-free effects from investments and to tax income for previous years.

In May, Munich Re issued its third subordinated green bond, with the volume issued amounting to US$ 1.25bn. This bond will mature on 23 May 2042 and is callable for the first time in 2031. It pays a fixed rate of 5.875% p.a. until 23 May 2032. Please see the section "Sustainability in investment and insurance" of our combined non-financial statement for details.

In the second quarter, we exercised our call option for Munich Reinsurance Company's subordinated bond 2012/2042; it had a nominal volume of €900m and paid a fixed rate of 6.25%. Likewise in the second quarter, we exercised our call option for Munich Reinsurance Company's subordinated bond 2012/2042 with a nominal volume of £450m and a fixed rate of 6.625%. Both bonds were redeemed in accordance with the bond conditions.

Information on events after the balance sheet date can be found in the Notes to the consolidated financial statements, (51) Events after the balance sheet date.

Investment mix

	Carrying amounts		Unrealised gains/losses[1]		Fair values	
€m	31.12.2022	Prev. year	31.12.2022	Prev. year	31.12.2022	Prev. year
Land and buildings, including buildings on third-party land	7,340	7,029	5,753	6,291	13,092	13,320
Investments in affiliated companies, associates and joint ventures	5,904	3,635	3,036	2,812	8,782	6,258
Loans	48,547	50,389	–4,956	8,270	43,591	58,659
Other securities available for sale	140,388	162,468	–13,065	12,967	140,388	162,468
Thereof: Fixed-interest	121,581	138,209	–15,015	8,078	121,581	138,209
Thereof: Non-fixed-interest	18,807	24,259	1,950	4,888	18,807	24,259
Other securities at fair value through profit or loss	3,956	2,950	0	0	3,956	2,950
Thereof: Derivatives	1,974	1,718	0	0	1,974	1,718
Deposits retained on assumed reinsurance	9,494	9,027	0	0	9,494	9,027
Other investments	4,168	4,803	0	0	4,168	4,803
Total	**219,797**	**240,300**	**–9,233**	**30,340**	**223,471**	**257,485**

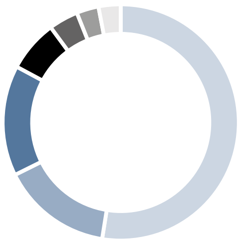
1 Including on- and off-balance-sheet unrealised gains and losses.

The fair value of our investment portfolio decreased, largely due to rising interest rates and falling stock market prices – with favourable effects coming from the development of exchange rates. Our portfolio continues to be dominated by fixed-interest securities and loans.

Higher interest rates were mainly responsible for the decline in unrealised gains/losses on fixed-interest securities available for sale and loans.

Fixed-interest portfolio by economic category[1]

Total: €179bn (209bn)



	Government bonds[2]	52%	(55%)
	Thereof: Inflation-linked bonds	5%	(8%)
	Pfandbriefs/Covered bonds	15%	(16%)
	Corporate bonds	15%	(14%)
	Cash/Other	7%	(6%)
	Policy and mortgage loans	4%	(4%)
	Structured products (credit structures)	3%	(3%)
	Bank bonds	3%	(2%)

1 Presentation essentially shows fixed-interest securities and loans, including deposits and cash at banks, at fair value.
2 Including other public-sector issuers and government-guaranteed bank bonds.

At the reporting date, over half of our portfolio of interest-bearing securities was invested in government bonds. The vast majority of these continue to come from countries with a high credit rating. Our German and US government bond holdings at fair value constituted 10.6% (11.9%) and 11.7% (10.8%) of the portfolio of interest-bearing securities. The fair value of our portfolios of Russian government bonds amounted to €0.1bn. At the reporting date, we had no significant portfolio of Ukrainian government bonds. Our new investments in the reporting year were mostly in French and Canadian government bonds. We mainly reduced our bond holdings from supranational issuers in the reporting year. The purchase of government bonds from emerging markets is part of our balanced investment strategy. These constituted 9.4% of our government bond portfolio.

At around 29%, our investment in covered bonds remained focused on German securities. Our portfolio also included bonds from France and the United Kingdom, with 23% and 10% respectively.

The regional weighting of corporate bonds in our portfolio was 33% for the USA and 39% for the eurozone.

Our portfolio of government bonds, covered bonds and corporate bonds had a good rating structure: as at 31 December 2022, some 80% of securities were rated AAA to A.

The portfolio of structured credit products at fair value totalled 3% of the overall portfolio of interest-bearing securities as at the reporting date. This asset class is composed of securitised receivables (asset-backed securities or mortgage-backed securities), e.g. securitisations of real estate finance or consumer credit. Around 57% of our structured credit products had a rating of AAA.

Our investment in bank bonds is limited and at the reporting date amounted to 3% of our portfolio of interest-bearing securities. Financial instruments from states in southern Europe made up 3% of this portfolio. At 91%, most of our bank bonds were senior bonds, i.e. bonds that are not subordinated or subject to loss participation. Subordinated bonds and loss-bearing bonds made up 9% of our bank bond holdings.

The carrying amount of our equity portfolio decreased as a result of the sale of equities and the negative market development. Our equity-backing ratio (before taking derivatives into account, and including investments in affiliated companies, associates and joint ventures[1] at fair value) came to 7.7% (8.7%) at the end of the year. The equity-backing ratio including derivatives was 5.7% (7.7%). Besides this, we protected ourselves against accelerated inflation in an environment of continuing low interest rates by holding inflation-linked bonds with a fair value of €4.7bn (9.3bn). The inflation-linked bonds disposed of were replaced by inflation-linked swaps. Real and financial assets such as shares, property and commodities, as well as investments in infrastructure, renewable energies and new technologies also serve to guard against inflation. Additionally, our investments in real and financial assets have a positive diversification effect on the entire portfolio.

1 Excluding the newly established company "MR Beteiligungen 23. GmbH" (to operate in future under the name "Joint HR MR Private Equity GmbH").

Investment result[1]

	2022	RoI[2]	Prev. year	RoI[2]
	€m	%	€m	%
Regular income	6,565	2.8	6,017	2.4
Write-ups/write-downs of non-derivative investments	–3,155	–1.3	–505	–0.2
Gains/losses on the disposal of non-derivative investments	3,962	1.7	3,182	1.3
Net balance of derivatives	–1,629	–0.7	–774	–0.3
Other income/expenses	–839	–0.4	–764	–0.3
Total	**4,903**	**2.1**	**7,156**	**2.8**

1 Details of the result by type of investment are shown in the Notes to the consolidated financial statements, (34) Investment result.
2 Annual % return on the mean value of the investment portfolio (RoI) measured at market value as at the quarterly reporting dates. The overall investment portfolio used to determine the return for 2022 (2.1%) was calculated as the mean value of the investment portfolios (carrying amounts) as at 31 December 2021 (€240,300m), 31 March 2022 (€233,308m), 30 June 2022 (€223,275m), 30 September 2022 (€223,813m) and 31 December 2022 (€219,797m), and the off-balance-sheet unrealised gains and losses (excluding owner-occupied property and insurance-related loans) as at 31 December 2021 (€17,185m), 31 March 2022 (€12,552m), 30 June 2022 (€7,677m), 30 September 2022 (€4,485m) and 31 December 2022 (€3,674m).

Regular income increased on the previous year, primarily due to higher interest rates at the end of the year and the higher reinvestment yield associated with this. The average reinvestment yield[1] in the financial year rose to 2.8% (1.5%). Due to the higher interest rates in the reporting year, yields on new investments were also above the average return on our existing portfolio of fixed-interest investments.

We posted considerably higher net write-downs of non-derivative investments compared with the previous year, mainly owing to bearish equity markets and write-downs of Russian and Ukrainian bonds amounting to approximately €850m as a result of the war.

Gains on disposal, however, were higher overall than in the previous year, and chiefly derived from our portfolio of equities and equity-type investments. A total of €518m was realised *inter alia* by pooling private equity business with Hannover Re into Joint HR MR Private Equity GmbH.

We posted a net loss from write-downs and write-ups of derivatives and from the disposal of derivatives, primarily due to losses from interest-rate derivatives held for hedging purposes. As a result of the recent rise in stock markets, we also posted losses on equity derivatives held for hedging purposes.

Result from equities and equity derivatives[1]

€m	2022	Prev. year
Regular income	1,091	974
Impairment losses	–1,836	–334
Realised gains/losses	2,863	1,302
Result from equities	**2,117**	**1,942**
Change in on-balance-sheet unrealised gains and losses in equity (gross)	–2,938	2,022
Result from equity derivatives	–354	–553
Total	**–1,175**	**3,411**

1 To determine the total annualised return on our equity portfolio (see text), we calculate the ratio of the total result shown in the table and the mean value of the following figures: equity portfolio (carrying amounts) as at 31 December 2021 (€24,259m), 31 March 2022 (€23,165m), 30 June 2022 (€22,072m), 30 September 2022 (€21,799m) and 31 December 2022 (€18,807m).

The return on equities was strongly affected by the decline in valuation reserves in the financial year and by high write-downs owing to falling stock markets. The return on our equity portfolio including equity derivatives decreased to –5.3% (16.1%).

1 The average reinvestment yield is shown as an annual rate of return. All reinvestments that are transacted in a specific reporting period and have remaining terms to maturity of more than one year are recognised at the rates of return applicable at the relevant trade dates; for securities with terms to maturity of up to one year the proportionate term to maturity is taken into account. Investments are not included if their return cannot be calculated (e.g. equities, debt securities with variable rates, inflation-linked bonds, derivatives, real estate) or if they do not have the characteristics of investments (e.g. cash at banks). Hedging costs for securities in foreign currency are not considered.

Reinsurance – Life and health

Key figures

		2022	Prev. year	Change
				%
Gross premiums written	€m	13,676	12,561	8.9
Share of gross premiums written in reinsurance	%	28.4	30.4	
Technical result incl. result from insurance contracts with non-significant risk transfer	€m	918	218	320.9
Investment result	€m	719	860	–16.4
Operating result	€m	869	344	153.0
Consolidated result	€m	737	325	127.1

Premium

Positive currency translation effects had an impact on the development of gross premiums written. We write the majority of our business (around 89%) in non-euro currencies. Exchange rate fluctuations therefore have a substantial impact on premium development.

If exchange rates had remained unchanged, our gross premiums written would have increased by 3.0% compared with the previous year. The increase is mainly attributable to our business in North America and Asia. Despite the conclusion of new longevity contracts, premium income in Europe fell slightly, mainly owing to the restructuring and termination of several contracts.

The very pleasing growth in our financially motivated reinsurance is not reflected in gross premiums written, as the majority of new contracts are not posted as part of the technical result.

Result

The technical result of €595m improved significantly compared with the previous year (–€9m), and exceeded our annual guidance.

The increase compared with 2021 was primarily owing to reduced claims expenditure relating to the pandemic. Overall, losses attributable to COVID-19 totalled €344m (797m). This figure comprises losses incurred in the reporting year, including provisions for losses incurred but not reported. There is no provision included for future expected losses.

COVID-19 expenditure was dominated by mortality covers in North America. The claims expenditure in Asia and South Africa, which had contributed significantly to the high overall loss during the previous year, only played a minor role in 2022. We saw positive effects on the result in Australia, where we were able to release reserves for COVID-19 because the expected IBNR losses did not materialise. In addition, there were no new major claims notifications in 2022.

Adjusted for COVID-19, claims expenditure in the overall portfolio was generally pleasing, which contributed to a higher technical result than anticipated. Whereas we benefited from favourable claims development in Europe, Asia, Australia and Africa, the COVID-19-adjusted claims expenditure in North America was higher than expected, partly due to a number of large individual claims.

Furthermore, increased interest rates and the resulting reduction of claims reserves contributed significantly to the annual result, which was very good. The annual review of our reserve position also had a positive effect on the technical result.

The military conflict between Russia and Ukraine did not have a direct impact on the segment's technical result.

The result from insurance contracts with non-significant risk transfer continued to develop very favourably. At €322m (227m), the result was significantly higher than in the previous year as a consequence of business growth, particularly in Asia and the USA. We also profited from the higher interest rates. The portfolio performed as expected, confirming the stabilising effect of those contracts on the overall result.

The investment result was down €141m on the previous year chiefly because of impairment losses recognised in 2022 on equities and on fixed-interest securities as well as a negative net balance of derivatives attributable to increased interest rates.

Our individual core markets

Based on premium volume, around 40% of our reinsurance business is written in North America, with the USA accounting for approximately 25% and thus ranking before Canada. Around 25% of our premium stems from Europe – with approximately 10% generated in the United Kingdom and Ireland, and about 5% in Germany. Another significant share of around 25% stems from Asia and the MENA (Middle East, North Africa) region. Australia and New Zealand contribute around 5% to premium income. We are also well positioned in Africa and Latin America, but due to the small size of these markets, their share of our global business is modest (less than 5% in total).

Gross premium in the USA increased to about €3.7bn (3.1bn), partly owing to currency translation effects. We therefore continue to be one of the most important reinsurers in this market, which is the largest worldwide. The reporting year was again affected by high COVID-19 loss expenditure. This expenditure was higher than we had anticipated at the beginning of the year. The COVID-19-adjusted losses, including a number of large individual claims, also exceeded our expectations. We saw positive effects, on the other hand, from the annual review of our reserve position and from increased interest rates. We continue to be very satisfied with the development of our new business, both in terms of volume and profitability.

At €1.9bn (1.8bn), our premium income in Canada also saw a rise. The increase was exclusively attributable to currency effects. Adjusted for these effects, premium income was down somewhat. The technical result was below our expectations owing to higher claims payments in mortality business, which were attributable to COVID-19 and a number of large individual claims. Nevertheless, Canadian business again made a material contribution to the overall result in this reporting year.

In Europe, premium income saw a slight decrease to €3.2bn (3.3bn), with €1.7bn (1.5bn) deriving from the United Kingdom and Ireland, and a further €544m (697m) from Germany. Our longevity business continued to expand very pleasingly, boosting premium income. This effect was more than offset by the restructuring of a large-volume contract and the termination of several contract relationships. We are highly satisfied with our technical result. Moderate losses caused by COVID-19 only played a minor role in the result.

Premium income in Asia/MENA increased to €3.5bn (3.2bn). New business was again at a very gratifying level. This included in particular the expansion of our financially motivated reinsurance business, the bulk of which is not posted as part of the technical result. The technical result was at an extremely gratifying level, also thanks to significantly lower COVID-19 losses.

Premium generated by our business activities in Australia and New Zealand fell slightly to €864m (871m). Our main focus remains the rehabilitation of our existing portfolio; currently, we are very selective regarding the writing of new business. The technical result significantly exceeded our expectations; among other things, we benefited from positive effects from our rehabilitation measures and favourable claims development of our portfolio overall. The effect of COVID-19 on the result was also positive, as we were able to release provisions for IBNR claims, and almost no new claims were reported.

Reinsurance – Property-casualty

Key figures

		2022	Prev. year	Change
				%
Gross premiums written	€m	34,399	28,793	19.5
Share of gross premiums written in reinsurance	%	71.6	69.6	
Loss ratio	%	66.5	68.7	
Thereof: Major losses	Percentage points	12.8	16.5	
Expense ratio	%	29.7	30.9	
Combined ratio	%	96.2	99.6	
Technical result	€m	2,211	972	127.4
Investment result	€m	801	2,562	–68.7
Operating result	€m	1,704	2,352	–27.5
Consolidated result	€m	1,856	2,003	–7.3

Premium

Premium income in property-casualty reinsurance increased by 19.5% compared with the previous year. Changes in exchange rates had a positive impact on premium development. Approximately 11% of the portfolio is written in euros and 89% in foreign currency, of which 57 percentage points is in US dollars and 10 percentage points in pounds sterling. If exchange rates had remained unchanged, premium volume would have risen by 10.7% year on year.

The substantial increase in premium volume was due to an expansion of business across almost all lines and regions. The main drivers were the expansion of existing and acquisition of new business with selected clients – particularly in our primary insurance units in North America – and growth in Europe, South America, Asia and Australia.

Reinsurance contract renewals in 2022 saw risk-adjusted prices rise slightly, especially in regions affected by natural catastrophes. In other markets and lines of business, prices also increased slightly. The trend towards a hard (re)insurance market continues. As a result, quality continues to play an important role in the selection of reinsurers. This allows financially solid reinsurers to position themselves as reliable long-term partners. The risk-adjusted price increase for the 2022 renewals amounted to approximately 0.5%. Overall, we are adhering to our clearly profit-oriented underwriting policy.

Result

The consolidated result and the operating result in property-casualty reinsurance worsened in comparison with the previous year, despite lower natural hazard losses. This was due in particular to the lower investment result. The continuing high inflation also negatively impacted the result and claims costs alike. Adjusted for commissions, Munich Re's customary review of its provisions resulted in a reduction in the basic claims provisions for prior years of €1,304m for the full year, which is equivalent to 4.0 percentage points of the combined ratio. This positive development related to almost all lines in our portfolio. The safety margin in the provisions remained virtually unchanged year on year.

Major losses – in excess of €10m each – totalled €4,173m (4,304m) in 2022, after retrocession and before tax. This amount includes run-off profits and losses for major claims from previous years, and is equivalent to 12.8% (16.5%) of net earned premium. Expenditure was lower than in the previous year and also less than our major-loss expectation of 13.0% of net earned premium.

Man-made major losses totalling €1,742m (1,165m) were higher year on year. This increase was partly due to expenditure of around €475m related to the war in Ukraine. In terms of net earned premium, man-made losses amounted to 5.4% (4.5%). The number of major losses was similar to the previous year.

Major losses from natural catastrophes totalled €2,430m (3,139m) for the full year 2022. This corresponds to 7.5% (12.0%) of net earned premium. The largest natural catastrophes of the year happened in the USA, the largest individual loss being Hurricane Ian, with expenditure of around €1.6bn. There were also a number of flood events, especially in Australia.

The combined ratio improved significantly to 96.2% (99.6%) on account of lower major-loss expenditure in 2022. Paid claims and the change in claims provisions totalled €21,647m (17,920m), along with net operating expenses of €9,658m (8,054m), compared with net earned premiums of €32,530m (26,071m).

The investment result decreased by €1,760m on the previous year, largely owing to impairment losses recognised in 2022 on equities as a result of falling stock markets and on fixed-interest securities as a result of the Russia-Ukraine war. The result was also negatively impacted by losses on derivatives on fixed-interest securities.

Our individual core markets and selected special lines

Based on premium volume, around 45% of our global property-casualty reinsurance business – including Risk Solutions – is written in North America. Around 30% of our premium comes from Europe, of which around half is generated in the United Kingdom. Further substantial shares were contributed by Asia (about 10%), as well as Australia/New Zealand, Africa and Latin America (approximately 5% each).

Prices in the US market continued to improve. Major losses from natural catastrophes exceeded the long-term average in 2022 due to Hurricane Ian.

Munich Reinsurance America Inc. wrote attractive reinsurance business in 2022, thanks to the positive market environment. At €5,690m (5,867m), premium declined, as US business was allocated to other units in the Group so as to optimally utilise capital. The result was lower than expected due to Hurricane Ian.

The premium income of HSB amounted to €1,888m and was once again up on the previous year (€1,371m). This increase was mainly attributable to growth generated not only with new products, but also with our core business. The result was once again very favourable. American Modern also posted a rise in premium income to €1,912m (1,472m) owing to higher prices and new business. The result situation fell short of expectations due to natural hazard losses such as Hurricane Ian and tornadoes.

In Canada, we are represented by the Munich Reinsurance Company of Canada and Temple Insurance Company. Premium volume increased slightly to €520m (491m). Despite a number of storm losses, e.g. from Hurricane Fiona, this year's result for 2022 is positive, though lower than the previous year.

Premium volume in the United Kingdom and in continental Europe increased significantly year on year to €11,055m (9,032m). In many markets, the increase was driven by the targeted development of business with selected clients and additional profitable new business. Substantial growth rates were achieved, particularly in proportional business in Italy, where premium income increased to €598m (524m). Germany also saw large increases, with premium income rising to €1,163m (888m).

At our Swiss subsidiary, New Reinsurance Company Ltd., business volume in the area of property-casualty business increased to €1,475m (1,017m). In particular, profitable traditional business was significantly supplemented by expanding existing client relationships, and by new business.

Premium in Australia and New Zealand once again increased significantly overall, to €1,568m (1,273m).

Whereas premium income in Japan had increased in recent years following two years of heavy losses in 2018 and 2019, premium levels in 2022 were stable at €582m (593m).

Business expanded greatly again in China, where premium income amounted to €1,166m (1,017m).

India continued on its growth path, with premium income climbing to €738m (577m).

In the Caribbean as well as in Central and South America, we still provide high capacity for the coverage of natural hazards, in particular windstorms and earthquakes. The increased demand owing to major losses from natural catastrophes (hurricanes, floods, earthquakes and wildfires) in recent years remained at a high level in 2022. We took systematic advantage of this situation to further improve our portfolio. This enabled us to grow the already high premium volume attained in recent years to €1,795m (1,456m) and to achieve a further margin improvement.

In agricultural reinsurance, we again saw a significant increase in premium income to €917m (500m) in the North American market, due mainly to a rise in sums insured and to new business. This good result overall was negatively impacted by the drought in the western USA, whereas the result for Canada was good.

Supported by a positive market environment, total premium volume in marine business increased by around 20% to €1,583m (1,315m). Reserves for potential losses from the conflict in Ukraine led to a minor loss.

At €1,149m (946m), credit and bond reinsurance saw significant year-on-year premium growth. Whilst traditional credit business generated a moderate rise, growth was again attributable to profitable new business in specialty and niche segments.

The market environment in direct industrial insurance continues to be attractive. Renewals in the market were characterised by price increases and new business. We were therefore able to increase premium income in direct business generated by our Facultative & Corporate unit to €1,696m (1,524m). The result was positive, despite Hurricane Ian and other losses.

Premium income in aviation and space business grew to €893m (779m). Due to major losses, this result fell short of expectations.

Our Capital Partners division offers clients a broad range of structured individual reinsurance and capital market products, as well as parametric and derivative solutions to hedge against weather and other risks. These solutions are applied to clients from the agricultural sector as well. We also use Capital Partners' services for our own purposes in order to buy retrocession cover on the basis of our defined risk strategy. In the reporting year, we concluded client transactions worth around €1.9bn in the area of structured reinsurance and implemented the corporate retrocession strategy for 2023. This included two sidecar transactions valued at nearly US$ 530m and a non-proportional retrocession programme that was used for placing different capacities for various nat cat scenarios (these ranged from around US$ 350m to US$ 570m, depending on the scenario).

ERGO Life and Health Germany

Key figures

		2022	Prev. year	Change
				%
Total premium income[1]	€m	10,466	9,909	5.6
Gross premiums written	€m	9,703	9,203	5.4
Share of gross premiums written by ERGO	%	50.9	50.5	
Technical result	€m	530	349	52.0
Investment result	€m	3,037	3,201	–5.1
Operating result	€m	471	202	133.4
Consolidated result	€m	485	164	196.5

1 Total premium income includes not only gross premiums written, but also savings premiums for unit-linked life insurance and capitalisation products in accordance with the applicable statutory accounting guidelines.

Premium

For the ERGO Life and Health Germany segment, information about the German life, health and Digital Ventures operations is provided below. Approximately 62% of the segment's gross premiums written derives from Health Germany, around 29% from Life Germany and approximately 9% from Digital Ventures.

Gross premiums written in the segment rose substantially in the 2022 financial year. Key drivers were the pleasing development in Health Germany, especially in travel and comprehensive health insurance, as well as growth attributable to new capital-market-linked products and biometric products in Life Germany. We also saw premium growth in Digital Ventures, especially from health insurance business. The segment's total premium income was also up on the previous year.

Result

The technical result in the ERGO Life and Health Germany segment improved significantly compared with the previous year, benefiting from good operating performance in all fields of business in 2022. The investment result was down year on year, but remained at a good level despite the difficult market environment. The decline was due to higher impairment losses on equities and on Russian and Ukrainian bonds, among other factors, but was partly offset by higher net gains on disposal and a higher net balance of derivatives.

In addition to the good operating performance, a positive one-off effect of around €200m from updated assumptions regarding the appropriation of future profits in accordance with IFRS in Life Germany, and a higher currency result, were largely responsible for the increase in the consolidated result.

Development of premium income and results by division

Life Germany

Key figures

	2022	Prev. year	Change
	€m	€m	%
Total premium income[1]	3,607	3,540	1.9
Gross premiums written	2,844	2,834	0.3
Technical result	–19	9	–
Operating result	342	36	841.7

1 Total premium income includes not only gross premiums written but also savings premiums for unit-linked life insurance and capitalisation products in accordance with the applicable statutory accounting guidelines.

Gross premiums written saw a slight year-on-year increase in the past financial year, owing in particular to the pleasing development of new business in capital-market-linked products and biometric products. Moreover, the new banking cooperation with Santander Consumer Bank got off to a successful start. Total premium income was also up on the previous year's level. While single-premium business increased year on year owing to the aforementioned reasons, regular-premium new business was nearly at the same level as in the previous year. We also posted growth in terms of the annual premium equivalent measure for new business (see also the following table).

New business Life Germany

	2022	Prev. year	Change
	€m	€m	%
Regular premiums	201	205	–1.8
Single premiums	735	616	19.4
Total	**936**	**821**	**14.1**
Annual premium equivalent[1]	275	267	3.1

1 The annual premium equivalent corresponds to the regular premium income plus 10% of single-premium volume.

The technical result was down year on year, chiefly because of higher costs at ERGO Vorsorge Lebensversicherung AG due to business growth. The investment result totalled €1,926m (2,066m) for the 2022 financial year; the decline was triggered, among other factors, by higher impairment losses on equities and fixed-interest securities, which were partly offset by higher net gains on disposal. The operating result increased significantly overall, partly on account of the positive one-off effect from updated assumptions regarding the appropriation of future profits in accordance with IFRS.

Health Germany

Key figures

	2022	Prev. year	Change
	€m	€m	%
Gross premiums written	5,976	5,513	8.4
Technical result	465	283	64.3
Operating result	90	155	–42.0

Gross premiums written in the Health Germany division, which also includes travel insurance business, were up considerably year on year. Premium growth in Health Germany was largely attributable to travel insurance, which was up appreciably by 88.3% to €832m (442m), mainly also as a result of the travel industry's continued recovery in 2022. In health business, premium income grew by 2.4% in supplementary health insurance and by 1.1% in comprehensive health insurance. The growth in supplementary insurance was for the most part attributable to business not similar to life insurance, which grew by 7.8%. In-force business in particular accounted for the increase in comprehensive health insurance.

The technical result increased compared with the previous year, thanks to good operational development in health. This more than compensated for an increase in travel insurance claims payments arising from the considerable increase in travel activity. The investment result fell to €1,103m (1,127m), in particular due to higher impairment losses on equities and fixed-interest securities, which were almost fully offset by a higher net balance of derivatives and higher net gains on disposal. The operating result was down year on year, above all due to policyholder participation in the significantly higher currency result.

Digital Ventures

Key figures

	2022	Prev. year	Change
	€m	€m	%
Gross premiums written	883	855	3.2
Technical result	84	56	49.3
Operating result	40	11	260.3

Gross premiums written saw a year-on-year increase. This premium growth was largely attributable to health insurance business, which grew by 4.0%, chiefly driven by supplementary dental insurance. Gross premiums written in property-casualty business were also up, by 1.0% compared with the previous year.

The technical result was appreciably up on the previous year, mainly due to property-casualty business. The investment result reached the same level as last year, at €8m (8m). Altogether, the operating result increased as a result of these developments.

ERGO Property-casualty Germany

Key figures

		2022	Prev. year	Change
				%
Gross premiums written	€m	4,198	3,919	7.1
Share of gross premiums written by ERGO	%	22.0	21.5	
Loss ratio	%	60.3	62.6	
Expense ratio	%	30.3	29.8	
Combined ratio	%	90.6	92.4	
Technical result	€m	394	302	30.4
Investment result	€m	109	209	–47.8
Operating result	€m	306	354	–13.6
Consolidated result	€m	185	234	–20.7

Premium

With regard to the segment's gross premiums written, our most important classes of business were fire and property insurance and third-party liability insurance – accounting for around 19% each – as well as motor insurance (about 18%).

Gross premiums written were significantly up on the previous year. The increase was mainly attributable to growth in the other classes of business, especially in engineering (24.8%) and fire and property insurance (10.2%). Growth in gross premiums written was also posted in third-party liability insurance (9.2%), marine insurance (8.1%), motor insurance (1.4%), and legal protection insurance (0.9%). In personal accident insurance, gross premiums written were down by 1.0%.

Result

The technical result improved significantly year on year. It benefited mainly from good organic premium growth and the favourable development of basic losses, including in third-party liability insurance and legal protection insurance – despite the fact that major-loss expenditure was down only slightly on the previous year.

The combined ratio for 2022 improved by 1.8 percentage points year on year and thus remained at a very good level thanks to robust operating performance, even though the major-loss burden was similar to that of 2021. Given the significant increase in premium income, the loss ratio improved year on year, whilst the expense ratio remained almost stable. Paid claims and the change in claims provisions totalled €2,410m (2,357m), along with net operating expenses of €1,210m (1,122m), compared with net earned premiums of €3,996m (3,764m).

The investment result decreased considerably compared with the previous year, partly owing to higher impairment losses on equities and Russian bonds, and to lower gains from the disposal of fixed-interest securities. It should also be noted that the previous year's investment result had been boosted by high dividend payouts on alternative investments.

The strong improvement in the technical result did not fully compensate for the decline in the investment result and the significantly lower currency result; accordingly, the consolidated result was lower than in the previous year.

ERGO International

Key figures

		2022	Prev. year	Change
				%
Total premium income[1]	€m	5,396	5,339	1.1
Gross premiums written	€m	5,157	5,092	1.3
Share of gross premiums written by ERGO	%	27.1	28.0	
Loss ratio	%	63.0	62.4	
Expense ratio	%	31.2	30.5	
Combined ratio[2]	%	94.3	92.9	
Technical result	€m	301	313	–3.6
Investment result	€m	237	324	–26.9
Operating result	€m	231	266	–13.0
Consolidated result	€m	155	207	–25.0

1 Total premium income includes not only gross premiums written but also savings premiums for unit-linked life insurance and capitalisation products in accordance with the applicable statutory accounting guidelines.
2 Includes property-casualty business and short-term health business (excluding health insurance conducted like life insurance).

Premium

With regard to the segment's gross premiums written, property-casualty insurance accounted for around 59%, health for about 30% and life insurance for approximately 11%. Our biggest markets are Poland, accounting for approximately 34% of the premium volume, and Belgium and Spain, accounting for approximately 18% each.

We posted an overall increase in gross premiums written, despite the sale of companies outside Germany. This was mainly thanks to strong premium growth in the Baltic states and Poland, and in Belgian and Spanish health business (the latter after being adjusted for a sale). Adjusted to eliminate these sales and negative currency translation effects, gross premiums written in the ERGO International segment would have increased by 4.5% compared with the previous year. The segment's total premium income was also up on the previous year.

In international property-casualty business, gross premiums written rose by 2.5% to €3,013m (2,939m). We posted significantly higher premiums in the Baltic states especially, with premium growth in almost all lines of business, and in Poland, owing to growth particularly in motor insurance and engineering.

Gross premiums written in international health business increased by 1.5% year on year to €1,562m (1,538m). The positive development in Belgium together with the strong growth of our Spanish health insurer was able to more than offset the one-off effect resulting from the sale of a shareholding in Spain.

At €583m (614m), gross premiums written in international life insurance business were down by 5.2% on the previous year. In addition to reduced premiums in Belgium, this was chiefly due to a decrease in gross premiums written in Austria. and to the sale of international companies. By contrast, we posted pleasing premium growth in Poland. Total premium income amounted to €821m (862m).

New business Life International

	2022	Prev. year	Change
	€m	€m	%
Regular premiums	71	68	4.0
Single premiums	95	112	–15.2
Total	**166**	**180**	**–7.9**
Annual premium equivalent[1]	81	80	1.3

1 The annual premium equivalent corresponds to the regular premium income plus 10% of single-premium volume.

Result

The technical result was slightly down on the previous year, and thus remained at a good level. The lower results in property-casualty business, in particular in Poland, and in legal protection business in the Netherlands, were partially offset by higher results in the Baltic states, in life insurance business, especially in Belgium, and in Spanish health business.

In the international segment, the combined ratio rose year on year, notably on account of a higher loss ratio in Poland, particularly in motor insurance, and major losses in property insurance. By contrast, we achieved improvements in the combined ratio, including in the Baltic states and in Austria. At 91.9%, the combined ratio for international health business was slightly higher than in the previous year in Spain, and thus remained at a very good level. Paid claims and the change in claims provisions totalled €2,269m (2,163m), along with net operating expenses of €1,125m (1,056m), compared with net earned premiums of €3,600m (3,467m).

The investment result was down on the previous year chiefly due to lower net income from our joint venture investments. Other drivers included higher impairment losses.

Overall, the consolidated result was down year on year due to a lower investment result and a decreased currency result.

Financial position

Analysis of our capital structure

Our primary insurance and reinsurance operations have a significant influence on the structure of our balance sheet. In this context, investments serve to cover technical provisions (80% of the balance sheet total). Equity (7% of the balance sheet total) and bonds classified as strategic debt (2% of the balance sheet total) are the most important sources of funds.

Development of Group equity

	31.12.2022	Prev. year	Change
	€m	€m	%
Issued capital and capital reserve	7,422	7,432	-0.1
Retained earnings	15,414	13,822	11.5
Other reserves	-5,205	6,642	-
Consolidated result attributable to equity holders of Munich Reinsurance Company	3,432	2,933	17.0
Non-controlling interests	139	116	20.4
Total	**21,202**	**30,945**	**-31.5**

The lower Group equity is above all due to the reduction of valuation reserves for fixed-interest securities and equities. The reduction is in turn due to substantially higher interest rates, and to lower stock market prices. Neither the higher consolidated result nor the higher currency translation reserve was sufficient to compensate for this aspect.

Strategic debt

We define as strategic debt all financial instruments with the character of outside financing that do not have a direct link to our operative business. Strategic debt supplements our financial resources, is essentially designed to optimise the cost of capital, and ensures that we have sufficient liquidity at all times. We quantify our debt leverage to make our capital structure transparent. This is defined as the ratio – expressed as a percentage – of strategic debt to the sum of Group equity and strategic debt. Our technical provisions are not considered, even though they are mostly available to us on a long-term basis as a source of financing for investment.

Debt leverage

		31.12.2022	Prev. year	Change
		€m	€m	%
Strategic debt[1]		5,048	5,348	-5.6
Group equity		21,202	30,945	-31.5
Total		**26,250**	**36,293**	**-27.7**
Debt leverage	%	19.2	14.7	

1 The components of our strategic debt are subordinated liabilities, and bonds and notes issued (see the relevant sections in the Notes to the consolidated financial statements).

Munich Re's subordinated liabilities amounted to €4,748m (see section (19) Subordinated liabilities in the Notes to the consolidated financial statements). Of this sum, €4,644m were recognised at the reporting date as eligible own funds pursuant to Solvency II. Under the supervisory regulations of Solvency II, subordinated liabilities are recognised as own funds provided that they are available at all times to cover losses on a going-concern basis.

Technical provisions

Reinsurance business accounts for approximately 45% of technical provisions; around 55% comes from primary insurance. In contrast to liabilities under loans and securities issued, we cannot foresee with certainty how high our liabilities from underwriting business will be and when they will arise. This applies especially to reinsurance. Whereas in property insurance a major portion of the provisions is generally paid out within two to three years, in life or liability insurance substantial amounts may still be due decades after the contracts were concluded. The currency distribution of our provisions reflects the global orientation of our Group. Besides the euro, our main currencies are the US dollar, pound sterling, the Canadian dollar and the Australian dollar.

Restraints on disposal

Since we are an international (re)insurance group, some of our financial resources are subject to restraints on disposal. Supervisory authorities in some countries, for example, require foreign reinsurers to establish premium and reserve deposits to the benefit of primary insurers, or set up trustee accounts or guarantees with certain financial institutions. At the reporting date, restraints on disposal applied to investments with a volume of €11bn (11bn). In addition, there were contingent liabilities. Information on these can be found in the Notes to the consolidated financial statements under (48) Contingent liabilities, other financial commitments.

Capital position

Through active capital management, we strive to ensure that Munich Re's capital satisfies all applicable standards. In addition to the capital requirements determined using our internal risk model, more far-reaching requirements by regulatory authorities, rating agencies and our key insurance markets must be met. The Solvency II ratio is a fundamental measure of Munich Re's capital strength.

Further information on this ratio can be found in the risk report. We aim to ensure that our financial strength is such that it enables us to take advantage of profitable opportunities for growth, is not significantly affected by normal fluctuations in capital market conditions, and remains at a reasonable level even in the wake of major loss events or substantial falls in the stock markets.

At the same time, we also define an appropriate level of Group own funds as one which does not lastingly exceed that which is required. Excess capital is returned to our shareholders via dividends and share buy-backs. In practice, capital repatriation comes up against limits because the German Commercial Code (HGB) obligates our parent, Munich Reinsurance Company, to conduct prudent accounting – with regard to the claims equalisation provision, for instance. This restricts the revenue reserves and profit distribution possibilities, but stabilises results in years with high claims expenditure. Additional information can be found under Munich Reinsurance Company (information reported on the basis of German accountancy rules).

Between 2006 and 2022, we returned a total of €34.2bn to our shareholders in the form of dividends and share buy-backs.

Information in accordance with Sections 315a and 289a of the German Commercial Code (HGB) and explanatory report by the Board of Management

Composition of the subscribed capital

As at 31 December 2022, Munich Reinsurance Company's share capital of €587,725,396.48 was divided into 140,098,931 registered, no-par-value, fully paid shares. The rights and obligations deriving from these shares follow from the applicable statutory requirements and the Company's Articles of Association. With respect to the Company, the only parties deemed shareholders in accordance with Section 67 of the German Stock Corporation Act (AktG) are those entered as such in the Company's register of shareholders.

Restrictions on voting rights and the transfer of shares

The listed registered shares are subject to transfer restrictions. The issuing of restrictedly transferable registered shares by Munich Reinsurance Company dates back to the Company's foundation in 1880. Restricted transferability means that these shares may be transferred to another holder only with the Company's consent, which, according to Article 3(2) of Munich Reinsurance Company's Articles of Association, is granted at the Company's discretion. Since the share-trading processes have been made very efficient, the consent requirement does not lead to any delays in entry in the register. In recent decades, it has been granted without exception. Contractual agreements are in place with the members of the Board of Management providing for two-year or four-year minimum holding periods for the shares of the Company they had to purchase as part of share-based remuneration programmes under the remuneration system applicable prior to 2018. The minimum holding periods for these shares ended on 31 May 2022.

Each share carries one vote at the Annual General Meeting and determines the shareholders' participation in the Company's profit. This excludes own shares held by the Company, from which it enjoys no rights. In the cases specified in Section 136 of the Stock Corporation Act, voting rights from the shares concerned are excluded by law. Insofar as shareholders are entered under their own name as being the holders of shares which belong to a third party and exceed the upper limit of 2% of the share capital as stated in the Articles of Association, the shares entered shall not carry any voting rights, pursuant to Article 3(5) of the Articles of Association.

Shareholdings exceeding 10% of the voting rights

Munich Reinsurance Company has not been notified of, nor is it otherwise aware of, any direct or indirect shareholdings in the Company that exceeded 10% of the voting rights as at 31 December 2022.

Shares with special control rights

There are no shares with special control rights.

System of control for employee share scheme where the control rights are not exercised directly by the employees

Like other shareholders, employees of Munich Reinsurance Company exercise their control rights in accordance with statutory provisions and the Articles of Association.

Statutory regulations and provisions of the Articles of Association regarding appointment and dismissal of members of the Board of Management, and concerning amendments to the Articles of Association

The legal parameters for the appointment and dismissal of members of the Board of Management are specified in the Company's Co-determination Agreement, Articles 13(3) and 16 of the Articles of Association, Sections 84 and 85 of the Stock Corporation Act (AktG), and Sections 24, 47 and 303 of the German Insurance Supervision Act (VAG). Munich Re's Co-determination Agreement and Articles of Association follow the legal tenets of the German Co-Determination Act (MitbestG). Pursuant to Article 16 of the Articles of Association, the Board of Management must comprise a minimum of two persons; beyond this, the number of members is determined by the Supervisory Board. From 1 January 2023, the Board of Management will comprise ten members. The Supervisory Board appoints the members of the Board of Management pursuant to Section 84 of the Stock Corporation Act and may dismiss them at any time for good cause. On initial appointment, members of the Board of Management are usually given contracts for a term of three years. Extensions of up to five years are possible. For the appointment or dismissal of members of the Board of Management, Article 13(3) of the Articles of Association stipulates a two-thirds majority of the votes cast on the Supervisory Board. If the requisite majority is not obtained in the initial resolution, the appointment or dismissal of the Board of Management requires a simple majority of the votes cast. The second resolution is only possible following a suitable period of reflection and after the issue has been dealt with in the competent committee, but is thereafter also possible by written consent in lieu of a meeting. In exceptional cases, members of the Board of Management may also be appointed by a court of law, pursuant to Section 85 of the Stock Corporation Act.

The Stock Corporation Act contains general provisions governing amendments to the Articles of Association – Section 124(2) sentence 3, and Sections 179–181 of the Act. These state that only the Annual General Meeting can make resolutions on changes to the Articles of Association. In order to be carried, such a resolution must receive the votes cast by at least three-quarters of the share capital represented in the vote. The Articles of Association may stipulate a different capital majority (higher or lower) or other requirements, but the Company's Articles of Association do not provide for any such special features.

The Stock Corporation Act contains special regulations on amendments to the Articles of Association where increases and reductions in share capital are concerned (Sections 182–240 of the Act). Under these regulations, resolutions on capital measures are generally to be made by the Annual General Meeting. Within a self-determined scope, however, the Annual General Meeting can authorise the Board of Management to initiate certain (capital) measures. The authorisations relating to Munich Reinsurance Company are listed below. In all such cases, a resolution of the Annual General Meeting is required that has been adopted by at least a three-quarter majority of the share capital represented in the vote. Where these resolutions are concerned, the Company's Articles of Association again do not provide for other (i.e. higher) majorities or further requirements. Pursuant to Article 14 of the Articles of Association and Section 179(1) sentence 2 of the Stock Corporation Act, the Supervisory Board is empowered to make amendments to the Articles of Association which affect only the wording.

Powers of the Board of Management, with particular regard to the option of issuing or buying back shares

The powers of the members of the Board of Management are defined in Sections 71 and 76–94 of the Stock Corporation Act (AktG). The Board of Management has the following powers to issue and buy back shares:

- The Annual General Meeting of 28 April 2022 authorised the Board of Management to buy back, with the consent of the Supervisory Board, shares until 27 April 2025 up to a total amount of 10% of the share capital at the time of the resolution, pursuant to Section 71(1) no. 8 of the Stock Corporation Act. The shares acquired plus other own shares in the possession of the Company, or attributable to the Company pursuant to Sections 71d and 71e of the Stock Corporation Act may at no time amount to more than 10% of the share capital. In accordance with the provisions of the authorisation, the shares may be acquired in various ways. The Board of Management is authorised to use shares thus acquired for all legally permissible purposes, in particular those specified in the authorisation, whilst excluding subscription rights. Among other things, the Board of Management is empowered under Section 71(1) no. 8 of the Stock Corporation Act to retire the shares without requiring further approval from the Annual General Meeting.

- The Annual General Meeting of 29 April 2020 authorised the Board of Management to issue, with the consent of the Supervisory Board, in one or more issues until 28 April 2025, subordinated or non-subordinated convertible bonds, bonds with warrants, profit participation rights, profit participation certificates or combinations of such instruments, with or without a limited term to maturity, which may grant the holders or creditors conversion rights, warrants or conversion obligations in respect of shares of the Company up to a maximum proportional amount of the share capital of €117m (hereinafter referred to as "bonds"), with a total nominal amount of up to €5bn. Shareholders are generally entitled to a subscription right in respect of these bonds, but the Board of Management is authorised, with the consent of the Supervisory Board, to exclude this subscription right in the cases specified in the authorisation.

- Under Article 4(1) of the Articles of Association, the Board of Management is authorised, with the consent of the Supervisory Board, to increase the Company's share capital at any time up to 27 April 2026 by an amount of up to €117.5m by issuing new registered, no-par-value shares against cash or non-cash contribution (Authorised Capital 2021). In accordance with the above-mentioned provisions of the Articles of Association, it may exclude subscription rights.

- Pursuant to Article 4(2) of the Articles of Association, a contingent increase in the share capital by up to €117m, consisting of new registered no-par-value shares (Contingent Capital 2020), has been authorised. The purpose of this contingent capital increase is to permit shares to be granted to the holders of convertible bonds, bonds with warrants, profit participation rights or profit participation certificates (or combinations of such instruments) with conversion rights, warrants or conversion obligations, which are issued by the Company or a Group company in accordance with the authorisation granted by the Annual General Meeting on 29 April 2020 for the period from 29 April 2020 to the end of the day on 28 April 2025. The increase in the share capital is to be carried out only to the extent that warrants or conversion rights under the aforementioned instruments are exercised, or conversion obligations under these instruments are fulfilled, and insofar as other means of fulfilment are not introduced.

The complete text of the aforementioned authorisations and the declaration by the Board of Management is provided in the agenda of the respective Annual General Meetings at www.munichre.com/agm/archive. Munich Reinsurance Company's Articles of Association are available at www.munichre.com/articles-of-association.

Significant agreements which take effect, alter or terminate upon a change of control following a takeover bid, and resultant implications

Based on our underwriting guidelines, our reinsurance agreements generally include a clause that grants one or both parties to the agreement a right of extraordinary cancellation in the event that "the other party merges with another company or its ownership and control undergoes a material change". Such or similar clauses are typical of the industry. They are also common in joint venture or cooperation agreements between shareholders of a joint investment company.

Compensation agreements concluded with members of the Board of Management or employees for the event of a takeover bid

There are no compensation agreements with members of the Board of Management or employees for the event of a takeover bid.

Analysis of the consolidated cash flow statement

Our primary insurance and reinsurance operations have a significant influence on Munich Re's cash flow. We generally first collect the premiums for the risks assumed and do not make payments until later, when claims need to be settled. Cash flow statements of insurance companies are therefore of limited relevance. The cash flow statement is adjusted to eliminate the effects of fluctuations in exchange rates and changes in the entities consolidated.

Consolidated cash flow statement

	2022	Prev. year	Change
	€m	€m	%
Cash flows from operating activities	–7,644	5,226	–
Cash flows from investing activities	11,347	–3,818	–
Cash flows from financing activities	–2,702	–1,681	–60.7
Cash flows for the financial year	**1,001**	**–273**	–

In the consolidated cash flow statement, the consolidated profit of €3,419m is used as the starting point for determining the cash inflows from operating activities. The consolidated result is also adjusted by €2,860m to take account of the lower technical provisions. The net gains on the disposal of investments – which in adjusting the consolidated profit have to be deducted from the cash flows – are essentially attributable to the disposal of securities available for sale.

Outflows from investing activities were determined by the change from the acquisition/sale and maturity of investments and insurance-related investments totalling €11,276m.

The cash outflows for financing activities stem mainly from the dividend payment in 2022.

Overall in the year under review, cash – which encompasses cash with banks, cheques and cash in hand – increased by €1,001m (including currency effects) to €6,448m. There were items pledged as security and other restrictions on title amounting to €59m (10m).

Risk report

Risk governance and risk management system

Risk management organisation

Organisational structure
Munich Re has set up a governance system as required under Solvency II. The main elements of this system are the risk management, compliance, audit and actuarial functions. At Group level, risk management is part of the Integrated Risk Management division (IRM) and reports to the Group Chief Risk Officer (Group CRO). In addition to the Group functions, there are risk management units ("mirror functions") in the fields of business.

Risk governance
Our risk governance ensures that an appropriate risk and control culture is in place by clearly assigning roles and responsibilities for all material risks. Risk governance is supported by various committees at Group and field-of-business level. The Board of Management must consult the risk management function on major decisions to be taken.

Defining the risk strategy
The risk strategy, which is aligned with Munich Re's business strategy, defines where, how and to what extent we are prepared to incur risks. The further development of our risk strategy is embedded in the annual planning cycle, and hence in our business planning. The risk strategy is approved by the Board of Management, and discussed with both the Audit Committee of the Supervisory Board and the full Supervisory Board as a material element of the own risk and solvency assessment (ORSA) process.

We determine the risk strategy by defining risk tolerances for a number of risk criteria and limits for risk concentrations that are based on the capital and liquidity available, and on our earnings target, and provide a frame of reference for the Group's operating divisions.

Implementation of strategy and the risk management cycle
The risk appetite defined by the Board of Management is reflected in our business planning and integrated into the management of our operations. If capacity shortages or conflicts with the limit system or regulations arise, defined escalation and decision-making processes are followed. These have been designed to ensure that the interests of the business and risk management considerations are weighed and reconciled with each other as far as possible.

Our implementation of risk management at the operational level embraces the identification, analysis and assessment of all material risks. This provides a basis for risk reporting, the control of limits and monitoring.

Risk identification is performed by means of appropriate processes and indicators, which are complemented by expert opinions. At Munich Re, the early identification of risks is primarily operationalised using the emerging risk process. We define emerging risks as new or changing risks that are characterised by a high degree of uncertainty in terms of occurrence probability, expected loss amount, and possible effects on Munich Re.

As part of the risk analysis, a quantitative and qualitative assessment of all risks at consolidated Group level is made in order to take into account possible interactions between risks across all fields of business. Internal risk reporting provides the Board of Management with regular information on the risk situation, as regards the individual risk categories and the entire Group alike. This ensures that negative trends are identified in sufficient time for countermeasures to be taken. The purpose of our external risk reporting is to provide clients, shareholders and the supervisory authorities with a clear overview of the Group's risk situation. Actual risk limits are derived from the risk strategy: taking the defined risk appetite as a basis, limits, rules and any risk-reducing measures required are approved and implemented. We also have a comprehensive early-warning system that draws our attention to any potential shortages of capacity.

Quantitative risk monitoring based on indicators is carried out both centrally and within units. We monitor risks that cannot be expressed directly as an amount either centrally or in our units, depending on their materiality and allocation. The risk management system is regularly audited by Group Audit.

Internal control system[1]
Our internal control system is an integrated, Group-wide system for managing operational risks. Comprising two key components – the Operational Risk Control System (ORCS) and the Compliance Management System (CMS) – our internal control system addresses both Group management requirements and local regulations.

Operational Risk Control System
The Operational Risk Control System (ORCS) is an essential part of the internal control system. At Group level, the ORCS is overseen by the Integrated Risk Management division (IRM), which reports to the Group Chief Risk Officer (Group CRO). As part of the ORCS, risk and control self-assessments are carried out at least once a year in all fields of business, and the material operational risks, including compliance-related risks, are identified and assessed in the process. Key controls and management measures to mitigate the material operational risks are analysed and assessed. In addition, the risk management function carries out independent

1 The section on the internal control system is part of the combined management report and was not audited.

analyses and cross-comparisons of operational risks and controls (monitoring). Significant control deficiencies are addressed by means of improvement measures and/or close monitoring. The main findings derived from the risk and control self-assessments and from monitoring are reported to the Board of Management.

The identification, management and control of risks arising out of the accounting process is indispensable for the production of reliable annual financial statements at both consolidated and solo-undertaking level. Risks significant for financial reporting from a Group perspective are integrated into the internal control system in accordance with uniform criteria. The risks are checked annually by the process owners to ascertain whether they are up to date, and the controls are amended as necessary.

The standardised methodology has been implemented on the basis of a Group-wide ORCS policy and guidelines specific to the fields of business. The decision about whether to include a Group undertaking in the standardised ORCS is taken on the basis of the principle of proportionality – with due consideration being given to the nature, scale and complexity of the risks inherent in the undertaking's operations, and to compliance with regulatory and legal requirements. The Group undertakings that have not been integrated into the ORCS Group standard control their risks in compliance with the principles of good corporate governance, Group-wide principles of risk management and relevant national laws.

Compared to the previous year, no material changes were made to the ORCS (process, structure or responsibilities) in the reporting period.

Compliance Management System

The second key component of the internal control system is the compliance function. At Group level, the compliance function is performed by the Group Compliance & Legal (GCL) division and headed up by the Group Chief Compliance Officer (Group CCO). In addition to the Group function, there are compliance units in the fields of business, each headed up by its own Chief Compliance Officer. The Board of Management has assigned the development, implementation, monitoring and ongoing improvement of the Group-wide compliance management system (CMS) to the Group-level compliance function. GCL manages the compliance activities by means of Group-wide requirements, and monitors their implementation on the basis of the Group-wide CMS. Based on its three pillars of prevention, detection and response, the CMS is designed primarily to help ensure compliance with rules on the part of Munich Re, its management and its staff. The foundation of the CMS comprises an inherent sense of responsibility towards all business activities; a steadfast compliance organisation with clearly defined roles and responsibilities; and independent, suitable and qualified human resources that enable the compliance function to work effectively and efficiently. An intact compliance culture supports each individual CMS pillar.

In the scope of the CMS, compliance risks are systematically identified, analysed and appropriately handled so as to minimise the risks. This process is based on the foundation of the required ORCS methodology. Process results are reported to the Board of Management and the Supervisory Board's Audit Committee.

Compared to the previous year, no material changes to the ORCS were made in the reporting period concerning processes, structure or controls.

You will find a detailed description of the main features of this CMS in the section "Compliance" in the combined non-financial statement.

Statement on the adequacy and effectiveness of the risk management system and the internal control system[1]

In reviewing the adequacy and effectiveness of our risk management systems and internal control systems, we take into consideration many pieces of information in order to, among other things, identify any material internal control deficiencies. The primary pieces of information are as follows:

- the auditor's report on the results of the accounting-related control system,
- the annual report on the results of the ORCS,
- regular risk reporting, in particular by the Group CRO,
- regular (at least semi-annual) compliance reporting by the Group CCO, in particular on key compliance metrics and essential contents of the compliance management system (material compliance cases, focal points of compliance consulting, compliance-related training measures, recent changes in the regulatory environment), and
- confirmation of the maturity level of the CMS by the compliance officers in the individual fields of business.

In addition, the Audit Committee of the Supervisory Board regularly requests reports on the adequacy and effectiveness of the internal control system and on changes to the risk and control landscape compared with the previous year. The audit reports from Group Audit confirm the effectiveness of the accounting-related internal control system.

In light of the information and reports above – and considering the assessments made by experts in the divisions IRM, GCL and Group Audit – we consider our risk management systems and internal control systems to be adequate overall. Based on the fact that no material violations or systematic deficiencies were identified in the reporting period, we consider our risk management and internal control systems to therefore also be effective overall.

1 The statement on the adequacy and effectiveness is part of the combined management report and was not audited.

Significant risks

Our general definition of risk is possible future developments or events that could result in a negative prognosis or a negative deviation from the Group's targets. We consider three criteria when evaluating the materiality of risks. First, the extent to which a risk could influence stakeholder assessments of Munich Re. Second, the ways in which a risk could impact the solvency of Munich Re. And third, the extent to which a risk could exhaust cumulative limits or budgets. We have applied this definition consistently to each business unit and legal entity, taking account of its individual risk-bearing capacity. The assessment of whether a risk is significant or not for a company according to the above definition is performed in the responsible risk management functions. We make a basic distinction between risks included in our internal model and covered by risk-based capital and other risks not quantified in the internal model. The risks included in the internal model are divided into the following risk categories: underwriting risk in property-casualty business, underwriting risk in life and health business, market risk, credit risk and operational risk. Sustainability risks can affect all of these risk categories and are therefore an integral part of the management of these risks.

Risks depicted in the internal model

Munich Re has a comprehensive internal model that determines the capital needed to ensure that the Group is able to meet its commitments even after extreme loss events. We use the model to calculate the capital required under Solvency II (the solvency capital requirement, or SCR).

The SCR is the amount of eligible own funds that Munich Re needs to have available, with a given risk tolerance, to cover unexpected losses in the following year. It corresponds to the value at risk of the economic profit and loss distribution over a one-year time horizon with a confidence level of 99.5%, and thus equates to the economic loss for Munich Re that, given unchanged exposures, will be exceeded each year with a statistical probability of 0.5%. Our internal model is based on specially modelled distributions for the risk categories property-casualty, life and health, market, credit and operational risks. We use primarily historical data for the calibration of these distributions, complemented in some areas by expert judgement. Historical data covers a long period to provide a stable and appropriate estimate of our risk parameters. We continue to take account of diversification effects we achieve through our broad spread across various risk categories and the combination of primary insurance and reinsurance business. We also take into account dependencies between the risks, which can result in higher capital requirements than would be the case if no dependency were assumed. We then determine the effect of the loss absorbency of deferred taxes.

The table shows the solvency capital requirement for Munich Re and its risk categories as at 31 December 2022.

Solvency capital requirements (SCR)

	Reinsurance		ERGO		Diversification	
	31.12.2022	Prev. year	31.12.2022	Prev. year	31.12.2022	Prev. year
	€m	€m	€m	€m	€m	€m
Property-casualty	12,785	11,014	730	639	-603	-484
Life and health	5,771	6,470	883	1,360	-329	-397
Market	6,191	7,052	3,500	6,496	-1,177	-2,065
Credit	2,357	2,510	947	1,903	-58	-88
Operational risk	1,046	830	746	618	-234	-246
Other[1]	494	459	333	357		
Subtotal	**28,643**	**28,334**	**7,139**	**11,374**		
Diversification effect	-9,982	-10,281	-1,586	-1,594		
Tax	-3,446	-2,958	-965	-1,126		
Total	**15,215**	**15,095**	**4,588**	**8,653**	**-2,110**	**-3,209**

→	Group			
	31.12.2022	Prev. year		Change
	€m	€m	€m	%
Property-casualty	12,911	11,169	1,742	15.6
Life and health	6,325	7,434	-1,109	-14.9
Market	8,514	11,483	-2,969	-25.9
Credit	3,245	4,325	-1,080	-25.0
Operational risk	1,558	1,202	356	29.6
Other[1]	826	816	10	1.2
Subtotal	**33,381**	**36,428**	**-3,047**	**-8.4**
Diversification effect	-11,768	-12,332	564	-4.6
Tax	-3,920	-3,556	-364	10.2
Total	**17,693**	**20,540**	**-2,847**	**-13.9**

1 Capital requirements for other financial sectors, e.g. institutions for occupational retirement provision.

At Group level, the SCR decreased by 13.9% to €17.7bn – compared with €20.5bn as at 31 December of the previous year. This decrease was mainly driven by the substantial rise in interest rates worldwide, which led to lower solvency capital requirements in the categories of market, credit, and life and health. The decline in SCR was slightly mitigated by the growth in property-casualty reinsurance business regarding all natural hazards and in all regions; the growth in life reinsurance business; and the appreciation of the US dollar. Other information about the changes in individual risk categories and details about risk concentrations can be found in the following sections.

Property-casualty underwriting risk

The property-casualty risk category encompasses the underwriting risks in the property, motor, third-party liability, personal accident, marine, aviation and space, and credit classes of insurance, together with special lines also allocated to property-casualty. Further risk-relevant information on property-casualty business can be found in the Notes to the consolidated financial statements under (40) Disclosures on risks from property-casualty insurance business.

Underwriting risk is defined as the risk of insured losses being higher than our expectations. The premium and reserve risks are significant components of the underwriting risk. Premium risk is the risk of future claims payments relating to insured losses that have not yet occurred being higher than expected. Reserve risk is the risk of technical provisions established potentially being insufficient to cover losses that have already been incurred. In measuring loss provisions, we follow a cautious reserving approach and assess uncertainties conservatively. In every quarter, we also compare notified losses with our loss expectancy, in order to sustain a high level of reserves.

We differentiate between large losses involving expenditure that exceeds a certain large-loss limit; losses affecting more than one risk or more than one line of business (accumulation losses); and all other losses (basic losses). For basic losses, we calculate the risk of subsequent reserving being required for existing risks within a year (reserve risk) and the risk of under-rating (premium risk). To achieve this, we use actuarial methods that are based on standard reserving procedures, but take into account the one-year time horizon. The calibration for these methodologies is based on our own historical loss and run-off data. Appropriate homogeneous segments of our property-casualty portfolio are used for the calculation of the reserve and premium risks. To aggregate the risk to whole-portfolio level, we apply correlations that take account of our own historical loss experience.

Our experts develop scientifically sound models for the accumulation scenarios that quantify the probability of occurrence and the damage potential. The models also take risk-limiting elements into consideration, such as cover limits. In addition to natural catastrophes, we include other accumulation risks such as cyber and pandemics, using special models. Based on these scenarios, the potential effects on our portfolio are determined using stochastic models.

Our internal model considers the resulting accumulation-risk scenarios to be independent events. Munich Re's greatest natural hazard exposure lies in the scenarios "Atlantic Hurricane" and "Earthquake California", for which our estimates of annual loss exposure are €10.0bn (8.2bn) for Atlantic Hurricane and €6.3bn (5.8bn) for Earthquake California (before tax, retained) for a return period of 200 years.

As part of our regular validation, we look in particular at the sensitivity of results produced by the risk model for large and accumulation losses to changes in the return periods or loss amounts for events, or a change in the business volumes written. We also consider the effect of changes of dependency assumptions on the results. We regularly adapt our models on the basis of the findings from our validation.

Another measure for controlling underwriting risks is the targeted cession of a portion of our risks to other carriers via external reinsurance or retrocession. Most of our companies have intra-Group and/or external reinsurance and/or retrocession cover.

In addition to traditional retrocession, we use alternative risk transfer for natural catastrophe risks in particular. Under this process, underwriting risks are transferred to the capital markets via special purpose vehicles.

Solvency capital requirement – Property-casualty

The solvency capital requirement increased by around 15.6% at Group level, reflecting growth in reinsurance business regarding all natural hazards and in all regions. The appreciation of the US dollar further reinforced the increase.

Solvency capital requirements (SCR) – Property-casualty

	Reinsurance		ERGO		Diversification	
	31.12.2022	Prev. year	31.12.2022	Prev. year	31.12.2022	Prev. year
	€m	€m	€m	€m	€m	€m
Basic losses	4,790	4,486	630	566	–448	–378
Large and accumulation losses	12,261	10,532	420	360	–312	–299
Subtotal	**17,051**	**15,018**	**1,050**	**926**		
Diversification effect	–4,266	–4,004	–319	–286		
Total	**12,785**	**11,014**	**730**	**639**	**–603**	**–484**

→	Group			Change
	31.12.2022	Prev. year		Change
	€m	€m	€m	%
Basic losses	4,972	4,674	298	6.4
Large and accumulation losses	12,369	10,593	1,776	16.8
Subtotal	**17,340**	**15,267**	**2,073**	**13.6**
Diversification effect	–4,429	–4,098	–331	8.1
Total	**12,911**	**11,169**	**1,742**	**15.6**

Life and health underwriting risk

We define underwriting risk as the risk of insured benefits payable in life or health insurance business being higher than expected. Of particular relevance are biometric risks and policyholder-behaviour risks, such as lapses and lump-sum options. We differentiate between risks that have a short-term or long-term effect on our portfolio. In addition to the simple risk of random fluctuations resulting in higher claims expenditure in a particular year, the adverse developments with a short-term impact that we model notably include rare – but costly – events such as pandemics. To this end, we model losses and the sum at risk – taking into particular consideration excess mortalities in connection with, for instance, the pandemics of the 20th and 21st centuries.

Further relevant information on the risks in life and health insurance can be found in the Notes to the consolidated financial statements under (39) Disclosures on risks from life and health insurance business.

Life primary insurance products in particular, and a large part of our health primary insurance business, are long-term in nature, and the results they produce are spread over the entire duration of the policies. This can mean that negative developments in risk drivers with long-term effects sustainably reduce the value of the insurance portfolio (trend risks). The risk drivers mortality and disability are dominated by the life and health reinsurance segment, particularly by exposure in North America and the Asia-Pacific region. We also underwrite longevity risk in the life and health reinsurance segment, especially in the United Kingdom. The longevity risk driver can additionally be found in the products marketed by ERGO in Germany, together with typical risks related to policyholder behaviour, such as the lapse risk. To a lesser extent, we write risks connected with the increase in treatment costs, which arise in the ERGO field of business in particular.

Risk modelling attributes probabilities to potential modified assumptions. We use primarily historical data extracted from our underlying portfolios to calibrate these probabilities, and additionally apply general mortality rates for the population to model the mortality trend risk. To enable us to define appropriate parameters for the modelling of the range of areas in which we operate, portfolios with a homogeneous risk structure are grouped together and individual comprehensive profit and loss distributions determined. We then aggregate these distributions, taking account of the dependency structure to obtain an overall distribution.

Our largest short-term accumulation risk in the life and health risk category is a severe pandemic. We counter this risk by examining our overall exposure in detail using scenario analysis, and by deploying appropriate measures to manage the risks.

In reinsurance, we control the assumption of biometric risks by means of a risk-commensurate underwriting policy. Interest-rate and other market risks are frequently ruled out by depositing the provisions with the cedant, with a guaranteed rate of interest from the deposit. In individual cases, these risks are also hedged by means of suitable capital market instruments. We also limit our exposure to individuals and groups of persons in life insurance.

For primary insurance, substantial risk minimisation is achieved through product design. In case of adverse developments, parts of the provision for premium refunds – which are recognised and reversed in profit or loss – are of great significance for risk-balancing. In health primary insurance, most long-term contracts include the possibility and/or obligation to adjust premiums. Practically, however, there are limits to the resilience of policyholders.

Limits are laid down for the pandemic scenarios, which affect the portfolio in the shorter term, and for the longevity scenarios and their longer-term effects in conformity with the risk strategy. We continue to analyse the sensitivity of the internal model to the input parameters on a regular basis. This relates to the interest rate, the biometric risk drivers and customer behaviour.

Solvency capital requirement – Life and health

The solvency capital requirement decreased by 15% at Group level. In the reinsurance field of business, the SCR fell primarily on account of higher interest rates and the consequently greater discounting of the effect of biometric stresses. This was offset by business growth and the appreciation of the US dollar. The SCR also decreased in the ERGO field of business, mainly due to higher euro interest rates.

Solvency capital requirements (SCR) – Life and health

	Reinsurance		ERGO		Diversification		Group	
	31.12.2022	Prev. year	31.12.2022	Prev. year	31.12.2022	Prev. year	31.12.2022	Prev. year
	€m	€m	€m	€m	€m	€m	€m	€m
Health	343	255	597	833	–82	–55	857	1,033
Mortality	4,343	4,775	176	197	–15	–12	4,504	4,960
Disability	3,111	3,672	175	380	1	–20	3,287	4,031
Longevity	942	1,284	409	636	–17	–30	1,333	1,890
Other	298	446					298	446
Diversification	–3,266	–3,963	–474	–685			–3,955	–4,927
Total	**5,771**	**6,470**	**883**	**1,360**	**–329**	**–397**	**6,325**	**7,434**

Market risk

We define market risk as the risk of economic losses resulting from price changes in the capital markets. It includes equity risk, general interest-rate risk, specific interest-rate risk, property-price risk and currency risk. The general interest-rate risk relates to changes in the basic yield curves, whereas the specific interest-rate risk models changes in credit risk spreads – for example, on euro government bonds from various issuers, or on corporate bonds. We also include in market risk the risk of changes in inflation rates and implicit volatilities (cost of options). Fluctuations in market prices affect not only our investments, but also the underwriting liabilities – especially in life primary insurance. Due to the long-term interest-rate guarantees given in some cases and the variety of options granted to policyholders in traditional life insurance, the amount of the liabilities can be highly dependent on conditions in the capital markets.

Market risks are modelled by means of Monte Carlo simulation of possible future market scenarios. We revalue our assets and liabilities for each simulated market scenario, thus showing the probability distribution for changes to basic own funds.

We use appropriate limit and early-warning systems in our asset-liability management to manage market risks. Derivatives such as equity futures, options and interest-rate swaps – which are used mainly for hedging purposes – also play a role in our management of the risks. The impact of derivatives is taken into account in the calculation of solvency capital requirements. Further information on derivative financial instruments can be found in the Notes to the consolidated financial statements, (8) Other securities at fair value through profit or loss and insurance-related investments.

Solvency capital requirements (SCR) – Market

	Reinsurance		ERGO		Diversification	
	31.12.2022	Prev. year	31.12.2022	Prev. year	31.12.2022	Prev. year
	€m	€m	€m	€m	€m	€m
Equity risk	2,943	2,997	1,736	2,806	-219	-151
Interest-rate risk	2,654	2,771	1,970	4,349	-968	-1,635
General interest-rate risk	2,002	1,760	1,280	1,540	-459	-684
Specific interest-rate risk	1,145	1,648	1,518	3,114	-432	-777
Diversification interest-rate risk	-492	-638	-828	-305	-77	-173
Property risk	1,724	1,610	767	948	-137	-108
Currency risk	4,234	4,907	211	218	-45	-12
Subtotal	**11,555**	**12,284**	**4,685**	**8,321**		
Diversification effect	-5,363	-5,232	-1,185	-1,826		
Total	**6,191**	**7,052**	**3,500**	**6,496**	**-1,177**	**-2,065**

→	Group		Change	
	31.12.2022	Prev. year		
	€m	€m	€m	%
Equity risk	4,461	5,652	-1,191	-21.1
Interest-rate risk	3,656	5,486	-1,830	-33.4
General interest-rate risk	2,822	2,616	206	7.9
Specific interest-rate risk	2,230	3,985	-1,755	-44.0
Diversification interest-rate risk	-1,397	-1,116	-281	25.2
Property risk	2,354	2,450	-96	-3.9
Currency risk	4,400	5,113	-713	-13.9
Subtotal	**14,870**	**18,701**	**-3,831**	**-20.5**
Diversification effect	-6,356	-7,218	862	-11.9
Total	**8,514**	**11,483**	**-2,969**	**-25.9**

Solvency capital requirement – Market

The solvency capital requirement declined by 25.9% at Group level. Detailed information on the changes in the individual subcategories is available in the following sections.

Equity risk

The reduction in the equity risk was chiefly due to a reduction in equity exposure.

Interest-rate risk

The general interest-rate risk in the reinsurance field of business rose moderately. The specific interest-rate risk fell on account of lower exposure to fixed-interest securities with credit risk exposure, which was attributable, among other things, to the restructuring of portfolios and to lower market values caused by higher interest rates.

The interest-rate risks in the ERGO field of business were down, mainly owing to considerably higher interest-rate levels. As a result, it became easier for German life insurance companies to generate guaranteed minimum interest rates, in turn leaving Munich Re with less risk.

In the reinsurance field of business, the market value of interest-sensitive investments as at 31 December 2022 was €70.1bn (77.1bn). Measured in terms of modified duration, the interest-rate sensitivity of those investments was 4.8 (6.0), while that of the liabilities was 5.0 (6.4). A decrease in interest rates of one basis point led to a change in available own funds amounting to around €6.4m (7.9m).

In the ERGO field of business, the fair value of interest-sensitive investments was €105.9bn (130.0bn). The modified duration was 7.6 (9.6) for interest-sensitive investments and 6.9 (9.3) for liabilities. A decrease in interest rates of one basis point led to a change in available own funds amounting to around €6.0m (0.0m).

Property risk
The property risk decreased slightly, mainly on account of the larger risk buffers available to German life insurance companies.

Currency risk
The currency risk sank due to a reduced position in foreign currencies.

Credit risk
We define credit risk as the financial loss that Munich Re could incur as a result of a change in the financial situation of a counterparty. In addition to credit risks arising out of investments in securities and payment transactions with clients, we actively assume credit risk through the writing of credit and financial reinsurance and in corresponding primary insurance business.

When determining credit risks, Munich Re uses a portfolio model that is calibrated over a longer period (at least one full credit cycle); it also takes account of changes in fair value caused by rating migrations and debtor default. The credit risk arising out of investments (including deposits retained on assumed reinsurance, government bonds and credit default swaps, or CDSs) and reserves ceded is calculated by individual debtor. If the credit risk does not exclusively depend on the debtor's creditworthiness, but also on other factors (such as subordination, guarantees or collateralisation), these are also taken into account. We use historical capital market data to determine the associated migration and default probabilities. Correlation effects between debtors are derived from the sectors and countries in which they operate, and sector and country correlations are based on the interdependencies between the relevant stock indices. The calculation of the credit risk in "Other receivables" is based on internal expert assessments. We also capitalise the credit risk for highly rated government bonds. Information on ratings can be found in the Notes to the consolidated financial statements, (6) Loans ff.

Risk concentrations are mainly in government bonds issued by countries inside and outside the European Union. In addition, corporate bonds, pfandbriefe and similar covered bonds account for a large proportion of the investments.

We use a cross-balance-sheet counterparty limit system valid throughout the Group to monitor and control our Group-wide credit risks. The limits for each counterparty (a group of companies or country) are based on its financial situation as determined by the results of our fundamental analyses, ratings and market data, and the risk appetite defined by the Board of Management. The utilisation of limits is calculated on the basis of risk-weighted exposures. There are also volume limits for securities lending and repurchase transactions. Group-wide rules for collateral management – for example, for over-the-counter derivatives and catastrophe bonds issued – reduce the resultant credit risk.

In monitoring the country risks, we do not simply rely on the usual ratings, but perform independent analyses of the political, economic and fiscal situation in the countries issuing bonds in which Munich Re is most heavily invested. On this basis, and taking account of the investment requirements of the fields of business in the respective currency areas and countries, limits or action to be taken are approved. These are mandatory throughout the Group for investments and the insurance of political risks.

With the help of defined stress scenarios, our experts forecast potential consequences for the financial markets, the fair values of our investments, and the present values of our underwriting liabilities. At Group level, we counter any negative effects with the high degree of diversification in our investments and our liability structure, and with our active Group-wide asset-liability management.

The sensitivities in the credit risk model are regularly checked against the most important input parameters. This primarily concerns the recovery rates from insolvent debtors, the probabilities of debtor migration between rating classes, and the parameters for correlations between debtors. All validations demonstrated the appropriateness of the modelling approaches used.

We manage credit default risk in retrocession and external reinsurance with the assistance of limits determined by the Retro Security Committee. Our reserves ceded to reinsurers were assignable to the following rating categories as at 31 December 2022:

Ceded share of technical provisions according to rating

%	31.12.2022	Prev. year
AAA	3.4	4.7
AA	14.8	14.5
A	48.2	49.1
BBB and lower	2.8	5.4
No rating available	30.8	26.2

Less than one-third of the technical provisions covering ceded business came from reinsurers exhibiting sufficient creditworthiness but no official rating, as had been the case in the previous year. Further information on the risks arising out of receivables relating to insurance business can be found in the Notes to the consolidated financial statements, (12) Other receivables.

Solvency capital requirement – Credit

The solvency capital requirement decreased by 25.0% at Group level. The reduction was mainly attributable to higher interest rates, as a result of which the market values of fixed-interest securities fell. In addition, higher interest rates caused the risk buffers available to our life insurance companies to grow, leaving less credit risk with Munich Re.

Operational risk

We define operational risk as the risk of losses resulting from inadequate or failed internal processes, incidents caused by the actions of personnel or system malfunctions, or external events. This includes criminal acts committed by employees or third parties, insider trading, infringements of antitrust law, business interruptions, inaccurate processing of transactions, non-compliance with reporting obligations, and disagreements with business partners.

We use scenario analyses to quantify operational risks. The results are fed into the modelling of the solvency capital requirement for operational risks and are validated using various sources of information, such as the ORCS findings and both internal and external loss data.

The sensitivity in the internal model is regularly checked against the most important input parameters. This mainly relates to the dependence of the result on frequency and loss amounts and the parameters for the correlations between scenarios. The analyses showed no anomalies in the year under review.

Solvency capital requirement – Operational risk

At Group level, the solvency capital requirement for operational risks increased by 29.6%, owing primarily to a model adjustment.

Other risk categories

As is typical throughout the industry and in accordance with regulatory requirements, the risk types specified below are not explicitly capitalised in our internal model. Qualitative risk management is very important for dealing with these risks.

Reputational risk

We define reputational risk as the risk of loss that may result from a deterioration in the Group's public image among clients, shareholders or other parties. Our reputation is affected by our behaviour in a number of areas, such as client relationships, product quality, corporate governance, earnings power, our treatment of employees and corporate responsibility. Reputational risk is closely intertwined with all other risk categories. The assessment of individual business transactions in terms of their reputational risk is performed at field-of-business level by reputational risk committees. Where a reputational risk could potentially have an impact across fields of business, other central divisions may be involved in the assessment if required.

Strategic risk

We define strategic risk as the risk of making wrong business decisions, implementing decisions poorly, or being unable to adapt to changes in the operating environment. Existing and new potential for success in the Group and the fields of business in which it operates creates strategic risks. At Munich Re, strategic risks are identified, assessed and managed in a recurring process comprising the Strategic Dialogue and Annual Planning. The purpose of the Strategic Dialogue is to analyse and assess the risks and opportunities of Munich Re's longer-term strategic alignment. The Group-wide annual (financial) planning process is integrated into the Strategic Dialogue. This annual planning process includes analysing financial sensitivities and risks as well as assessing the capital management and risk strategy. These process steps are mirrored in the primary insurance and reinsurance fields of business and in investment management. In doing so, we put our strategy to the test in close dialogue with the various stakeholders at different levels (Group, primary insurance and reinsurance, investment management). The above processes ensure that the Board of Management addresses the strategic risks in detail and is well placed to control and manage them. The Group CRO is involved in both the strategic and operational business planning as well as in significant company sales, mergers and acquisitions.

Security risk

We define security risks as risks resulting from threats to the security of our employees, data, information, and property. We are intensifying our analysis of cyber risks in recognition of the increasing importance of information technology for Munich Re's core processes and the dynamic environment of cyber crime.

The Group Chief Information Security Officer (CISO), a function that is assigned to risk management, is responsible for the central and Group-wide coordination and control of all activities involving information security risks. Security risk committees have also been set up in the fields of business to assess and manage security risks. The members of the security risk committees are managers from operational units (e.g. IT Security), the control functions (e.g. Risk Management, Information Security, Data Protection) and other representatives.

To further improve cyber security, we are working on initiatives both specific to and across the fields of business to ensure a level of protection in line with our information security strategy.

Further information can be found in the combined non-financial statement, in the section "Responsible digital transformation, data protection and cyber security".

Liquidity risk

Our objective in managing liquidity risk is to ensure that we are in a position to meet our payment obligations at all times. To guarantee this, the liquidity position is continuously monitored and subject to stringent requirements for the availability of liquidity. The short-term and medium-term liquidity planning is submitted to the Board of Management on a regular basis.

The liquidity risk is managed within the framework of our holistic risk strategy, with the Board of Management defining limits on which minimum liquidity requirements for our operations are based. These risk limits are reviewed annually, and compliance with the minimum requirements is continuously monitored. Using quantitative risk criteria, we ensure that Munich Re has sufficient liquidity available to meet its payment obligations even under adverse scenarios, with the liquidity position being assessed both for extreme insurance scenarios and for adverse situations in the capital markets.

Further information on liquidity risks in life and health and property-casualty insurance business can be found in the Notes to the consolidated financial statements, (39) Disclosures on risks from life and health insurance business, and (40) Disclosures on risks from property-casualty insurance business.

Solvency ratio under Solvency II

The solvency ratio under Solvency II is the ratio of the eligible own funds to the solvency capital requirement.

Solvency II ratio[1]

		31.12.2022	Prev. year	Change
Eligible own funds[2]	€m	46,019	46,626	-607
Solvency capital requirement	€m	17,693	20,540	-2,847
Solvency II ratio	%	260	227	

1 Eligible own funds excluding the application of transitional measures for technical provisions; including the application of transitional measures for technical provisions, the own funds amounted to €51.1bn (52.2bn); Solvency II ratio: 289% (254%).

2 Despite positive economic earnings of €2.8bn, the eligible own funds decreased as at the reporting date on account of the following: the dividend of €1.6bn, agreed by the Board of Management and to be proposed to the Annual General Meeting for the 2022 financial year; the planned share buy-back programme with a volume of €1.0bn; the adjustment to the opening balance amounting to €0.2bn; and other measures totalling €0.4bn. The repayment and issue of a subordinated bond similarly led to a slight overall reduction in the eligible own funds.

The eligible own funds as at the balance sheet date take into account deductions for the dividend of €1.6bn agreed by the Board of Management and proposed to the Annual General Meeting for the 2022 financial year.

Other risks

Economic and financial-market developments and regulatory risks

Munich Re is heavily invested in the eurozone, and in reinsurance in particular in the US dollar currency area, a consequence of our global business activities in these currency areas. We prioritise maintaining a correspondingly broad diversification of investments to cover our technical provisions and liabilities. We take various risk management measures to counter fluctuations in the capital markets that can lead to volatilities in the Group's own funds.

The recovery of the global economy from the recession triggered by the coronavirus pandemic faltered substantially over the course of 2022 – with the economic recovery nearly stagnating altogether at the end of the year, particularly in Europe. One reason for this stagnation was the Russia/Ukraine war and the consequently much higher prices, especially of energy, which in turn impacted real income. A second reason lay in the significant tightening of monetary policy, which dampened the propensity to invest. In addition, the rapidly rising key interest rates led to substantial losses in the bond and equities markets.

Against the backdrop of a recently weak economy and higher interest rates, refinancing has become more expensive for businesses, private households and governments alike – and the general risk of insolvencies has increased. The global tightening of monetary policy could hamper economic activity even more severely than expected. This would likely occur if the recent above-average inflation rates were to become entrenched – on account of higher collective wage agreements, for example. Moreover, rising prices could contribute to social upheavals and political instability. Over the course of 2023, polarised politics in the United States Congress could lead to a failure to raise the debt ceiling in time, which would make it impossible to rule out a temporary payment default.

For Munich Re, above-average inflation rates can have a particularly adverse effect on its provision for outstanding claims. Despite this, we consider our stance on anticipated inflation to be adequate in light of both our conservative reserving approach and the standard actuarial methods that we use, which address the effects of inflation. Nevertheless, there is a risk that inflation exceeds forecasts and remains high for longer than anticipated, in turn impacting the business operations, financial position and financial performance of the Group. Although Munich Re protects itself against accelerated inflation by holding inflation-linked bonds and inflation-linked assets such as property, commodities and infrastructure, these measures would not be sufficient to fully mitigate the repercussions of inflation. Conversely, the strong increase in interest rates in the eurozone associated with high inflation has been a significant relief for life insurance companies with guaranteed minimum interest rates. Although the number of lapses could increase as soon as interest rates rise significantly above the guaranteed interest rate, Munich Re life insurance companies have not on the whole observed such a trend. Thus far, both the positive impact on earnings capacity and the solvency ratio of life insurance companies significantly outweigh the lapse risk.

The focal point of geopolitics remains the war between Russia and Ukraine. In this context, we posted provisions in various lines of business and posted write-downs, particularly of Russian and Ukrainian bonds, in the reporting year. In addition, we cancelled all new business in Russia and Belarus shortly after war broke out, and existing contracts have not been renewed. We consequently regard the remaining risks directly associated with the war of aggression as largely mitigated with respect to both investment risks and underwriting risks. However, further escalation of the war cannot be ruled out. In addition, geopolitical conflicts (especially between China and the USA) and a large number of other major conflicts and trouble spots – including a possible deterioration in the confrontation between the USA and Iran – could, if they escalate, have perceptible regional and global consequences, and make capital markets more volatile, at least in the short term. Against the backdrop of the above-mentioned fault lines, there remains a risk of a deepening division of the global economy and of access to technology into two spheres of influence.

And the eurozone remains home to stability risks. It is in the shadow of the war between Russia and Ukraine that the EU has sent strong signals of cohesion. In connection with the ECB's tightening of monetary policy, refinancing costs remain high, as does the consequently greater risk of potential falls in ratings and declines in market values – especially in countries with high sovereign debt. But the ECB has already implemented the transmission protection instrument (TPI), a new programme for limiting distortions in the bond markets. Political risks nevertheless remain, with the disputes related to the rule-of-law mechanisms similarly exacerbating disintegration risks. Conversely, the "communitisation" of sovereign debt, already underway, could lead to German government bonds losing their safe-haven status in the medium term, which would also involve falls in market values. The risk of power outages and energy supply failures could return as a threat for the winter of 2023/2024, in turn impacting European investments in particular. Moreover, there remains a risk that the bilateral trade agreement between the European Union and the United Kingdom could be terminated as part of the renegotiation of the Northern Ireland Protocol.

Global players such as Munich Re are subject to increased fiscal pressure nationally and internationally, as well as a higher audit intensity. Given the current political emphasis on an appropriate taxation of international companies and the implementation of a global minimum tax rate, which has already been approved by the EU, this trend will continue and intensify.

Climate change

With respect to the ecological dimension of sustainability, climate change represents the central sustainability risk. Climate-related risks arise in the form of physical risks and transition risks, with interdependencies between both risk types. Physical risks arise as a consequence of extreme weather events (heat, drought, windstorms, hail, etc.) resulting from climate change. Transition risks arise as a consequence of political or economic measures taken for the purpose of conversion to a more low-carbon economy or reactions to changing living conditions in certain regions. Both risks not only have long-term effects, but can also have disruptive short-term consequences. The occurrence of natural catastrophes with greater frequency or of greater severity than expected could have a substantial adverse impact on Munich Re's results and financial situation.

Munich Re is working intensively on the impact of climate change. Our risk management competence built up over many years allows us to professionally assess changes in natural hazard risks and to adequately account for these risks in the pricing of hedging products as well as in contract wording and in calculating solvency capital requirements.

We take short-term (physical) impacts of climate change on our insurance business into account, particularly in the risk assessment of natural hazards. The validation activities for modelling accumulation risks also take climate change risks into account. Munich Re regularly analyses how resilient the Company is against various climate change scenarios to derive potential action requirements. We generally assess the risks resulting from climate change as material risks for the Company. We currently regard the impacts on our risk exposures as immaterial on the whole. This is, in particular, thanks to our ability to regularly adjust risk exposures.

We see relevant, long-term risks in long-term, illiquid investments; in possible exposures to litigation risks in our insurance portfolio; and in the risk of litigation against Munich Re itself. We address these risks with suitable mitigation measures such as employee training, appropriate guidelines for writing business and making investments, and through the diversification of investments.

Further information, in particular on the probable maximum loss (PML) to our insurance portfolio from climate-related natural catastrophes for a 200-year return period, is available in the section "Insurance" of our combined non-financial statement.

Legal risks

As part of the normal course of business, Munich Re companies are involved in court, regulatory and arbitration proceedings in various countries. The outcome of those or possibly imminent proceedings is neither certain nor predictable. However, we believe that none of these proceedings will have a significant negative effect on the financial position of Munich Re. Such proceedings are dealt with using combined expertise within the individual departments and units.

Summary

In accordance with the prescribed processes, our Board committees explicitly defined the risk appetite for significant risk categories in the year under review, and quantified it with key figures. We determined and documented the risk appetite across the Group hierarchy and communicated it throughout the Group. In 2022 risk exposures were regularly quantified and compared with the risk appetite. They were reported on and discussed in the relevant committees.
At 260%, the Solvency II ratio is at a very comfortable level above our communicated optimal range of 175–220% (without application of transitional measures).

Munich Re thus continues to have a very solid capital base. Based on up-to-date findings and on our internal model, Munich Re's Solvency II ratio (without application of transitional measures) would be at least within or above the optimal range even in the event of major loss events and negative capital market effects. We therefore assess Munich Re's risk situation to be manageable and under control.

Opportunities report

Our integrated business model, strong capitalisation and innovation, good customer focus, and deep knowledge of the industry put us in a good position to benefit from continuously evolving markets and changes in client behaviour, while generating profitable growth by developing customised solutions for our clients. Unless stated otherwise, the opportunities for Munich Re outlined below generally relate equally to all fields of business.

Business environment

We assume that global economic growth will be sluggish. High inflation, monetary policy tightening, geopolitical uncertainty, restrictions owing to the coronavirus pandemic and bottlenecks in global supply chains will limit economic dynamics. Our high degree of diversification and our strong capitalisation mitigate the risks we face, and will open up additional business opportunities for us provided the macroeconomic parameters that are especially relevant to us improve. Stronger economic growth in combination with stable price levels tends to have a positive impact on the demand for insurance cover and triggers higher premium volume in most classes of insurance. In addition, the coronavirus pandemic has caused many reinsurance and primary insurance clients to recognise that they need increased risk protection. The need for first-class medical care and cover against unforeseeable risks was brought home to consumers, and this could have a positive effect on demand for insurance products, in particular private health insurance.

Economic dynamics, which are expected to be positive in the long term, and the low degree of insurance penetration in many developing and emerging markets represent opportunities for profitable expansion and further diversification of our business portfolio along the entire value chain. Examples include the targeted growth in reinsurance through service provision for cedants in emerging markets in Asia, the Middle East and South America.

Against the backdrop of high inflation and diminishing global reinsurance capacity in 2022, we expect an ongoing hard market in international property insurance, with numerous opportunities for profitable growth, especially in our reinsurance and industrial insurance portfolios.

Digital transformation

Digitalisation is increasingly transforming the markets, and the continuous changes in customer behaviour are demanding greater flexibility in providing access, coverage and solutions, as well as in our underlying internal structures. Driving digital transformation therefore remains one of Munich Re's strategic priorities and is part of our Group Ambition 2025.

We are continually adjusting our internal structures and processes to reduce complexity and costs, while at the same time seizing the opportunities that digital transformation offers. We are attempting to automate as much as possible, along the entire value chain and across all units. We want to deliver what our clients and we ourselves expect in terms of quality, speed and security, while continuing to increase efficiency. This applies not just to traditionally client-focused areas such as sales, contract administration and claims handling, but also for example to the digitalisation of our asset management. In addition, we are leveraging opportunities arising from flexible, mobile working models to retain and attract qualified staff.

We are also taking account of increasing demand for digital products in our research and development activities. At ERGO, for example, we invest heavily in the development of new technologies such as robotics, artificial intelligence and voice technology. In doing so, we intend to make our processes and operations more efficient and intelligent, thus enhancing customer experience.

We are supporting our transformation towards more innovative products and services through major investments in our innovation activities, digital infrastructure and know-how, as well as through joint ventures with strategic partners such as start-ups. Through Munich Re's presence in major start-up hubs, our collaboration with accelerators, and our corporate venture capital activities, we are seeing the emergence of numerous new cooperation and business ideas which will help us to lastingly safeguard our business model, expand it beyond the insurance value chain, and tap the growth opportunities provided by the digital world. In reinsurance, we are focusing on five main areas: digital cooperation models in life and health and property-casualty business, IoT applications and services, cyber, data-driven underwriting and claims management solutions, and mobility solutions. One example of this is our participation in the Swiss start-up CertX which, together with the Munich Re spin-off CertAI, is developing an artificial intelligence validation service which will enable us to hone our analytical skills in assessing the use of artificial intelligence for the insurance risks of tomorrow. Given our clients' hybrid requirements, we are actively driving the integration of various products and sales channels, and the expansion of direct sales in all classes of primary insurance.

Social trends

In life and health insurance, an ageing population coupled with frequently diminishing state benefits are leading to increasing demand for private and company insurance plans, which we are catering to with our broad spectrum of products in life primary insurance. MEAG is also playing a key role in this respect with its investment expertise. Moreover, advances in medicine and the increasing significance of prevention in primary insurance are providing us with a host of possibilities for satisfying our clients' most diverse needs and binding them to Munich Re, as well as for expanding our business. In life reinsurance, we also offer our clients integrated reinsurance and financing solutions.

Ecologically and socially sustainable action is becoming more and more important for the insurance industry. Our many different activities in this context and our high and reliable ESG standards give us the opportunity to be perceived as an attractive partner for investors, clients and staff, and to address societal expectations. Further information is available in our combined non-financial statement.

Climate change and natural catastrophes

We expect climate change to lead to an increase in weather-related natural catastrophes in the long term – despite the global efforts being made. This growing loss potential will result in greater demand for primary insurance and reinsurance products. Our expertise in dealing with natural hazard risks and advances in our risk management – such as new, high-resolution risk models – allow us to support preventative measures, calculate competitive prices for traditional covers, and develop new solutions for our primary insurance and reinsurance clients.

We see considerable business potential in the transition to a climate-neutral economy. We anticipate a sharp increase in investment in renewable energy in an effort to meet the net-zero goal by 2050. We possess leading engineering and risk assessment expertise and we have innovative risk-transfer concepts ready for this investment surge. For the production of hydrogen using renewable energy sources, our Green Tech Solutions unit has developed an innovative guarantee cover that takes over availability and performance risks related to hydrogen production facilities from manufacturers, operators and investors.

Expanding the limits of insurability

Together with our clients, we strive to expand the boundaries of insurability in many ways and provide our customers with new and enhanced types of cover. For example, in cyber insurance we are offering our clients diverse coverage concepts for risks and damage caused by faulty product software and cyber attacks, as well as services ranging from preventative measures to the recovery of lost data. At the same time, we are developing a broad spectrum of insurance covers for types of risk that are rapidly becoming as important as the traditional ones in a changing world: for example, performance guarantees for alternative energy and motors, risks from artificial intelligence and algorithms, parametric risks, flood risks or credit insurance, as well as data-driven solutions and services marketed under third-party brands. Together with cooperation partners, our ERGO Mobility Solutions division develops innovative service and product solutions in the field of mobility.

Prospects

Our predictions for the forthcoming development of our Group are based on planning figures, forecasts and expectations. Consequently, the following outlook merely reflects our imperfect assumptions and subjective views. We do not accept any responsibility or liability in the event that they are not realised in part or in full.

It is not only the obvious fluctuations in the incidence of major losses that make an accurate forecast of IFRS results impossible. Despite the fact that our assets are geared to the characteristics of our liabilities, forecasts are also made more difficult by the pronounced volatility of the capital markets and exchange rates.

Outlook 2023

Outlook for Munich Re

		2023
Insurance revenue (gross)	€bn	58
Total technical result life and health reinsurance	€bn	1
Combined ratio property-casualty reinsurance	%	86
Combined ratio ERGO Property-casualty Germany	%	89
Combined ratio ERGO International	%	90
Return on investment[1]	%	Over 2.2
Consolidated result	€bn	4.0
Economic earnings	€bn	Over 4.0

1 Excluding insurance-related investments.

All forecasts continue to be characterised by increased uncertainty: both the outcome of the military conflict between Russia and Ukraine, and the further development of the coronavirus pandemic, remain unforeseeable. It can be assumed that overall economic development will be fragile and that volatility on the financial markets will remain high. For Munich Re, this entails risks related to higher inflation rates, a possible widening of credit risk spreads, and potential defaults on bonds. Further loss potential is to be found in possible reductions in the market values of shares and property, and changes in interest rates.

The transition to the new reporting standards IFRS 9/17 will mean changes in both the nomenclature and calculation of the key figures used in the outlook. This will not apply to our economic earnings.

Munich Re

For 2023, we estimate that the Group's gross insurance revenue will total around €58bn. From now on, insurance revenue will supersede gross premiums written. Insurance revenue in accordance with IFRS 17 differs significantly from gross premiums written from a methodological standpoint, particularly because those premium components that are paid back to policyholders are deducted. Accordingly, the revenue is comparatively lower.

Overall, we expect an annual return on investment of more than 2.2%. From 2023, the return on investment will be based on the new reporting standard IFRS 9.

On the basis of IFRS 9/17, the target for our consolidated result in 2023 is around €4.0bn. Comparable, published results from the previous year are not available. The projected consolidated result is affected by IFRS 9 and IFRS 17 being applied for the first time, particularly by the influence of interest rates being included in the measurement of underwriting liabilities. The forecasts are subject to major losses being within normal bounds and claims provisions remaining unchanged. Furthermore, they are dependent on our income statement not being impacted by severe currency or capital market movements, significant changes in fiscal parameters, or other special factors.

For 2023, we expect the economic earnings to surpass the IFRS consolidated result of €4.0bn. Although the method used in determining the consolidated result under IFRS 9/17 is closer to the one used for economic earnings than was the case with the current accounting method, certain differences remain. These concern in particular the timing of the recognition of profit and differences in the impact of capital market effects. The projection for the economic earnings is based on the assumption of stable conditions and capital markets, unchanged modelling parameters, and normal major-loss incidence. Deviations from these assumptions may have a different impact on economic earnings than on IFRS accounting. Further information on economic earnings as a management tool can be found in the section “Tools of corporate management and strategic financial objectives”.

Subject to approval by the Annual General Meeting, the dividend will amount to €11.60 per share. This is equivalent to a total payout of €1.6bn.

Reinsurance

In the reinsurance field of business, we expect gross insurance revenue of around €39bn for 2023. Currency translation effects could potentially have a considerable impact on this estimate. The consolidated result for reinsurance will total around €3.3bn. Comparable, published results from the previous year are not available.

We project a total technical result of around €1bn for life and health reinsurance. This total technical result includes the result from insurance contracts measured in accordance with IFRS 17 and the result from insurance-related financial instruments under IFRS 9. It is higher than the previous target figure, as the method now used provides for an earlier recognition of profit. In addition, the target figure takes into account profitable growth in life and health reinsurance.

The combined ratio in property-casualty reinsurance will likely improve significantly to around 86% – chiefly due to the calculation method used under IFRS 17. The ratio is in turn based on net insurance revenue, which supersedes net earned premiums.

In the reinsurance renewals as at 1 January 2023, the trend towards a hard insurance market continued. In some markets, a reduction in the capacities offered by reinsurers and capital market players could be observed. As a result, quality continues to play an important role in the selection of reinsurers. This allows financially solid reinsurers to position themselves as reliable long-term partners.

Prices continued to develop positively overall across all regions, especially in US business, and above all for loss-affected portfolios. Original rates are also increasing in many markets. Overall, the high price level for Munich Re's portfolio was further improved with a 2.3% increase. Higher interest rates had a positive effect on economic profitability.

As at 1 January 2023, around two-thirds of non-life reinsurance treaty business was up for renewal, with a focus on Europe, the USA, and global business, and representing a premium volume of €15.1bn. Total premium volume written increased by 1.3% to around €15.3bn. Thanks to our excellent client relationships and our expertise, we were able to tap into attractive business opportunities across all regions and classes of business. These involved the expansion of existing client relationships as well as new business.

The renewals as at 1 April 2023 (above all in Japan and India) and 1 July 2023 (parts of the portfolio in the USA, Australia and Latin America) will involve the renegotiation of a premium volume of around €7.1bn in reinsurance treaty business. It is Munich Re's expectation that the recent price increases and improved treaty conditions will continue in these renewal rounds, too.

ERGO

In the ERGO field of business, we expect gross insurance revenue of around €19bn for 2023. The IFRS 9/17-based consolidated result is expected to total around €0.7bn. Comparable, published results from the previous year are not available.

We aim to achieve a combined ratio of around 89% in the ERGO Property-casualty Germany segment, and around 90% in the ERGO International segment. Both forecasts are based on the assumption that major losses are at a normal level. Just as in property and casualty reinsurance, from 2023 the ratio will be based on net insurance revenue, not on net earned premiums.

Munich Reinsurance Company (information reported on the basis of German accountancy rules)

For the 2022 financial year, Munich Re again utilised the option of publishing a combined management report in accordance with Section 315(5) in conjunction with Section 298(2) of the German Commercial Code (HGB). Supplementary to our Munich Re reporting, this section provides details on the performance of Munich Reinsurance Company.

The annual financial statements of Munich Reinsurance Company are prepared in accordance with German accounting rules (HGB). By contrast, the consolidated financial statements are prepared in accordance with International Financial Reporting Standards (IFRSs). As a result, there are some deviations in the accounting policies – mainly with regard to intangible assets, investments, financial instruments, individual underwriting assets and liabilities, and deferred taxes.

Market environment and major factors of influence

The macroeconomic and industry environment of Munich Reinsurance Company essentially corresponds to that of the Group. Please see the section “Macroeconomic and industry environment” for more detailed information.

Business performance

In the 2022 financial year, Munich Reinsurance Company’s business performance was pleasing overall. Major-loss expenditure was lower than in the previous year, although it was impacted by significant losses from Hurricane Ian.

In addition, the reserve releases made for prior accident years following a review of our reserving position were up on the previous year. This led to an improvement in the underwriting result before claims equalisation. Another key driver of the positive result was growth of profitable business.

On a general note, the financial year was greatly influenced by geopolitical and macroeconomic turbulence. The military conflict between Russia and Ukraine accelerated global inflation owing to energy scarcity caused by the war. As a consequence, central banks significantly increased their key interest rates.

The accounting result of Munich Reinsurance Company developed as follows:

Condensed income statement for Munich Reinsurance Company

	2022	Prev. year	Change
	€m	€m	%
Earned premiums for own account	24,513	21,367	14.7
Interest on technical provisions for own account	360	349	3.2
Other underwriting income for own account	–18	25	–
Claims incurred for own account	–17,540	–16,183	–8.4
Change in other technical provisions for own account	333	478	–30.4
Expenses for performance-related and non-performance-related premium refunds for own account	–1	–1	31.6
Operating expenses for own account	–6,063	–5,230	–15.9
Other underwriting expenses for own account	–36	–13	–188.2
Subtotal	**1,549**	**792**	**95.6**
Change in claims equalisation provision and similar provisions	250	2,046	–87.8
Underwriting result for own account	**1,799**	**2,839**	**–36.6**
Investment income	6,188	4,947	25.1
Investment expenses	–5,981	–1,601	–273.7
Interest income on technical provisions	–395	–379	–4.3
Other income	1,907	1,429	33.4
Other expenses	–2,171	–1,857	–16.9
Non-technical result	**–453**	**2,540**	**–**
Operating result before tax	**1,347**	**5,378**	**–75.0**
Taxes on income and profit and other taxes	–251	–1,327	81.1
Profit for the year	**1,095**	**4,051**	**–73.0**
Profit brought forward from previous year	0	0	–
Transfers from other revenue reserves	500	0	–
Appropriations to revenue reserves	0	–2,026	100.0
Net retained profits	**1,596**	**2,026**	**–21.2**

Technical result

In the 2022 financial year, Munich Reinsurance Company's gross premium income totalled €31,550m (26,928m). The year-on-year increase of 17.2% chiefly resulted from new business, growth of existing business, and changes in the value of the euro against other currencies.

Gross premium volume in life and health reinsurance was up in the reporting year: gross premiums rose slightly by 2.2% to €8,885m (8,697m). If exchange rates had remained unchanged, our premium income in life and health reinsurance would have decreased by 1.4%.

In property-casualty reinsurance, we posted growth in gross premium income of 24.3% to €22,665m (18,230m) in the reporting year. The increase was due to new business and business growth across almost all lines and regions, buoyed by positive currency translation effects. If exchange rates had remained the same, premium volume would have been up by 16.8%.

In the reinsurance renewals, Munich Re managed to exploit growth opportunities. Prices, terms and conditions improved overall in the sectional markets, with considerably different trends dependent upon claims experience, future claims expectations and the situation in each individual market. Prices rose – considerably in some instances – for insurance cover in regions and classes of business with high loss experience. By contrast, prices rose only slightly in regions and classes of business with low claims experience. Munich Re takes the different price trends into account and has deliberately withdrawn from business that no longer met risk-return expectations. All in all, prices for the Munich Re portfolio increased by around 0.5%. Overall, we adhered to our profit-oriented underwriting policy.

The underwriting result before claims equalisation provision rose to €1,549m in the reporting year, compared with a profit of €792m in the previous year. The strong result increase was mainly attributable to lower major-loss expenditure overall compared with the previous year, which had seen a much greater impact from natural catastrophe losses. Our customary review of provisions for the full year, which resulted in a higher release of provisions for claims from prior years, had a reinforcing effect. Over the years, the safety margin in the provisions has remained unchanged at a high level.

Major-loss expenditure totalling €3,104m after retrocession and before tax was lower than in the previous year, but exceeded the long-term average expected value of 13%. There were again many major losses in the 2022 financial year. With expected losses of around €700m, the year's biggest loss event by far was Hurricane Ian, which caused severe damage in September, especially in Florida.

Despite various other major loss events, such as heavy rainfall in eastern Australia in February 2022, natural catastrophe losses came to a total of €1,377m, down on the previous year. In terms of net earned premium, aggregate natural catastrophe losses accounted for 7.3 percentage points of the loss ratio.

In property-casualty reinsurance, man-made major losses totalled €1,637m in the reporting year, up on the previous year. This was equivalent to 8.7 percentage points of net earned premium. The increase was partly due to expenditure of around €410m related to the war in Ukraine.

The combined ratio, which reflects the relation of claims and costs to net earned premiums, came to 93.7% (97.2%) overall, mainly owing to the above effects.

Performance of the classes of business

Life

		2022	Prev. year	Change
				%
Gross premiums written	€m	7,816	7,599	2.9
Underwriting result before claims equalisation provision and similar provisions	€m	376	326	15.3

In life reinsurance, the rise in premium income was chiefly attributable to new reinsurance contracts and business growth in the UK. The underwriting result was above the level of the previous year, mainly driven by lower year-on-year COVID-19 losses and adjustments to provisions in various markets.

Health

		2022	Prev. year	Change
				%
Gross premiums written	€m	1,068	1,098	-2.7
Combined ratio	%	97.2	96.4	
Underwriting result before claims equalisation provision and similar provisions	€m	30	46	-34.8

In health reinsurance, a decline in premium income due to the termination of reinsurance contracts in the UK was mitigated by new contracts and business growth in Asia. The underwriting result declined, chiefly on account of intra-Group retrocessions in the UK.

Personal accident

		2022	Prev. year	Change
				%
Gross premiums written	€m	402	316	27.2
Combined ratio	%	74.9	91.9	
Underwriting result before claims equalisation provision and similar provisions	€m	97	5	>1,000.0

In personal accident reinsurance, premium income was up in the reporting year owing to business growth. The result improved year on year due to a much lower combined ratio.

Third-party liability

		2022	Prev. year	Change
				%
Gross premiums written	€m	4,317	3,344	29.1
Combined ratio	%	110.4	110.4	
Underwriting result before claims equalisation provision and similar provisions	€m	-416	-319	-30.4

In third-party liability reinsurance, premium income increased considerably in the reporting year, mainly on account of new business and business growth. The underwriting result before claims equalisation provision decreased year on year owing to higher expenditure for major losses.

Motor

		2022	Prev. year	Change
				%
Gross premiums written	€m	4,461	3,849	15.9
Combined ratio	%	95.7	96.3	
Underwriting result before claims equalisation provision and similar provisions	€m	105	139	-24.5

In motor reinsurance, premium income increased in the reporting year – mainly on account of new business. The underwriting result decreased owing to higher major-loss expenditure.

Marine

		2022	Prev. year	Change
				%
Gross premiums written	€m	577	457	26.3
Combined ratio	%	133.1	85.2	
Underwriting result before claims equalisation provision and similar provisions	€m	-162	53	–

In marine reinsurance, premium income increased in the reporting year on account of new business. Significantly higher major-loss expenditure – mainly due to expenditure related to the war in Ukraine – resulted in a substantially lower underwriting result before claims equalisation provision.

Aviation

		2022	Prev. year	Change
				%
Gross premiums written	€m	703	601	17.0
Combined ratio	%	155.7	96.3	
Underwriting result before claims equalisation provision and similar provisions	€m	-367	21	–

Premium income in aviation reinsurance, which comprises the aviation and space classes, was up on the previous year because of new business. While the previous year had still seen a profit, the underwriting result before claims equalisation provision turned negative in the reporting year owing to significantly higher major-loss expenditure, which was partly attributable to expenditure related to the war in Ukraine.

Fire

		2022	Prev. year	Change
				%
Gross premiums written	€m	3,041	2,753	10.5
Combined ratio	%	114.6	110.5	
Underwriting result before claims equalisation provision and similar provisions	€m	-383	-235	-63.0

Premium income in fire reinsurance rose in the reporting year, mainly on account of new business. The underwriting result before claims equalisation provision was down on the previous year, in particular owing to high loss expenditure from Hurricane Ian, with expected losses of around €600m.

Engineering

		2022	Prev. year	Change
				%
Gross premiums written	€m	1,115	956	16.6
Combined ratio	%	71.8	76.9	
Underwriting result before claims equalisation provision and similar provisions	€m	262	182	44.0

In engineering (machinery, EAR, CAR, EEI, etc.), premium income saw a year-on-year increase due to business growth. The underwriting result was up on the previous year thanks to a lower combined ratio.

Other classes

		2022	Prev. year	Change
				%
Gross premiums written	€m	8,049	5,953	35.2
Combined ratio	%	69.6	88.5	
Underwriting result before claims equalisation provision and similar provisions	€m	2,008	574	249.8

Under “Other classes”, we subsume the remaining classes of property insurance, such as burglary, plate glass, hail (including agricultural insurance), water damage, contingency, windstorm, livestock and householders’ and homeowners’ comprehensive insurance as well as credit insurance.

Premium income was up significantly year on year, above all on account of new business and business growth. The combined underwriting result of the “Other classes” before claims equalisation provision improved substantially year on year, mainly thanks to a much lower loss ratio.

Non-technical result

The global economy’s recovery from the recession triggered by the coronavirus pandemic slowed considerably in 2022. In Europe in particular, overall economic development was significantly affected by the Russian invasion of Ukraine. In consequence, and as a result of the economic sanctions imposed on Russia, extraordinarily high energy prices and uncertainty concerning the future energy supply hampered economic activity. Inflation reached record levels in many countries around the world and, combined with the considerable monetary tightening engaged in by many central banks, dampened economic growth. Rigorous state-imposed measures to control the coronavirus pandemic in China curbed economic activity there and contributed to disruptions in global supply chains.

Following a steep rise in inflation, major central banks put an end to the period of low interest rates in 2022, significantly tightening their monetary policy.

Yields on ten-year government bonds in the USA and Germany rose sharply in 2022 as a result of high inflation and considerable monetary policy tightening. By the end of December, yields on US and German bonds were high compared to the previous several years.

Volatility on the international financial markets was higher in the reporting year than in the previous year. Geopolitical uncertainty, extraordinarily high inflation, interest rate hikes and fears of recession had adverse impacts. In the course of the year, important equity indices like the US Dow Jones and the Dow Jones (DJ) EURO STOXX 50 were at times more than 20% down on their levels at the end of 2021 and only made a partial recovery by the end of the reporting year.

On the currency markets, fluctuations were more pronounced in 2022 than in the previous year. At the end of December, the US dollar was significantly higher and the pound sterling significantly lower against the euro compared with the end of 2021, while the Canadian dollar had returned to approximately the same level at which it began the year.

In the 2022 financial year, Munich Reinsurance Company’s return on investment (including deposits retained on assumed reinsurance) totalled 0.3% (4.2%) on the basis of carrying amounts.

Investment result

€m	2022	Prev. year
Regular income	2,342	2,535
Write-ups and write-downs	–1,224	415
Realised gains/losses on the disposal of investments	166	451
Other income/expenses	–1,077	–55
Total	**206**	**3,346**

The decline in the investment result in the reporting year was mostly attributable to two effects. First, high impairment losses due to interest rate developments were only partly offset by selective initial application of Section 341b of the German Commercial Code (HGB). Second, it was necessary to increase the provision for anticipated losses from derivative financial instruments. This was somewhat mitigated by higher gains on disposal. Among other things, valuation reserves were realised in the field of alternative investments as part of the contribution of an affiliated company to a newly founded joint venture. The interests in the entity concerned, MR Beteiligungen 23. GmbH, which in future will be operating under the name of Joint HR MR Private Equity GmbH, were recognised under “Participating interests” as at the reporting date.

Profit for the year

Munich Reinsurance Company generated a profit of €1,095m (4,051m) in the 2022 financial year, which was significantly down on the previous year’s figure. The strong decrease in the investment result and lower underwriting result could not be offset by reduced tax expenditure.

The year-on-year reduction in tax expenditure in the 2022 financial year was mostly attributable to the decline in taxable income at the German headquarters. Adjustments to taxes for previous years from tax returns filed and tax audits completed also resulted in a decrease in tax charges in the 2022 financial year.

Financial position

Balance sheet structure of Munich Reinsurance Company

€m	2022	Prev. year	Change
	€m	€m	%
Intangible assets	119	133	−10.8
Investments	82,108	81,339	0.9
Receivables	22,968	23,113	−0.6
Other assets	1,223	1,242	−1.5
Deferred items	324	228	42.4
Excess of plan assets over pension liabilities	146	501	−70.7
Total assets	**106,889**	**106,556**	**0.3**
Equity	13,975	15,040	−7.1
Subordinated liabilities	4,671	4,936	−5.4
Technical provisions	70,011	66,538	5.2
Other provisions	2,920	2,221	31.5
Deposits retained on retroceded business	2,851	2,620	8.8
Other liabilities	12,441	15,170	−18.0
Deferred items	21	31	−32.5
Total equity and liabilities	**106,889**	**106,556**	**0.3**

In the 2022 financial year, Munich Reinsurance Company generated net retained profits of €1,596m (2,026m) according to German accountancy rules (HGB). Including these net retained profits and a €500m withdrawal from the revenue reserves, the Company's revenue reserves amounted to €6,552m (7,608m) as at the reporting date, of which €177m (637m) is subject to a restriction on distribution. The distributable earnings thus amount to €6,375m (6,971m).

The shareholders' equity of Munich Reinsurance Company as determined under German accountancy rules is protected against the risk of loss arising from a random accumulation of losses by the claims equalisation provision totalling €7,671m (7,946m). Given our robust capital position according to all calculation methods, we intend – subject to the approval of the Annual General Meeting – to pay our shareholders an increased dividend of €11.60 per share for the 2022 financial year, or €1,590m in total, from Munich Reinsurance Company's net retained profits.

The carrying amount of Munich Reinsurance Company's investments excluding deposits retained on assumed reinsurance increased to €72,753m (72,162m).

As at 31 December 2022, 90% of our fixed-interest securities were rated "A" or better. Overall, 96% of our fixed-interest securities were investment-grade at the reporting date.

Equity[1]

€m	2022	Prev. year
Issued capital	577	588
Capital reserve	6,845	6,845
Revenue reserves	4,957	5,582
Net retained profits	1,596	2,026
Equity	**13,975**	**15,040**

1 Information on Section 160(1) no. 2 of the German Stock Corporation Act (AktG) can be found in Note 3 of Munich Reinsurance Company's Annual Report 2022.

Pursuant to German commercial and company law, dividends and share buy-backs may only be paid out of profits and revenue reserves. Besides the expenses and income incurred in the current year, changes in the claims equalisation provision also have a significant influence on the level of profits for the year.

The claims equalisation provision is established for individual classes of property-casualty business. It serves to smooth significant fluctuations in loss experience over a number of years. Its recognition and measurement are governed by legal provisions.

If, in a given financial year, loss ratios in individual classes of business are significantly in excess of the long-term average (which amounts to 15 years in most classes), the claims equalisation provision is reduced and the above-average loss expenditure is largely offset. According to current calculations, it is expected that – given normal claims expenditure in the 2023 financial year – the amounts released will be moderate.

The target or maximum amount allowed for the claims equalisation provision, which is essentially calculated on the basis of earned premiums and the standard deviation of the loss ratio in the respective class of insurance, determines the amount of the annual non-performance-related allocation to the claims equalisation provision. The performance-related change in the claims equalisation provision is added to this figure in years in which claims experience is favourable (i.e. when the random occurrence of claims is below average), whereas amounts are withdrawn in years in which claims experience is adverse (i.e. the random occurrence of claims is above average).

The balance sheet item "Claims equalisation provision and similar provisions" decreased by €250m to €8,313m (8,563m) in the 2022 financial year. Owing to lower-than-average claims ratios, we had to allocate significant amounts to the claims equalisation provision in some classes of business – especially in third-party liability €381m (289m), credit €221m (338m), and aviation €44m (7m).

Due to higher-than-average claims ratios, the claims equalisation provision was reduced in the following classes of business: fire –€462m (–724m), marine –€189m (+13m) and personal accident –€35m (–150m).

In addition, owing to a reduction of the maximum amount, the claims equalisation provision in motor was reduced by –€234m (–222m).

As we ceased preparing separate profit and loss accounts in engineering and "Other classes" in the previous year, we have no longer set a claims equalisation provision for these classes of business since the 2021 reporting year.

The current level of the claims equalisation provision is 100% of the legally stipulated maximum amount allowed in the motor and personal accident classes of business, and more than 50% in third-party liability and credit.

Liquidity

Our liquidity is ensured at all times by means of detailed liquidity planning. As a rule, the Company generates significant liquidity from its premium income, from regular investment income and from investments that mature. We also attach great importance to the credit rating and fungibility of our investments. Given the maturity structure of the outstanding bonds and the credit facilities employed (which are, in any case, relatively insignificant in scope), there are no refinancing requirements.

Statement on Corporate Governance for the 2022 financial year pursuant to Section 289f and Section 315d of the German Commercial Code (HGB)

Munich Reinsurance Company has submitted the Statement of Corporate Governance pursuant to Section 289f of the Commercial Code (HGB), and the Group Statement of Corporate Governance in accordance with Section 315d of the Commercial Code. The statements have been combined and can be found in the "Corporate governance" section. Pursuant to Section 317(2) sentence 6 of the Commercial Code, the audit of statements by the auditors is limited to whether or not this has been done. The combined Statement on Corporate Governance can be found on the Munich Re website at www.munichre.com/cg-en.

Further information

Risks and opportunities

The business performance of Munich Reinsurance Company is largely subject to the same risks and opportunities as the performance of the reinsurance field of business presented in the consolidated financial statements. Munich Reinsurance Company generally participates in the risks of its shareholdings and subsidiaries in accordance with its respective percentage interest held. Munich Reinsurance Company is integrated in the Group-wide risk management system and internal control system of the Group. Further information is provided in the risk report and the opportunities report.

Remuneration report of Munich Reinsurance Company

The principles regarding the structure and design of the compensation system of Munich Reinsurance Company correspond to those of the Group. Further information is provided in the remuneration report at www.munichre.com/board-of-management.

Other information

On 31 December 2022, Munich Reinsurance Company had 4,339 employees.

Munich Reinsurance Company has branches in Australia, Canada, China, France, India, Italy, Japan, Malaysia, New Zealand, Singapore, South Korea, Spain and the United Kingdom.

Prospects

The projections by Munich Reinsurance Company about the future development of its business are essentially subject to the same influences as the reinsurance life and health and reinsurance property-casualty segments presented in the consolidated financial statements. You can find this information in "Outlook 2023".

Against this background, Munich Reinsurance Company should post gross premium of around €32bn in the 2023 financial year – assuming that exchange rates remain constant. We expect the combined ratio to be at around the same level as in the reporting year. An accurate forecast is not possible, partly due to the obvious fluctuations in the incidence of major losses. Assuming average claims experience, we project that the underwriting result before claims equalisation provision for the 2023 financial year will be slightly higher than in the reporting year.

The investment result of Munich Reinsurance Company is expected to show a strong positive development in the 2023 financial year. While we expect gains on disposal to decrease, we anticipate a much lower negative impact from net write-ups and write-downs and additions to the provision for anticipated losses.

As things stand at present, we expect to achieve an adequate German GAAP (HGB) result in 2023 that is likely to be higher than in the reporting year.

Corporate governance

Dr. Nikolaus von Bomhard
Chair of the Supervisory Board

Dear Readers,

In the 2022 financial year, the Supervisory Board fulfilled all the tasks and duties incumbent upon it by law and under the Articles of Association and the rules of procedure. The overall attendance of members at meetings of the Supervisory Board and its committees was 99%; an overview of attendance can be found at the end of the Report of the Supervisory Board and at www.munichre.com/supervisory-board. Most of the meetings of the full Supervisory Board and of the committees were face-to-face meetings. In some instances, either exclusively virtual meetings (video conferences) were held or hybrid meetings, with some participants attending in person and others remotely via video conference.

We monitored the Board of Management in its conduct of the business, and gave advice on all matters of importance for the Group. No inspection measures in accordance with Section 111(2) sentence 1 of the German Stock Corporation Act (AktG) were required at any time.

Collaboration between Supervisory Board and Board of Management

The Board of Management punctually and directly involved the Supervisory Board in all important business transactions and decisions of fundamental significance for the Group. In our meetings, we discussed the reports from the Board of Management in detail. Cooperation with the Board of Management was characterised in every regard by targeted and responsible action aimed at promoting the successful development of Munich Re. The Board of Management satisfied its reporting obligations towards the Supervisory Board in all respects, both verbally and in writing.

Outside of Supervisory Board meetings, the Board of Management informed us promptly and extensively about important events in the Group. In addition, the shareholder representatives and the employee representatives met regularly with the Chair of the Board of Management for separate discussions in preparation for the meetings.

Between meetings, I held regular discussions with the Chair of the Board of Management, Joachim Wenning. We discussed questions of strategic orientation, succession planning, risk management, compliance, the current business situation and the impact of the war in Ukraine on Munich Re. Also between meetings, the Chair of the Audit Committee Maximilian Zimmerer remained in close contact with Chief Financial Officer Christoph Jurecka.

Focal points of the meetings of the full Supervisory Board

There were six meetings of the Supervisory Board in the reporting year. The meetings on 22 February and on 27 April 2022 were via video conference; the other four meetings were held in person. We regularly held in-depth discussions with the Board of Management about business performance and current topics, with a special focus on strategic considerations of the Board of Management with respect to the individual fields of business and the consequences of the war in Ukraine for Munich Re. The Board of Management reported to us regularly on Munich Re's investments, addressing developments in the global economy and financial markets in detail, as well as their impact on the Group's assets, financial position and results. In addition, we advised the Board of Management on matters of strategic importance for the future of the Group, with a particular focus last year on the innovation and sustainability strategies. Besides the above-mentioned issues, we dealt specifically with the following topics at the individual meetings in 2022:

The meeting on 22 February focused on the preliminary figures for the 2021 Company and Group financial statements and the Board of Management's proposal for appropriation of the net retained profits. We discussed and decided how to measure the annual bonus for 2021, the multi-year bonus for 2018–2021 and the resultant bonus payments to the Board of Management. At the meeting on 22 February, we also approved the remuneration report of the Board of Management and the Supervisory Board for the 2021 financial year as per the German Act implementing the Second Shareholders' Rights Directive (ARUG II) so that the report could be presented at the 2022 Annual General Meeting.

The meeting on 16 March focused, among other things, on the Company and Group financial statements for 2021, the combined management report (including the combined non-financial statement and information regarding the EU Taxonomy) and the Supervisory Board's motions for resolution by the 2022 Annual General Meeting. We also discussed and then took a decision on the appointment of Board of Management member Achim Kassow as Labour Relations Director, with effect from 1 May 2022; we also approved an adjustment in the Board of Management's distribution of responsibilities.

The meeting on 27 April addressed the self-assessment that insurance supervisory law requires the members of the Supervisory Board to undertake concerning their knowledge of topics that are important for providing advice and supervision to the Munich Re Board of Management. The high level of collective expertise on the Supervisory Board was maintained. The Supervisory Board possesses the appropriate diversity of qualifications, knowledge and experience to provide advice and supervision to proficiently monitor and accompany the business performance of Munich Re, taking account of the characteristics specific to the Company and the Group. We used the meeting to make last-minute preparations for the Annual General Meeting, which was to take place the next day – again as an online event.

At the meeting on 12 July, we discussed the data and innovation strategy in reinsurance. Moreover, we received the Group-wide remuneration report for the 2021 financial year in line with Solvency II and the Remuneration Regulation for Insurance Companies (VersVergV).

At the meeting on 13 October, we adopted resolutions on the appointment of Thomas Blunck as Chair of the Reinsurance Committee – and on the extension of Achim Kassow's appointment to the Board of Management and of his appointment as Labour Relations Director. In addition, we appointed Clarisse Kopff and Mari-Lizette Malherbe to the Board of Management. We also adjusted the Board of Management's distribution of responsibilities. Topics related to corporate governance were regularly on the agenda, including the resolution regarding the Declaration of Conformity with the German Corporate Governance Code (DCGK) and the discussion of the self-assessment findings of the Supervisory Board and its committees in 2022. We modified the objectives concerning the composition and competence profile of the Supervisory Board, and altered the set of criteria for selecting shareholder representatives. In addition, we adopted a resolution on changing the Audit Committee's rules of procedure. Furthermore, the Board of Management updated us on ERGO's performance and the Munich Re Group's climate strategy (enabling and decarbonisation measures).

We reviewed the compensation of the Board of Management on 14 December and, following a comprehensive discussion, we established the amount of their remuneration with effect from 2023. In addition, we approved the appointment of Michael Kerner to the Board of Management, and adjusted the Board's distribution of responsibilities. Moreover, we specified the assessment bases for variable remuneration in 2023, and we adapted the rules on fringe benefits, remuneration in kind and other regulations concerning members of the Board of Management. During the meeting on 14 December, the Group Chief Risk Officer updated us on the risk situation of the Group. We discussed and approved the financial planning for 2023, as presented by the Board of Management. In this context, the Board of Management also informed us of the effects that the implementation of IFRS 17, a new financial reporting standard, will have on the Munich Re Group. Furthermore, the Board presented us with the Group human resources report, and explained the focal points of human resources work within the Group. We also received updates on the Group's investment strategy, with a particular focus on sustainable investments.

Work of the committees

There are six Supervisory Board committees. These are assigned certain matters for resolution, and also prepare the topics which are to be addressed and decided upon by the full Supervisory Board. At each Supervisory Board meeting, detailed information about the work of the committees was provided to the full Supervisory Board by the respective chairs of the committees.

Details of the tasks of the committees and their composition are included in the Statement on Corporate Governance and on our website at www.munichre.com/supervisory-board.

The Personnel Committee met six times during the reporting period. One meeting was held in person; the other five were hybrid meetings. The Committee essentially prepared the resolutions on matters involving the Board of Management, unless these fell under the remit of the Remuneration Committee. Among other things, the Personnel Committee focused on preparations for the appointment of several new people to the Board of Management, the confirmation of fitness and propriety as part of first-time appointments, and the confirmation of the extension of the appointment of an incumbent member of the Board of Management. In addition, the Personnel Committee dealt with the contract terms unrelated to remuneration, and approved the assumption by Board of Management members of mandates on supervisory, advisory and similar boards. Under consideration of aspects of diversity, the Personnel Committee also addressed Group-wide succession planning – in particular as regards Board of Management positions.

The Remuneration Committee held six meetings: four times in person, one hybrid meeting and one video conference. In particular, it prepared resolutions on matters involving the Board of Management – as already mentioned above when reporting on the work of the full Supervisory Board – as far as these resolutions concerned the amount of remuneration, the establishment of the assessment basis for variable remuneration and the corresponding evaluation, fringe benefits and remuneration in kind, as well as the sections of the Board members' contracts relating to remuneration.

The Praesidium and Sustainability Committee (known as the Standing Committee until June 2022) met eight times in 2022: five times in person, two hybrid meetings and one video conference. It made preparations for each Supervisory Board meeting and, in particular, topics of corporate governance and sustainability strategy. This Committee prepared, among other items, the assessment of the effectiveness of the Supervisory Board as a whole and of its committees (self-assessment). The Praesidium and Sustainability Committee also approved proposals by the Board of Management concerning both the procedure for answering questions at the virtual Annual General Meeting and the implementation of the 2022/2023 share buy-back programme. At its meeting on 11 July 2022, the Praesidium and Sustainability Committee discussed in detail Munich Re's sustainability strategy, recent developments of which this Committee discussed at its two subsequent meetings. It then dealt in October 2022 with reforms specified in the German Corporate Governance Code (DCGK). In addition, the Praesidium and Sustainability Committee assessed related-party transactions in an internal procedure as per Section 111a(2) of the Stock Corporation Act (AktG). The Chair of the Board of Management gave this Committee regular updates on the shareholder structure.

In the reporting period, the Audit Committee held six meetings: three times in person and three times in a hybrid format, with two Committee members participating by video. The external auditor attended all six meetings. At its meetings in February and March 2022, the Audit Committee discussed the Munich Reinsurance Company and Group financial statements, the combined management report, the auditor's reports and the Board of Management's proposal for the appropriation of the net retained profits for the 2021 financial year. The Committee also discussed in detail the quarterly statements for the first and third quarters of 2022, and scrutinised both the 2022 Half-Year Financial Report and the findings of the external auditor's review. At the meetings in May and August 2022, the Chief Financial Officer gave us a thorough progress report on the implementation and the effects of IFRS 17, a new financial reporting standard. At these meetings, the Audit Committee also heard regular reports on the key Solvency II figures and discussed the quarterly reporting to the supervisory authority. In August 2022, the Committee thoroughly addressed the reforms specified in the German Corporate Governance Code (DCGK). Other key tasks of the Audit Committee consisted in monitoring the Group's risk situation and risk management on an ongoing basis, and developing a risk strategy. In addition to the Group Chief Risk Officer's quarterly written reports, the Committee also obtained detailed verbal information from the Group CRO on several occasions. At one meeting, the Head of the Actuarial Function reported on significant developments at Munich Re. There were regular discussions about the internal control system and compliance topics – particularly individual compliance violations that were presented to the Audit Committee. The Group Chief Auditor comprehensively informed the members of the Committee about the outcome of the audits for 2021 and the audit planning for 2022. The Audit Committee also received updates on the current status of individual audits. Without the Board of Management in attendance, Committee members took the opportunity to regularly confer amongst themselves – or with the Group Chief Auditor, the Group Chief Compliance Officer, the Group Chief Risk Officer, or the external auditor.

In addition, the Audit Committee and the external auditor exchanged views on selected topics on an ad-hoc basis between meetings. The Chair of the Audit Committee, Maximilian Zimmerer, also consulted with the auditor on a regular basis between meetings. The Chair discussed, among other things, the progress of the audit with the auditor, and then reported to the Committee.

The Audit Committee assiduously reviewed and monitored the auditor's independence. It regularly called for reports on the auditor's non-audit activities and on the utilisation of the statutory limit for awarding such contracts. Moreover, the Audit Committee and the auditor discussed the assessment of audit risk, the audit strategy, audit planning and the audit findings. The auditor also presented the Audit Committee with explanations of the key audit matters for the 2022 financial year. The Audit Committee regularly assessed the quality of the audit. In this context, the Committee continually examined the role of Ernst & Young GmbH Wirtschaftsprüfungsgesellschaft (EY) as the auditor of Wirecard AG. The Audit Committee currently finds no indications of a negative impact on the audit of Munich Re. The Committee is satisfied with the qualifications and integrity of the persons on EY's audit team. Munich Re and EY discuss the composition of the audit team at least once a year. In addition, the Audit Committee prepared for the full Supervisory Board a proposal that the Annual General Meeting appoint the external auditor. Following a resolution adopted at the Annual General Meeting, the Chair of the Committee commissioned EY, Munich with the audit for the 2022 financial year and also commissioned the auditor's review of the 2022 Half-Year Financial Report. The Audit Committee also defined focal points of the audits and set the auditor's fee.

The Nomination Committee met twice in the reporting period, with both meetings being held in person. The Nomination Committee discussed the medium-term succession planning of the Supervisory Board and had an initial preparatory conversation on potential future candidates who could be voted on to the Supervisory Board at the next regular election – by the 2024 Annual General Meeting. In this regard, the Committee took into account the objectives approved by the Supervisory Board regarding its composition, the competence profile for the Supervisory Board as a whole, and the set of criteria for the selection of shareholder representatives.

As in years past, there was no need to convene the Conference Committee in the 2022 financial year.

Corporate governance and Declaration of Conformity

The Supervisory Board pays close attention to good corporate governance. Together with the Board of Management, we therefore published the Declaration of Conformity pursuant to Section 161 of the German Stock Corporation Act (AktG) in November 2022.

The Company has fulfilled all recommendations of the German Corporate Governance Code of 28 April 2022 (published on 27 June 2022, "DCGK 2022") and will continue to do so in future. An exception applies to recommendation C.5 DCGK 2022 (number of supervisory board mandates). The Supervisory Board member Renata Jungo Brüngger sits on the Board of Management of Mercedes-Benz Group AG. Following restructuring measures undertaken by the Daimler Group, she accepted supervisory board memberships at Daimler Truck AG and at Daimler Truck Holding AG, which are both to be classified as non-group companies.

Since issuing its last Declaration of Conformity in November 2021, Munich Re has complied with all of the recommendations of the German Corporate Governance Code as amended on 16 December 2019 and published on 20 March 2020 ("DCGK 2020"). An exception has applied to recommendation C.5 DCGK 2020 since the update of the Declaration of Conformity of 10 December 2021.

Further information on the Declaration of Conformity and on corporate governance within the Company can be found in the Statement of Corporate Governance.

In accordance with their own assessment, all ten shareholder representatives are independent within the meaning of the German Corporate Governance Code.

In order to avoid even the semblance of work or decision-making processes being influenced by personal interests, each member of the Supervisory Board promptly discloses any conflicts of interest. Where a current Supervisory Board member was on the Board of Management during a period which is currently being dealt with by the Supervisory Board, the member in question does not participate in any of the discussions of the matter or in any related resolutions. This was the approach I took for one agenda item in the 2022 financial year.

The Supervisory Board also met regularly without the Board of Management.

Members of the Supervisory Board were invited to participate in an internal information event in 2022, as in years past. Nearly all members used the opportunity to learn more about IFRS 17 (a new financial reporting standard), investment management and risk management at Munich Re. The Company also provided the members of the Supervisory Board with extensive electronic training material for self-study focusing on underwriting, risk management, accounting, investment, controlling, sustainability, digitalisation, etc. Before they took up their appointments, new members of the Supervisory Board also received specially compiled informational material to prepare for their new role.

As I do every year in the lead-up to the Annual General Meeting, I spoke – in my role as Chair of the Supervisory Board – with investors and proxy advisors; as part of an ongoing dialogue with investors about topics relevant to the Supervisory Board, we discussed remuneration of Board of Management members as well as the work and the composition of the Supervisory Board and its committees, among other topics.

Changes on the Board of Management

For personal reasons, Doris Höpke did not extend her appointment that expired on 30 April 2022, and has since left the Company.

Torsten Jeworrek chose to step down from the Board of Management on 31 December 2022. Thomas Blunck was appointed Jeworrek's successor as Chair of the Reinsurance Committee, effective 1 January 2023.

The Supervisory Board wishes to thank Doris Höpke and Torsten Jeworrek for their many years of very successful work at Munich Re.

On 13 October 2022, the Supervisory Board appointed Clarisse Kopff and Mari-Lizette Malherbe to the Board of Management. Clarisse Kopff has been responsible for the Europe and Latin America Non-life division since 1 December 2022. Mari-Lizette Malherbe has been in charge of the Life and Health division since 1 January 2023.

In addition, the Supervisory Board appointed Michael Kerner to the Board of Management on 14 December 2022. Michael Kerner has been responsible for Global Specialty Insurance, a recently created Board division, since 1 January 2023.

Changes on the Supervisory Board

Gabriele Sinz-Toporzysek resigned from the Supervisory Board with effect from 31 January 2022. With effect from 1 February 2022, Markus Wagner – who had been elected as a substitute member by employee representatives in 2019 – became a Supervisory Board member for the remainder of Gabriele Sinz-Toporzysek's term of office.

The Supervisory Board wishes to thank Gabriele Sinz-Toporzysek for her many years of constructive consulting for Munich Re.

Company and Group financial statements for 2022, Solvency II reporting and non-financial information

The external auditor EY duly audited the annual financial statements of Munich Reinsurance Company, the Group financial statements and the combined management report as at 31 December 2022, and issued them with an unqualified auditor's opinion. The German Public Auditor responsible for the engagement is Thomas Kagermeier.

These reports and the Board of Management's proposal for appropriation of the net retained profits were submitted to the members of the Supervisory Board. On 22 February 2023, the Audit Committee thoroughly discussed the preliminary year-end figures as at 31 December 2022, along with the Board of Management's proposal for appropriation of the net retained profits. At its meeting on 22 February 2023, the Supervisory Board also thoroughly discussed the preliminary year-end figures as at 31 December 2022, along with the Board of Management's proposal for appropriation of the net retained profits. On 14 March 2023, the Audit Committee prepared the Supervisory Board's resolution on the adoption of the Company financial statements and the approval of the Group financial statements. To this end, the Audit Committee examined the annual and consolidated financial statements and the combined management report in advance. The Committee also examined the combined non-financial statement (a section of the combined management report), including information regarding the EU Taxonomy. The Audit Committee discussed both documents at length with the external auditor present at the meeting, and gave detailed consideration to the auditor's reports. The Audit Committee paid particular attention to the key audit matters described in the auditor's report, including audit activity. The Chair of the Audit Committee briefed the full Supervisory Board about the outcome of its consultations at the balance sheet meeting. In its March meeting, the Audit Committee discussed the preliminary key figures under Solvency II reporting – and the Solvency II ratio in particular – and reported on this to the full Supervisory Board.

The full Supervisory Board also checked the financial statements of Munich Reinsurance Company and the Group, and the combined management report (including the combined non-financial statement and information regarding the EU Taxonomy). The auditor's reports were available to all members of the Supervisory Board and were discussed in detail at the balance sheet meeting of the Supervisory Board on 15 March 2023 in the presence of the external auditor. The audit findings regarding the combined non-financial statement were also considered by the Supervisory Board. The external auditor reported on the scope, the main points, and the key findings of the audit – and went into particular detail on both the key audit matters and the audit activity conducted. There were no reports of material weaknesses in the internal control system or the risk management system.

More information on the internal control system and the risk management system can be found in the combined non-financial statement and in the risk report.

On the basis of this comprehensive examination, the Supervisory Board raised no objections concerning the outcome of the external audit. It approved the Company and Group financial statements on 15 March 2023. The financial statements were thus adopted. Having carefully weighed all relevant aspects, the Supervisory Board followed the proposal of the Board of Management for appropriation of the net retained profits.

Words of thanks to the Board of Management and employees

The Supervisory Board wishes to thank all members of the Board of Management and staff worldwide. With their work and commitment, they have contributed to a very gratifying result for Munich Re.

Munich, 15 March 2023

For the Supervisory Board

Nikolaus von Bomhard
Chair

Attendance of Supervisory Board members at meetings of the Supervisory Board of Munich Reinsurance Company and its committees in 2022

Member of the Supervisory Board	Supervisory Board	Participation quota Supervisory Board	Personnel Committee	Remuneration Committee	Praesidium and Sustainability Committee	Audit Committee	Nomination Committee
Nikolaus von Bomhard	6/6	100%	6/6		8/8	6/6	2/2
Anne Horstmann	6/6	100%			8/8		
Ann-Kristin Achleitner	6/6	100%		6/6		6/6	2/2
Clement Booth	6/6	100%					
Ruth Brown	6/6	100%					
Stephan Eberl	6/6	100%	6/6	6/6	8/8		
Frank Fassin	6/6	100%					
Ursula Gather	6/6	100%					
Gerd Häusler	6/6	100%			8/8		
Angelika Judith Herzog	6/6	100%					
Renata Jungo Brüngger	6/6	100%	6/6	6/6			
Stefan Kaindl	6/6	100%				6/6	
Carinne Knoche-Brouillon	6/6	100%					
Gabriele Mücke	6/6	100%					
Ulrich Plottke	6/6	100%				6/6	
Manfred Rassy	6/6	100%					
Gabriele Sinz-Toporzysek[1]	0/0	n.a.					
Carsten Spohr	5/6	83%					
Karl-Heinz Streibich	5/6	83%					
Markus Wagner[2]	6/6	100%					
Maximilian Zimmerer	6/6	100%			8/8	6/6	2/2
Participation quota (average)		**98%**	**100%**	**100%**	**100%**	**100%**	**100%**

1 Member until 31 January 2022.
2 Member from 1 February 2022.

Statement on Corporate Governance pursuant to Section 289f and Section 315d of the German Commercial Code (HGB)[1]

Pursuant to Section 289f and Section 315d of the German Commercial Code (HGB), Münchener Rückversicherungs-Gesellschaft Aktiengesellschaft in München (Munich Reinsurance Company Joint-Stock Company in Munich) has issued the following Statement on Corporate Governance and Group Statement on Corporate Governance. This Statement also contains the disclosures and explanatory notes as recommended in the German Corporate Governance Code of 28 April 2022 (published on 27 June 2022). More information on corporate governance can be found at www.munichre.com/cg-en.

We apply the highest standards to our operations and activities and therefore comply with all but one of the recommendations and proposals of the German Corporate Governance Code. There are no overriding statutory provisions that render the recommendations and suggestions of the German Corporate Governance Code not applicable to Munich Reinsurance Company.

Declaration of Conformity by the Board of Management and Supervisory Board of Münchener Rückversicherungs-Gesellschaft Aktiengesellschaft in München with the German Corporate Governance Code in accordance with Section 161 of the German Stock Corporation Act

Münchener Rückversicherungs-Gesellschaft Aktiengesellschaft in München ("Company") has fulfilled all recommendations of the German Corporate Governance Code of 28 April 2022 (published on 27 June 2022, "DCGK 2022") and will continue to do so in future. An exception applies to recommendation C.5 DCGK 2022.

Since the last Declaration of Conformity in November 2021, the Company has fulfilled all the recommendations of the German Corporate Governance Code of 16 December 2019 (published on 20 March 2020, "DCGK 2020"). An exception has applied to recommendation C.5 DCGK 2020 since the update of the Declaration of Conformity of 10 December 2021.

Recommendation C.5 DCGK 2022/2020: Number of supervisory board mandates

In accordance with the recommendation C.5 DCGK 2022/2020, members of the management board of a listed company shall not have, in aggregate, more than two supervisory board mandates in non-group listed companies or comparable functions, and shall not accept the chairmanship of a supervisory board in a non-group listed company.

The Supervisory Board member Renata Jungo Brüngger sits on the Board of Management of Mercedes-Benz Group AG. Following restructuring measures, Ms. Jungo Brüngger has accepted two supervisory board memberships at companies that, in the view of Mercedes-Benz Group AG, are to be classified as non-group companies: Firstly, she is a supervisory board member of Daimler Truck AG. Secondly, she is a supervisory board member of the listed company Daimler Truck Holding AG, which holds all shares in Daimler Truck AG.

The Supervisory Board has satisfied itself that Ms. Jungo Brüngger will continue to have enough time to fulfil her tasks at the Company.

Munich, November 2022

The Board of Management The Supervisory Board

1 The Statement on Corporate Governance is part of the combined management report and was not audited.

Corporate legal structure

Munich Reinsurance Company has three governing bodies: the Annual General Meeting, the Board of Management, and the Supervisory Board. Their functions and powers are defined by law, the Articles of Association, the Co-Determination Agreement applicable to Munich Reinsurance Company, and by rules of procedure and internal guidelines. Employee co-determination on the Supervisory Board is governed by the Co-Determination Agreement concluded pursuant to the German Act on the Co-Determination of Employees in Cross-Border Mergers (MgVG). The principle of parity co-determination on the Supervisory Board has been strengthened by taking into account staff employed in the European Union and in the European Economic Area (EU/EEA).

Additional corporate governance requirements are set out in the regulatory requirements for (re)insurance companies, especially the German Insurance Supervision Act (VAG) and the European supervisory regulations (Solvency II). They include specific and supplementary rules on various issues such as business organisation or the qualifications and remuneration of members of the Board of Management, Supervisory Board members and other individuals.

The Annual General Meeting

The Annual General Meeting decides on the appropriation of net retained profits, the approval of the actions of the Board of Management and Supervisory Board, the election of the auditor, the election of shareholder representatives to the Supervisory Board, amendments to the Articles of Association and capital measures, among other things.

The principle of "one share, one vote" applies at the Annual General Meeting of Munich Reinsurance Company. Shareholders may cast their votes by postal vote (also via electronic means of communication). Postal votes already cast may be changed online until voting starts.

Shareholders may also have their voting rights exercised at the Annual General Meeting by one of the proxies nominated by Munich Reinsurance Company. These proxies will exercise the voting rights solely in accordance with the instructions they receive from the shareholders. Power of attorney and instructions may also be issued via electronic means of communication to the Company proxies, and also changed until voting starts. Shareholders may watch the whole Annual General Meeting live on the internet. In addition, the Annual General Meeting was publicly streamed on the internet.

The documents required by law for the Annual General Meeting, including the Annual Report, and the agenda will be available on the Munich Re website with effect from the day the Annual General Meeting is called.

The Annual General Meeting on 28 April 2022 was held as a Virtual Annual General Meeting without attendance in person by the shareholders or their proxies, in accordance with Section 1(2) of the Act on Measures in Corporate Law, Cooperatives Law, Associations Law, Trust Law, and Real Estate Owner Law to Combat the Effects of the COVID-19 Pandemic dated 27 March 2020 (Federal Gazette I, p. 570), as amended by the Act on the Further Shortening of the Residual Debt Relief Procedure and on the Adjustment of Pandemic-Related Provisions in Corporate, Associations and Trust Law as well as Tenancy and Lease Law dated 22 December 2020 (Federal Gazette I, p. 3328 ff.), and as extended by the Act for the Establishment of a Special Fund "Development Aid 2021" and Temporarily Suspending the Obligation to File for Insolvency due to Heavy Rainfall and Flooding in July 2021 and Amending Further Acts dated 10 September 2021 (Federal Gazette I, p. 4147 ff.).

Board of Management

In 2022, the Board of Management of Munich Reinsurance Company comprised nine members, including one woman. From 1 January 2023, the Board of Management is comprised of ten members, two of them women.

Responsibilities of the members of the Board of Management and their memberships of statutory supervisory boards and comparable bodies[1]

Member of the Board of Management/Responsibilities	Memberships of statutory supervisory boards	Memberships of comparable bodies of German and foreign business enterprises
Dr. Joachim Wenning Chair of the Board of Management Group Strategy and M&A Group Communications Group Audit Economics, Sustainability & Public Affairs[3] Group Human Resources Group Executive Affairs Group Compliance and Legal	ERGO Group AG[2] (Chair)	–
Dr. Thomas Blunck Life and Health Capital Partners Europe and Latin America (from 1 May 2022 until 30 November 2022)	ERGO Group AG[2] ERGO Digital Ventures AG[2] (from 1 January 2023) ERGO International AG[2] (from 1 January 2023)	–
Nicholas Gartside Chief Investment Officer Group Investments Third Party Asset Management	MEAG MUNICH ERGO AssetManagement GmbH[2] (Chair)	–
Stefan Golling Global Clients and North America	–	Munich Re America Corporation, USA[2] (Chair) Munich Reinsurance America, Inc., USA[2] (Chair)
Dr. Doris Höpke (until 30 April 2022) Labour Relations Director Europe and Latin America Human Resources	–	New Reinsurance Company Ltd., Switzerland[2] (President) (until 30 April 2022)
Dr. Torsten Jeworrek (until 31 December 2022) Reinsurance Development Data and Analytics Internet of Things Corporate Underwriting Claims Accounting, Controlling and Central Reserving for Reinsurance Information Technology	ERGO Digital Ventures AG[2] (until 31 December 2022) ERGO International AG[2] (until 31 December 2022)	–
Dr. Christoph Jurecka Chief Financial Officer Financial and Regulatory Reporting Group Controlling Integrated Risk Management Group Taxation Investor and Rating Agency Relations	ERGO Group AG[2] MEAG MUNICH ERGO AssetManagement GmbH[2]	–
Dr. Achim Kassow Labour Relations Director (since 1 May 2022) Asia Pacific and Africa Human Resources Central Procurement Global Real Estate and Services	ERGO International AG[2]	–

See the end of the table for footnotes.

Member of the Board of Management/Responsibilities	Memberships of statutory supervisory boards	Memberships of comparable bodies of German and foreign business enterprises
Clarisse Kopff (from 1 December 2022) Europe and Latin America	–	–
Dr. Markus Rieß Primary Insurance/ERGO	ERGO Deutschland AG[2] (Chair) ERGO Digital Ventures AG[2] (Chair) ERGO International AG[2] (Chair) ERGO Technology & Services Management AG[2] (Chair)	Next Insurance, Inc., USA
Michael Kerner (from 1 January 2023) Global Specialty Insurance	–	American Modern Property and Casualty Insurance Company, USA[2] (Chair) (from 1 January 2023) The Hartford Steam Boiler Inspection and Insurance Company, USA[2] (Chair) (from 1 January 2023) Munich Re America Corporation, USA[2] (from 1 January 2023) Munich Re America Services Inc., USA[2] (Chair) (from 1 January 2023)
Mari-Lizette Malherbe (from 1 January 2023) Life and Health	–	–

1 As at 31 December 2022, unless stated otherwise.
2 Position held within the Munich Re Group.
3 Including responsibility for ESG issues.

The Board of Management is responsible for managing the Company, in particular for setting the Company's objectives and determining strategy. It is bound to act in the Company's best interests. It should take account of the interests of shareholders, employees, and other stakeholders of Munich Reinsurance Company, with the objective of sustainable value creation. The Board of Management is responsible for effecting adequate risk management and risk control. It must ensure that statutory requirements and internal Company rules are observed, and works to ensure compliance by Group companies and their staff members.

Compliance

The Group Compliance and Legal division of Munich Reinsurance Company reports directly to the Chair of the Board of Management. Group Compliance and Legal manages the compliance activities and monitors their implementation by means of the Compliance Management System (CMS). The CMS is the methodical framework for the structured implementation of early warning, risk control, consulting and monitoring functions. More information on the CMS can be found in the combined non-financial statement and in the risk report.

In order to further strengthen compliance within the Group, the compliance whistleblowing portal serves as another channel of communication to complement the independent external ombudsperson. Staff members and third parties can use the portal to anonymously report any activity that may cause reputational damage, suspected contraventions of the law, especially financial crime (such as corruption offences, and money laundering), contraventions of antitrust law, insurance supervisory law, market abuse law, data protection law, and any serious breach of internal rules and regulations.

The Group has a comprehensive reporting system for issues relevant to compliance. This allows for regular and ad-hoc reporting to the Board of Management, the Audit Committee or equivalent and ensures ongoing documentation. The reporting includes, but is not limited to, legal changes and their implications, significant compliance risks and measures to mitigate these risks, material compliance violations, statements regarding the maturity of the CMS as well as an overview of the adequacy and effectiveness of the procedures implemented to comply with the external requirements. It also comprises the regular exchanges with the supervisory authorities concerned.

Further information about compliance and the key features of the CMS can be found at www.munichre.com/en/compliance.

Working procedures of the Board of Management

The work of the Board of Management, in particular the allocation of responsibilities among the individual Board members, matters reserved for the full Board of Management, and the majority required to pass resolutions, is regulated by rules of procedure issued by the Supervisory Board. The full Board of Management decides on all matters that, either by law, or according to the Articles of Association or rules of procedure, require a resolution of the Board of Management. In particular, it is responsible for matters requiring the approval of the Supervisory Board, for items which have to be submitted to the Annual General Meeting, for tasks which constitute management functions or are of exceptional importance, and for significant personnel measures.

Meetings of the Board of Management take place as required, but generally at least once a month, and are presided over by the Chair of the Board of Management. The adoption of a resolution requires the majority of votes cast; in the event of a tie, the Chair has the casting vote. The members of the Board of Management cooperate closely for the benefit of the Company. On an ongoing basis, they inform each other about all important business transactions.

Composition and working procedures of the Board of Management committees

Three Board of Management committees ensure efficient work by the Board of Management: the Group Committee, the Reinsurance Committee, and the Strategy Committee.

Composition of the Board of Management committees[1]

Group Committee	Dr. Joachim Wenning (Chair) Dr. Christoph Jurecka
Reinsurance Committee	Dr. Torsten Jeworrek (Chair) (until 31 December 2022) Dr. Thomas Blunck (from 1 January 2023 Chair) Stefan Golling Dr. Doris Höpke (until 30 April 2022) Dr. Achim Kassow Michael Kerner (from 1 January 2023) Clarisse Kopff (from 1 December 2022) Mari-Lizette Malherbe (from 1 January 2023) Chief Financial Officer for the reinsurance field of business[2]
Strategy Committee	Dr. Joachim Wenning (Chair) Dr. Thomas Blunck (from 1 January 2023) Nicholas Gartside Dr. Torsten Jeworrek (until 31 December 2022) Dr. Christoph Jurecka Dr. Markus Rieß

1 As at 31 December 2022.
2 No voting rights.

Group Committee
The Group Committee is the central management committee of the Group. It decides in particular on fundamental issues concerning the strategic and financial management of the Group for all fields of business, and on the principles of general business policy and organisation within the Group. The Committee also makes decisions on all matters of fundamental importance relating to the divisions headed by its voting members. In addition, it serves as an executive committee with responsibility for important ongoing issues, in particular the approval of significant individual transactions.

Reinsurance Committee
The Reinsurance Committee is the central management committee of the reinsurance field of business. It decides on all matters of fundamental importance for this field of business, except investments.

Strategy Committee
The Strategy Committee is the central management committee for fundamental strategic matters in the fields of business (reinsurance, primary insurance). It makes decisions on all strategic matters of fundamental importance for the fields of business, including own investments and administered (third-party) funds.

The following applies to all Board of Management committees: Where decisions within the sphere of responsibility of a committee relate to issues reserved for the full Board of Management, the respective committee will prepare these matters for decision. Committee meetings are held regularly, and as required. Only members of the Board of Management have voting rights on the committees. The committees are further governed by their respective rules of procedure, as adopted by the full Board of Management.

Subcommittees of the Board of Management Committees
All three Board committees have set up subcommittees: specifically, the Group Committee has established the Group Risk Committee; the Reinsurance Committee has set up the Global Underwriting and Risk Committee as well as the Board Committee IT Investments; and the Strategy Committee has established the ESG Committee. These subcommittees also include senior executives from Munich Reinsurance Company and the Group who do not have voting rights.

Subcommittees of the Board of Management committees[1]

Group Risk Committee	Dr. Christoph Jurecka (Chair) Dr. Joachim Wenning Chief Risk Officer (Group)[2]
Global Underwriting and Risk Committee	Dr. Torsten Jeworrek (Chair) (until 31 December 2022) Dr. Thomas Blunck (from 1 January 2023 Chair) Stefan Golling Mari-Lizette Malherbe (from 11 January 2023) Chief Financial Officer for the reinsurance field of business[2] Chief Risk Officer (Group)[2] Head of Investment Strategies[2] Head of CU (Corporate Underwriting)[2]
ESG Committee	Dr. Joachim Wenning (Chair) Dr. Thomas Blunck (from 1 January 2023) Nicholas Gartside Dr. Torsten Jeworrek (until 31 December 2022) Dr. Christoph Jurecka Dr. Markus Rieß Head of Economics, Sustainability and Public Affairs[2]
Board Committee IT Investments	Dr. Thomas Blunck (Chair) Stefan Golling Dr. Achim Kassow Chief Financial Officer for the reinsurance field of business[2]

1 As at 31 December 2022; members as at 11 January 2023.
2 No voting rights.

The work of these subcommittees is governed by their own written rules of procedure. Both the Group Risk Committee and the Global Underwriting and Risk Committee deal with risk management issues, albeit with different emphases. The Board Committee IT Investments is responsible for IT investments. The ESG Committee is the central management committee for fundamental, ESG-related strategic matters in the Group.

Remuneration of the members of the Board of Management

The remuneration system for members of the Board of Management is determined by the Supervisory Board and the Annual General Meeting is asked to endorse the system upon any material change and at least every four years. This was most recently the case on 28 April 2021. The remuneration report contains detailed information on the remuneration paid to the members of the Board of Management.

The remuneration system for members of the Board of Management and the remuneration report (which must be submitted to the Annual General Meeting for approval once a year) along with the Auditor's opinion are available at www.munichre.com/board-of-management.

Collaboration between Board of Management and Supervisory Board

The Board of Management and the Supervisory Board work together closely and in a spirit of trust for the benefit of the Company.

The Board of Management determines the strategic direction of the Company in conjunction with the Supervisory Board. The Board of Management reports regularly and as needed to the Supervisory Board about all questions relevant to the Company. The Chair of the Supervisory Board maintains regular contact with the Board of Management between meetings – in particular with the Chair of the Board of Management – in order to discuss issues of strategy, planning, business development, the risk situation, risk management and Company compliance. The Supervisory Board has defined the Board of Management's information and reporting obligations in detail. The Supervisory Board's consent is required before the Board of Management can conduct specific types of transactions, which include the following: annual financial planning, certain investments and divestments, the implementation of share buy-back programmes, the conclusion of inter-company agreements, and the execution of corporate restructurings in which the Company holds a stake. The Supervisory Board's approval is also required for sideline activities assumed by members of the Board of Management and for material related-party transactions as defined in Section 111b(1) of the German Stock Corporation Act (AktG).

Supervisory Board

Pursuant to the Articles of Association, the Supervisory Board of Munich Reinsurance Company comprises twenty members: half are shareholder representatives and are elected by the Annual General Meeting. The other ten members are elected employee representatives from Group companies in the EU and EEA.

Members of the Supervisory Board and their mandates on statutory supervisory boards and comparable bodies[1]

Member of the Supervisory Board	Seats held on statutory supervisory boards	Membership of comparable bodies of German and foreign business enterprises
Dr. Nikolaus von Bomhard (Chair) Chair of the Supervisory Board of Munich Reinsurance Company Member since 30 April 2019	Deutsche Post AG (Chair)[4]	Athora Holding Ltd., Bermuda (Chair)[6]
Dr. Anne Horstmann[2] (Deputy Chair) Employee of ERGO Group AG Member since 30 April 2014	–[10]	–
Prof. Dr. Dr. Dr. h.c. Ann-Kristin Achleitner Scientific Co-Director of the Center for Entrepreneurial and Financial Studies (CEFS) at the Technical University of Munich Member since 3 January 2013	–	Lazard Ltd., USA[4] Linde plc, Ireland[4] Luxembourg Investment Company 261 S.à r.l., Luxembourg[5]
Clement B. Booth Member of the Board of Directors of Howden Group Holdings Limited, United Kingdom Member since 27 April 2016	Howden Deutschland AG (Chair)[6 7]	Howden Group Holdings Limited, United Kingdom
Ruth Brown[2] Foreign Services Specialist at DAS Legal Expenses Insurance Member since 30 April 2019	–	–
Stephan Eberl[2] Member of the Staff Council of Munich Reinsurance Company Member since 30 April 2019	–	–
Frank Fassin[2] Regional Department Head Division A at ver.di North Rhine-Westphalia Member since 22 April 2009	ERGO Group AG[3]	–
Prof. Dr. Dr. h.c. Ursula Gather Chair of Board of Trustees of Alfried Krupp von Bohlen und Halbach Foundation Member since 30 April 2014	thyssenkrupp AG[4]	–
Gerd Häusler Member of the Supervisory Board of Auto1 Group SE Member since 30 April 2014	Auto1 Group SE[4]	–
Angelika Judith Herzog[2] Chair of the Staff Council of ERGO Direkt AG Member since 1 July 2021	–	–
Renata Jungo Brüngger Member of the Board of Management of Mercedes-Benz Group AG Member since 3 January 2017	Daimler Truck Holding AG[4 8] Daimler Truck AG	–
Stefan Kaindl[2] Head of Department at Munich Reinsurance Company Member since 30 April 2019	–	–

See the end of the table for footnotes.

Member of the Supervisory Board	Seats held on statutory supervisory boards	Membership of comparable bodies of German and foreign business enterprises
Dr. Carinne Knoche-Brouillon Member of management of C.H. Boehringer Sohn AG & Co. KG Member since 28 April 2021	–	–
Gabriele Mücke[2] Chair of the Board of Management of Neue Assekuranz Trade Union – NAG Member since 30 April 2019	–	–
Ulrich Plottke[2] Employee of ERGO Group AG Member since 30 April 2014	ERGO Group AG[3 9]	–
Manfred Rassy[2] Member of the Staff Council of Munich Reinsurance Company Member since 30 April 2019	–	–
Gabriele Sinz-Torporzysek[2] Employee of ERGO Beratung und Vertrieb AG Member from 30 April 2014 until 31 January 2022	–	–
Carsten Spohr Chair of the Board of Management of Deutsche Lufthansa AG Member since 29 April 2020	–	–
Karl-Heinz Streibich Member of the Supervisory Board of Deutsche Telekom AG (Deputy Chair of the Supervisory Board of Siemens Heathineers AG since 15 February 2023) Member since 30 April 2019	Siemens Healthineers AG[4] Deutsche Telekom AG[4]	–
Markus Wagner[2] Employee of ERGO Beratung und Vertrieb AG Member since 1 February 2022	ERGO Beratung und Vertrieb AG[3]	–
Dr. Maximilian Zimmerer Member of the Supervisory Board of Munich Reinsurance Company Member since 4 July 2017	Deutsche Beteiligungs AG[4] Investmentaktiengesellschaft für langfristige Investoren TGV (Chair)[6]	–

1 As at 31 December 2022.
2 Employee representative.
3 Mandate within the Munich Re Group.
4 Listed on the stock exchange.
5 Membership of a non-statutory supervisory board.
6 Company with fewer than 500 employees.
7 Mandate within Howden Group Holdings Limited.
8 Daimler Truck Holding AG holds all shares in Daimler Truck AG.
9 Until 31 December 2022.
10 ERGO Group AG (since 2 February 2023).

The Supervisory Board advises the Board of Management and monitors the management of the Company, but it is not authorised to take management action in place of the Board of Management. In accordance with a special rule applicable to (re)insurance undertakings, the Supervisory Board appointed the external auditor for the Company and Group financial statements and for the Half-Year Financial Report until the 2021 financial year. Owing to new legislation, the external auditor was elected by the Annual General Meeting for the first time in the 2022 financial year.

Working procedures of the Supervisory Board

The Supervisory Board has its own rules of procedure, which specify responsibilities, work processes and further modalities for the adoption of resolutions. The Audit Committee also has its own rules of procedure, which have been adopted by the full Supervisory Board.

The rules of procedure for the Supervisory Board and for the Audit Committee are available on the Munich Re website at www.munichre.com/supervisory-board.

The Supervisory Board normally meets at least six times during the financial year. Supervisory Board meetings are generally held with the members of the Supervisory Board personally present at the meeting (face-to-face meeting). If the Chair of the Supervisory Board so rules, meetings of the Supervisory Board may also be held using electronic media, and individual members of the Supervisory Board may attend meetings via electronic media. The members of the Board of Management attend the meetings of the Supervisory Board unless the Chair of the Supervisory Board decides otherwise. If the external auditor is consulted as an expert appraiser, the Board of Management does not attend this meeting unless the Supervisory Board considers the Board of Management's attendance to be necessary.

The Supervisory Board also meets regularly without the Board of Management.

The Supervisory Board is quorate if all its members have been invited to the meeting or called upon to vote, and if fifteen members – or ten members including the Chair – participate in the vote. Supervisory Board resolutions are adopted by a majority of votes cast, unless the law or the Articles of Association require otherwise. In the event of a Supervisory Board vote being tied, should a second vote on the same motion also result in a tie, the Chair of the Supervisory Board has a casting vote. The Chair is authorised to make declarations for the Supervisory Board based on resolutions.

Self-assessment

The Supervisory Board and its committees regularly assess how effectively the Supervisory Board as a whole and also its individual committees perform their duties. Following preparations by the Praesidium and Sustainability Committee in 2022, the Supervisory Board conducted an internal self-assessment based on a wide-ranging questionnaire. The Supervisory Board thoroughly discussed the findings of the self-assessment at its meeting on 13 October 2022. The self-assessment confirms that the working relationships within the Supervisory Board and with the Board of Management are professional and constructive, and characterised by a high degree of trust and candour. In addition, the findings document the efficient organisation and execution of meetings, as well as appropriate reporting by the Board of Management. There was no indication of any fundamental need for change. A few optimisation measures were identified and are being put into practice.

Composition and working procedures of the Supervisory Board committees

The Supervisory Board has set up six committees from among its members – the Praesidium and Sustainability Committee (until 7 June 2022: Standing Committee), the Personnel Committee, the Remuneration Committee, the Audit Committee, the Nomination Committee and the Conference Committee.

The committees adopt decisions by the majority of votes cast. With the exception of the Conference Committee, the chair of the committee has a casting vote in case of a tie. The full Supervisory Board is regularly informed about the work of the committees by their respective chairs.

Composition of the Supervisory Board committees[1]

Praesidium and Sustainability Committee	Dr. Nikolaus von Bomhard (Chair) Stephan Eberl Gerd Häusler Dr. Anne Horstmann Dr. Maximilian Zimmerer
Personnel Committee	Dr. Nikolaus von Bomhard (Chair) Stephan Eberl Renata Jungo Brüngger
Remuneration Committee	Prof. Dr. Dr. Dr. h.c. Ann-Kristin Achleitner (Chair) Stephan Eberl Renata Jungo Brüngger
Audit Committee	Dr. Maximilian Zimmerer (Chair) Prof. Dr. Dr. Dr. h.c. Ann-Kristin Achleitner Dr. Nikolaus von Bomhard Stefan Kaindl Ulrich Plottke
Nomination Committee	Dr. Nikolaus von Bomhard (Chair) Prof. Dr. Dr. Dr. h.c. Ann-Kristin Achleitner Dr. Maximilian Zimmerer
Conference Committee	Dr. Nikolaus von Bomhard (Chair) Frank Fassin Dr. Anne Horstmann Dr. Maximilian Zimmerer

1 As at 31 December 2022.

Further details of the work of the Supervisory Board committees can be found in the report of the Supervisory Board and at www.munichre.com/supervisory-board.

The main responsibilities of the committees are as follows (as at 31 December 2022):

Praesidium and Sustainability Committee

The Praesidium and Sustainability Committee prepares meetings of the Supervisory Board, unless another committee is responsible for doing so. It decides on matters of Company business requiring the Supervisory Board's consent, unless the full Supervisory Board or another committee is responsible. In addition, the Praesidium and Sustainability Committee is responsible for an internal procedure – as per Section 111a(2) of the Stock Corporation Act (AktG) – that assesses related-party transactions. The Committee regularly deals with sustainability issues (ESG), except in cases where other committees are responsible. The Praesidium and Sustainability Committee also prepares the Report of the Supervisory Board to the Annual General Meeting, the Declaration of Conformity with the German Corporate Governance Code pursuant to Section 161 of the Stock Corporation Act (AktG), and the Statement on Corporate Governance for the Supervisory Board. Moreover, the Praesidium and Sustainability Committee prepares the annual self-assessment of the effectiveness of the Supervisory Board as a whole and its individual committees with regard to the performance of their duties. Further details about the self-assessment in the past financial year are provided in the section "Self-assessment" and in the Report of the Supervisory Board.

Personnel Committee
The Personnel Committee prepares the appointment of members to the Board of Management. It also prepares the long-term succession planning together with the Board of Management, including setting targets for the number of women on the Board of Management. In addition, the Personnel Committee represents the Company in matters concerning the members of the Board of Management, and is responsible for personnel matters involving members of the Board of Management, unless these are issues that are the responsibility of the full Supervisory Board or the Remuneration Committee. This Committee approves loan transactions between the Company and members of the Board of Management and their related parties. The Personnel Committee also decides whether to approve sideline activities of members of the Board of Management, particularly mandates in supervisory boards or similar committees.

Remuneration Committee
The Remuneration Committee is responsible for preparing the Supervisory Board's resolutions on determining, amending, and regularly reviewing the remuneration system for the Board of Management; this Committee also determines and reviews the total remuneration of the individual members of the Board of Management. In addition, the Remuneration Committee prepares the Supervisory Board's resolutions regarding determination of the level of variable remuneration components, determination of the performance criteria and objectives for variable remuneration, the assessment of objectives, and the determination of the variable remuneration to be granted to the individual Board of Management members. The Personnel Committee may be involved in this assessment. Where sustainability (ESG) issues are concerned, the Praesidium and Sustainability Committee may be involved in determining and assessing the performance criteria and objectives for variable remuneration. The Remuneration Committee is also responsible for preparing the remuneration components of the employment contracts of members of the Board of Management, and for remuneration reporting with regard to the remuneration of members of the Board of Management and the Supervisory Board.

Audit Committee
The Audit Committee prepares Supervisory Board resolutions on the adoption of the Company's annual financial statements and approval of the consolidated financial statements. It discusses the Half-Year Financial Report and the material information underlying the quarterly statements, and receives the audit reports, other reports and statements by the external auditor. The Audit Committee also discusses the essential components of the Solvency II reporting with the Board of Management.

This Committee monitors accounting and the financial reporting process. It also monitors the adequacy and effectiveness of the risk management system, the internal control system, the CMS (including whistleblowing) and handling of material compliance cases, the actuarial function system and the internal audit system. Furthermore, the Audit Committee is responsible for examining potential claims for breach of duty against members of the Board of Management.

The Audit Committee prepares the procedure for selecting the external auditor, in particular the Supervisory Board's proposal to the Annual General Meeting. The Audit Committee is responsible for assessing performance and monitoring the independence of the external auditor; it also monitors and assesses the quality of the audit and any additional services provided by the external auditor. In particular, it hires the external auditor for the Company and Group financial statements as well as for any voluntary external audit of the combined non-financial statement. The Audit Committee also defines focal points of the audits and agrees the auditor's fee for the annual audits; the same applies to the review of the Half-Year Financial Report and the review of the solvency balance sheets. Beyond this, the Committee handles the approval and monitoring of non-audit services.

After in-depth deliberations by the Board of Management, the Audit Committee – together with the Board of Management – prepares the annual discussion of the risk strategy by the Supervisory Board, and discusses any changes to or deviations from the risk strategy with the Board of Management during the year.

In this connection, the Audit Committee hears reports not only from the Board of Management but also directly from the General Counsel & Group Chief Compliance Officer, the Group Chief Auditor, the Group Chief Risk Officer and the Head of the Actuarial Function. Through the Chair of the Audit Committee, every member of the Audit Committee may obtain information from the heads of the central divisions responsible for the accounting process, the internal control system, the risk management system, the internal audit system and the audit of financial statements. Through its Chair, the Audit Committee maintains a regular dialogue with the auditor also in between meetings. The Chair of the Audit Committee regularly discusses the progress of the audit with the auditor and reports thereon to the Audit Committee. The Audit Committee consults with the auditor on a regular basis without the Board of Management.

Nomination Committee

The Nomination Committee is made up exclusively of shareholder representatives.

This Committee provides the Supervisory Board with names of suitable candidates that the latter can nominate for election at the Annual General Meeting. As a basis for this, the shareholder representatives have developed and adopted a list of criteria for the selection of suitable candidates for the Supervisory Board. The Nomination Committee also proposes suitable candidates to the Supervisory Board for the election of shareholder representatives to Supervisory Board committees and as chairs of the respective committees.

Conference Committee

If the first round of voting concerning the appointment or dismissal of members of the Board of Management does not result in the required two-thirds majority, the matter will be addressed by the Conference Committee before a second vote is held on the Supervisory Board.

Remuneration of Supervisory Board members

The remuneration of the members of the Supervisory Board is laid down in the Articles of Association. The remuneration report contains detailed information on the remuneration paid to the members of the Supervisory Board. The resolution of the Annual General Meeting on the system of remuneration for members of the Supervisory Board dated 28 April 2021 and the remuneration report (including the Auditor's opinion) are available at www.munichre.com/supervisory-board.

Other corporate governance practices

Munich Re Code of Conduct

Our business actions are geared to our Group-wide guidelines and standards that go beyond legal and German Corporate Governance Code requirements. For us, "compliance" is not simply adhering to legal provisions, statutes and internal rules, but also extends to the fact that the decisions we take and activities we engage in are guided by our principles and values.

The main principles for compliant conduct and integrity are laid down in our Code of Conduct, which provides orientation to all employees and responsible management bodies in their daily work. The main principles include not only adherence to legal provisions and statutes but also a quest for sustainable value creation.

Further information can be found on our website under www.munichre.com/code-of-conduct.

UN Global Compact

To make clear our understanding of important values inside and outside our Group, Munich Re joined the United Nations Global Compact in 2007. The ten principles of this declaration (covering human rights, labour standards, environmental protection and combating corruption) form the benchmark for our actions within the Group, and thus provide the fundamental framework for our corporate responsibility. Our Code of Conduct takes full account of these principles.

We report annually on the implementation of these principles in our Communication on Progress.

Principles for Responsible Investment (PRI)

Munich Re was one of the founding members of PRI in 2006. We implement the principles for sustainable investment through our Group investment function GIM and our asset manager MEAG, for example, and we report regularly on adherence to these principles.

Net-Zero Asset Owner Alliance (NZAOA)

Beyond the PRI, we joined the NZAOA in 2020. We thus undertake to decarbonise our investments to net zero in order to reach the Paris climate targets.

Principles for Sustainable Insurance (PSI) and Net-Zero Insurance Alliance (NZIA)

The PSI – which Munich Re played an active role in formulating and which we signed in 2012 as one of the first signatories – serve as a guide for anchoring environmental, social and governance (ESG) aspects along the value chain in our core business. Moreover, we were one of the founding members of the NZIA in 2021.

Further information on these voluntary commitments is available on our Sustainability Portal at www.munichre.com/sustainability.

Equal participation of men and women in management positions

As at 31 December 2022, the percentage of women on the Board of Management was 11.1%; with 16.7% at the first management level and 26.5% at the second management level. The targets set as part of implementing the German Act on Equal Participation of Men and Women in Private-Sector and Public-Sector Management Positions (FüPoG) – 25% at Board of Management level, 15% at the first and 35% at the second management level, all to be achieved by 31 December 2025 – have thus already been met as far as the first management level is concerned. At the second management level, the percentage has also continued to increase. Since 1 January 2023, the percentage of women on the Board of Management has been 20%.

The management levels are defined as follows: A manager at the first management level reports to a member of the Board of Management. A manager at the second management level reports to a manager at the first management level. For these purposes, only staff members with disciplinary responsibility are categorised as managers.

We aim to increase female representation in management positions by taking targeted measures and providing a variety of offerings. These include women's networks, mentoring, training and coaching programmes, career counselling, and childcare as well as part-time and parental leave offerings. The share of women in management positions is monitored on a quarterly basis throughout the Group, with a special focus on the process of staffing management positions at the first and second management levels, in order to keep track of developments and identify potential issues.

To make the pool of female candidates for management positions as big as possible, we take care to ensure that women and men are equally represented in our talent programmes. Specifically, women made up 41% of participants in the "Group Management Platform" (the top Group-wide talent pool), 42% in "Hydrogen", 49% in "Oxygen" (talent programmes in reinsurance), 50% in "Grow" (ERGO), and 38% in MEAG's "Leadership Journey" (as at 31 December 2022).

This focused approach is bearing fruit. Globally, the share of women in management positions within the Group continued to increase, amounting to 38.5% as at 31 December 2022. We are thus getting ever closer to our commitment of achieving a share of women of 40% across all management levels worldwide.

Moreover, in accordance with legislation and the objectives concerning composition of the Supervisory Board, at least 30% of seats on the Supervisory Board of Munich Reinsurance Company must be filled by women, and at least 30% by men.

In accordance with the Co-Determination Agreement, the employee and shareholder representatives ensure separate compliance with the statutory gender quotas on the Supervisory Board.

On 31 December 2022, 60% of seats on the Supervisory Board of Munich Reinsurance Company were occupied by men and 40% by women – four women were shareholder representatives and four were employee representatives. The minimum requirements are thus met by both sets of representatives on the Supervisory Board.

Diversity concepts for the Board of Management and Supervisory Board

Diversity is taken into account when filling management positions in the Company and in the composition of the Board of Management and the Supervisory Board. Diversity is an important part of Munich Re's corporate culture. The tenets of diversity are set out in the Diversity Policy. This applies to all employees across the Group.

Diversity concept for the Board of Management

When appointing members of the Board of Management, the Supervisory Board is mindful of diversity in terms of professional and educational background, internationality, age, and gender. The aim is to ensure that the Board's composition is as diverse as possible, complementary, and strong as a whole. Gender diversity is described in the section entitled "Equal participation of men and women in management positions".

Members of the Board of Management bear individual responsibility for the divisions they head, and joint responsibility for overall management of the Company. In addition to the specific knowledge and experience required for each division, all Board members must have a sufficiently broad range of knowledge and experience in all areas of our business to ensure that they can monitor each other.

To implement the requirements of Solvency II, the Board of Management and Supervisory Board have adopted a Fit and Proper Policy; this policy sets out fitness and propriety requirements for Board members and other persons. Accordingly, it must be ensured that the members of the Board of Management have the necessary qualifications in their respective individual areas of responsibility. The policy also requires the Board of Management overall to have adequate qualifications, experience and expertise at least in the business, economic, market and regulatory environment, as well as the business strategy, business model, governance system and risk model of Munich Reinsurance Company, and financial and actuarial analysis.

The differences between the business models within the Group and between divisions in the reinsurance field of business require that the Board of Management have a broad professional and educational background.

In its current composition, the Board of Management shows a diverse range of professional training and education. It includes graduates of various degrees and vocational training (e.g. business and economics, mathematics, physics, and political science). The CVs of the individual members of the Board of Management have different focuses – in operative business, in certain markets, or in specialist areas. The diverse careers and personalities within the Board of Management express the versatility of our business model, and reflect the complex requirements faced by the Board.

The internationality of the Board is also taken into account. The global business activities of Munich Re mean that all members of the Board of Management have international management experience.

The average age of the members of the Board of Management at the end of the 2022 financial year was 53; the youngest Board member was 46, and the oldest was 61. The age limit for membership of the Board of Management is 67; members of the Board of Management must leave the Board no later than the end of the calendar year in which they turn 67. The requirements for age limits are thus met.

First-time appointments of members of the Board of Management are as a rule for a period of three years. A reappointment more than one year before the end of the appointment period with simultaneous cancellation of the current appointment will only be made in special circumstances. With the exception of aspects relating to remuneration, which are dealt with by the Remuneration Committee, preparation for the appointment of members of the Board of Management is the responsibility of the Personnel Committee of the Supervisory Board, which provides suggestions for suitable candidates to the full Supervisory Board. The Personnel Committee is guided by the Fit and Proper Policy, the specific requirements of the relevant function, and the above-mentioned diversity considerations. In conjunction with the Board of Management, the Personnel Committee is also responsible for succession planning. Succession planning for the Board of Management is systematic and geared to the strategic objectives and future challenges of the Group. Candidates are mainly selected from the top Group-wide talent pool, the Group Management Platform (GMP). Care is taken on the GMP to make sure that there is a balanced composition in terms of gender, internationality, fields of business – reinsurance/ERGO/MEAG and Group functions – and diversity of experience and profiles.

The CVs of the members of the Board of Management are updated regularly and can be found at www.munichre.com/board-of-management.

Diversity concept for the Supervisory Board/Objectives of the Supervisory Board concerning its composition, competence profile and sets of criteria

The composition of the Supervisory Board also follows a concept of diversity with regard to its members' professional and educational background, internationality, ethnicity, age, and gender. Gender diversity is described in the section "Equal participation of men and women in management positions". The aim of the diversity concept is to bring a pluralistic wealth of experience to the Supervisory Board through the interaction of members that have different professional and educational backgrounds and are diverse in terms of internationality, ethnicity, age and gender, thereby enhancing the Board's efficiency for the benefit of the Company.

Members of the Supervisory Board of Munich Reinsurance Company must meet fitness and propriety requirements. Overseeing the Company professionally and competently and actively accompanying its development demands an appropriate level of diversity on the Supervisory Board in terms of qualifications, knowledge and relevant experience.

The Supervisory Board has set itself specific objectives concerning its composition and has defined requirements regarding the competences of the Supervisory Board as a whole. Moreover, employee representatives and shareholder representatives have each adopted a set of criteria that specifies more far-reaching requirements.

In accordance with the competence profile for the Supervisory Board as a whole and both sets of criteria, it must be ensured that – in terms of the professional and educational background of its members – the Supervisory Board as a whole has adequate knowledge, skills and experience with regard to the markets, business processes, competition and the requirements of reinsurance, primary insurance and investment in order to perform its duties properly. Appropriate knowledge of the following fields is also required: risk management, accounting, auditing, controlling and internal audit, asset-liability management, law, regulatory supervision, compliance, tax, human resources management and other strategically relevant topics, such as digitalisation, innovation and sustainability. The competence profile also includes a good overall understanding of the business model. The members of the Supervisory Board must collectively be familiar with the sector in which the Company operates.

Any additional requirements for specific duties will be defined on a case-by-case basis, in particular taking into account legal requirements and the competence profile. At least one member of the Audit Committee must have expertise in the field of accounting and at least one other member of the Audit Committee must have expertise in the field of auditing. The expertise in the field of accounting shall consist of special knowledge and experience in the application of accounting principles and internal control and risk management systems, and the expertise in the field of auditing shall consist of special knowledge and experience in the auditing of financial statements. Accounting and auditing also include sustainability reporting and its audit and assurance.

When proposing candidates for election to the Supervisory Board, the Supervisory Board generally only considers nominees aged 70 or under (target age limit). The Supervisory Board has deliberately opted for a flexible target age limit, which provides sufficient room for manoeuvre for assessing the circumstances of the individual case. This expands the pool of potential candidates and allows in particular for the re-election of members of the Supervisory Board with many years of experience. Future nominations of candidates for election to the Supervisory Board should also take into account that at the time of election no candidate should already have been on the Supervisory Board for a continuous period of more than ten years. Normally, Supervisory Board members should not serve on the Board for a continuous period of more than twelve years.

The competence profile also includes other personal qualities of Supervisory Board members, such as entrepreneurial and international experience, having sufficient availability to devote to the role, a strong commitment to corporate governance, commitment to the sustainable, long-term value-creating orientation of the Company and its business policy, a solution-oriented approach, strategic expertise and the competence to effect change. Members of the

Supervisory Board must have no relevant (material and not only temporary) conflicts of interest.

The Nomination Committee of the Supervisory Board selects candidates for the shareholder representatives – based on the objectives concerning composition of the Supervisory Board, the competence profile and the set of criteria for the shareholder representatives – and prepares the Supervisory Board's election proposals to the Annual General Meeting. This Committee draws up a requirements profile to be used in the selection process. Shareholders receive the detailed CVs of the respective candidates when the Annual General Meeting is convened. When selecting candidates, care is taken to achieve diversity in terms of the composition of the Supervisory Board to ensure that the Supervisory Board as a whole fits the required competence profile.

Half of the members of the Supervisory Board are elected representatives of Group employees in the EU/EEA. The employee representatives on the Supervisory Board are governed by special co-determination rules under the Co-Determination Agreement. The Co-Determination Agreement also specifies a corresponding set of criteria for the employee representatives, including diversity criteria, which serves as a basis for electing employee representatives to the Supervisory Board. The bodies responsible for making election nominations to the European Electoral Board under the Co-Determination Agreement should take these criteria into account within the limits prescribed by applicable regulations to ensure that the diversity criteria and other requirements are met.

In its current composition, the Supervisory Board demonstrates diversity of professional training and education, and also has the overall knowledge, expertise and professional experience necessary for the proper performance of its duties. Members have diverse professional and educational focuses (including law, economics, mathematics, natural sciences, engineering, and commercial and insurance-specific training). The Supervisory Board members also have management experience in various sectors (such as finance and insurance, software, automotive, aviation, pharmaceutical industry), and extensive experience in academia.

Above all the Chair of the Audit Committee – Maximilian Zimmerer – , Ann-Kristin Achleitner and Nikolaus von Bomhard as members of the Audit Committee, and Supervisory Board member Gerd Häusler possess recognised expertise in accounting (special knowledge and experience in the application of accounting principles and internal control and risk management systems) and auditing (special knowledge and experience in the auditing of financial statements). This expertise also includes sustainability reporting and its audit and assurance. The shareholder representatives on the Audit Committee and Supervisory Board member Gerd Häusler thus qualify as financial experts within the meaning of Section 100(5) of the German Stock Corporation Act (AktG) and recommendation D.3 DCGK.

Maximilian Zimmerer has gained his expertise in accounting and auditing during his many years on the Board of Management of Allianz SE, by chairing the Boards of Management of Allianz Lebensversicherungs-AG and Allianz Private Krankenversicherungs-AG, and by being a member of various supervisory boards. Ann-Kristin Achleitner qualifies as a financial expert due to her many years of experience teaching at universities and serving on numerous supervisory board committees and audit committees of listed companies over the years. Nikolaus von Bomhard possesses the requisite knowledge and experience in accounting and auditing due to his thirteen years as Chair of the Board of Management of Munich Reinsurance Company and his many years as Chair of the Supervisory Board of Deutsche Post AG. Gerd Häusler has gained his financial expertise by serving on Board of Management and Supervisory Board committees over many years, and by holding various roles in the global financial services industry, including as Chair of the Board of Management – and later on as Chair of the Supervisory Board – of Bayerische Landesbank, and as Chair of the Board of BHF Kleinwort Benson Group SA. Since 2018, he has also been chairing the Audit Committee of listed company Auto1 Group SE. In addition, the members of the Audit Commitee – Ann-Kristin Achleitner (since 2016), Maximilian Zimmerer (since 2019; started attending meetings as a guest in 2018) and Nikolaus von Bomhard (since 2019) – have expanded and deepened their relevant expertise during their many years as members of the Company's Audit Committee. The above members of the Audit Committee and Supervisory Board member Gerd Häusler keep track of current developments in the fields of accounting, auditing and sustainability reporting.

In addition, Maximilian Zimmerer, Ann-Kristin Achleitner, Nikolaus von Bomhard and Gerd Häusler possess recognised sustainability expertise.

As a result, all shareholder representatives in the Audit Committee and in the Praesidium and Sustainability Committee are both financial experts and sustainability experts.

Qualification matrix of the members of the Supervisory Board[1]

		von Bomhard	Horstmann	Achleitner	Booth	Brown
Tenure	Joined Board in	2019	2014	2013	2016	2019
Personal suitability	Regulatory requirement (Fit & Proper)	✓	✓	✓	✓	✓
	Independence[2]	✓	n.a.	✓	✓	n.a.
	No overboarding[2]	✓	✓	✓	✓	✓
Diversity	Gender	Male	Female	Female	Male	Female
	Year of birth	1956	1970	1966	1954	1959
	Nationality	German	German	German	British/German	British
	International experience	✓	–	✓	✓	✓
	Educational background	Lawyer	Lawyer	Lawyer/ Economist	Economist	Joint Honours Degree in French and German
Professional suitability	Actuarial experience[3]	✓	–	✓	✓	✓
	Investment management[4]	✓	✓	✓	✓	–
	Accounting[5]	✓	✓	✓	–	–
	Risk management[6]	✓	✓	✓	✓	–
	Corporate goverance and control[7]	✓	✓	✓	✓	–
	Human resources	✓	✓	✓	✓	✓
	Sustainability	✓	–	✓	✓	–
Special expertise[8]	Financial expert per Section 100(5) AktG	✓	–	✓	–	–
	Accounting expert	✓	–	✓	–	–
	Audit expert	✓	–	✓	–	–
	Digital transformation/ Information technology	–	–	✓	–	–
	Cyber security and information security	–	–	–	–	–
	Climate change/ Climate risks	✓	–	✓	✓	–
	Natural sciences	–	–	–	–	–
	Engineering	–	–	–	–	–

See the end of the table for footnotes.

→		Eberl	Fassin	Gather	Häusler	Herzog
Tenure	Joined Board in	2019	2009	2014	2014	2021
Personal suitability	Regulatory requirement (Fit & Proper)	✓	✓	✓	✓	✓
	Independence[2]	n.a.	n.a.	✓	✓	n.a.
	No overboarding[2]	✓	✓	✓	✓	✓
Diversity	Gender	Male	Male	Female	Male	Female
	Year of birth	1970	1959	1953	1951	1961
	Nationality	German	German	German	German	German
	International experience	–	–	✓	✓	–
	Educational background	Graduate in commercial studies	Graduate in education studies	Mathematician /Statistician	Lawyer/ Economist	Florist diploma
Professional suitability	Actuarial experience[3]	✓	–	✓	✓	–
	Investment management[4]	✓	–	✓	✓	✓
	Accounting[5]	✓	–	✓	✓	–
	Risk management[6]	–	✓	✓	✓	–
	Corporate goverance and control[7]	✓	✓	✓	✓	✓
	Human resources	✓	✓	✓	✓	✓
	Sustainability	✓	✓	✓	✓	–
Special expertise[8]	Financial expert per Section 100(5) AktG	–	–	–	✓	–
	Accounting expert	–	–	–	✓	–
	Audit expert	–	–	–	✓	–
	Digital transformation/ Information technology	–	–	✓	–	✓
	Cyber security and information security	–	–	✓	–	–
	Climate change/ Climate risks	–	✓	✓	✓	–
	Natural sciences	–	–	✓	–	–
	Engineering	–	–	✓	–	–

See the end of the table for footnotes.

→		Jungo Brüngger	Kaindl	Knoche-Brouillon	Mücke	Plottke
Tenure	Joined Board in	2017	2019	2021	2019	2014
Personal suitability	Regulatory requirement (Fit & Proper)	✓	✓	✓	✓	✓
	Independence[2]	✓	n.a.	✓	n.a.	n.a.
	No overboarding[2]	–	✓	✓	✓	✓
Diversity	Gender	Female	Male	Female	Female	Male
	Year of birth	1961	1969	1965	1953	1962
	Nationality	Swiss	German	French/ German	German	German
	International experience	✓	✓	✓	✓	–
	Educational background	Lawyer	Mathematician	Pharmacist	Legal assistant	Graduate in insurance business administration
Professional suitability	Actuarial experience[3]	✓	✓	–	✓	✓
	Investment management[4]	✓	✓	✓	✓	✓
	Accounting[5]	✓	✓	✓	–	✓
	Risk management[6]	✓	✓	✓	✓	✓
	Corporate goverance and control[7]	✓	✓	✓	✓	✓
	Human resources	✓	✓	✓	✓	✓
	Sustainability	✓	–	✓	✓	–
Special expertise[8]	Financial expert per Section 100(5) AktG	–	–	–	–	–
	Accounting expert	–	–	–	–	–
	Audit expert	–	–	–	–	–
	Digital transformation/ Information technology	✓	–	✓	✓	–
	Cyber security and information security	–	–	–	–	–
	Climate change/ Climate risks	–	✓	✓	–	–
	Natural sciences	–	–	✓	–	–
	Engineering	–	–	–	–	–

See the end of the table for footnotes.

→		Rassy	Spohr	Streibich	Wagner	Zimmerer
Tenure	Joined Board in	2019	2020	2019	2022	2017
Personal suitability	Regulatory requirement (Fit & Proper)	✓	✓	✓	✓	✓
	Independence[2]	n.a.	✓	✓	n.a.	✓
	No overboarding[2]	✓	✓	✓	✓	✓
Diversity	Gender	Male	Male	Male	Male	Male
	Year of birth	1963	1966	1952	1965	1958
	Nationality	German	German	German	German	German
	International experience	✓	✓	✓	–	✓
	Educational background	–	Engineer	Engineer	Insurance Specialist	Lawyer
Professional suitability	Actuarial experience[3]	✓	✓	–	✓	✓
	Investment management[4]	–	✓	✓	✓	✓
	Accounting[5]	–	✓	✓	–	✓
	Risk management[6]	✓	✓	✓	–	✓
	Corporate goverance and control[7]	✓	✓	✓	✓	✓
	Human resources	✓	✓	✓	✓	✓
	Sustainability	–	✓	✓	–	✓
Special expertise[8]	Financial expert per Section 100(5) AktG	–	–	–	–	✓
	Accounting expert	–	–	–	–	✓
	Audit expert	–	–	–	–	✓
	Digital transformation/ Information technology	✓	✓	✓	✓	–
	Cyber security and information security	–	✓	✓	✓	–
	Climate change/ Climate risks	–	✓	✓	✓	✓
	Natural sciences	–	–	✓	–	–
	Engineering	–	✓	✓	–	–

1 As at 31 December 2022; ✓ = Fitness: Evaluation as part of the annual self-assessment of the Supervisory Board with “good” or “sound knowledge”. On a scale of A to E, this corresponds to an evaluation of at least B.
2 In conformity with the German Corporate Governance Code (recommendations on independence relate to shareholder representatives only). The members of the Supervisory Board have no relevant (material and not only temporary) conflicts of interest.
3 Skills and experience with regard to the markets, business processes, competition and the requirements of reinsurance and primary insurance (life and non-life).
4 Investment, asset-liability management.
5 Accounting, auditing, controlling.
6 Risk management (including internal control processes).
7 Law, regulatory supervision, compliance, internal audit, tax.
8 Result of a supplementary query (without a rating scale) as part of the annual self-assessment.

The different personalities within the Supervisory Board and their individual careers reflect the wide range of duties of the Supervisory Board and meet the associated requirements.

Most of the members of the Supervisory Board also have international experience. The members of the Supervisory Board come from a number of different countries, and this reflects the Company's international activities.

The average age of members of the Supervisory Board at the end of the 2022 financial year was 61; the youngest Board member was 52, and the oldest was 71. There is therefore a sufficient age mix on the Supervisory Board.

The CVs of the members of the Supervisory Board can be found at www.munichre.com/supervisory-board. They are updated as required, at least once a year.

Independence

The shareholder representatives on the Supervisory Board aim to ensure that, as far as possible, all candidates whom they propose to the Annual General Meeting for election are independent.

In implementing the German Corporate Governance Code, the shareholder representatives have set themselves the objective of having at least eight independent shareholder representatives on the Supervisory Board.

Taking into account the ownership structure, the shareholder representatives are of the opinion that all ten shareholder representatives meet the independence criteria of the German Corporate Governance Code. Specifically, the Chair of the Supervisory Board, the Chair of the Audit Committee, as well as the Chair of the committee that addresses Management Board remuneration are thus independent within the meaning of the DCGK. In their assessment, the shareholder representatives took into particular account whether the member of the Supervisory Board or a close relative of the member of the Supervisory Board (i) is related to a member of the Board of Management, (ii) was a member of the Board of Management of the Company in the two years preceding the appointment to the Supervisory Board, (iii) may derive benefits that are influenceable by the Board of Management as a consequence of their membership on the Supervisory Board (for instance through a consultancy contract), (iv) represents in particular a specific group that pursues individual or special interests, (v) holds a major direct or indirect stake in the Company or represents a shareholder/group that holds such a stake or its interests, (vi) held a board or consultancy function in the year preceding the appointment, in particular for competitors, clients, suppliers or creditors of the Company or for an entity dependent on these which might lead to a relevant, i.e. material and not only temporary, conflict of interest in their view or in the view of the Company, (vii) has been a partner or employee of the auditors during the past three years and/or (viii) has been a member of the Supervisory Board for more than 12 years.

Consolidated financial statements and notes

Consolidated balance sheet as at 31 December 2022[1]

Assets

	Notes			31.12.2022	Prev. year		Change
		€m	€m	€m	€m	€m	%
A. Intangible assets							
I. Goodwill	(1)		3,240		3,092	148	4.8
II. Other intangible assets	(2)		1,297		1,286	10	0.8
				4,537	**4,379**	**158**	**3.6**
B. Investments							
I. Land and buildings, including buildings on third-party land	(3)		7,340		7,029	311	4.4
II. Investments in affiliated companies, associates and joint ventures	(5)		5,904		3,635	2,269	62.4
Thereof: Associates and joint ventures accounted for using the equity method			5,449		3,215	2,234	69.5
III. Loans	(6)		48,547		50,389	–1,842	–3.7
IV. Other securities							
1. Available for sale	(7)	140,388			162,468	–22,080	–13.6
2. At fair value through profit or loss	(8)	3,956			2,950	1,007	34.1
			144,345		165,418	–21,073	–12.7
V. Deposits retained on assumed reinsurance	(9)		9,494		9,027	466	5.2
VI. Other investments	(10)		4,168		4,803	–635	–13.2
				219,797	**240,300**	**–20,503**	**–8.5**
C. Insurance-related investments	**(8)**			**11,128**	**12,283**	**–1,155**	**–9.4**
D. Ceded share of technical provisions	**(11)**			**6,498**	**6,099**	**399**	**6.5**
E. Receivables							
I. Current tax receivables			695		715	–21	–2.9
II. Other receivables	(12)		32,749		29,058	3,692	12.7
				33,444	**29,773**	**3,671**	**12.3**
F. Cash at banks, cheques and cash in hand				**6,439**	**5,413**	**1,026**	**19.0**
G. Deferred acquisition costs	**(13)**						
Gross			11,089		10,545	545	5.2
Ceded share			–664		–608	–56	–9.2
Net				10,425	9,937	488	4.9
H. Deferred tax assets	**(14)**			**2,775**	**503**	**2,272**	**451.4**
I. Other assets	**(15)**			**3,080**	**3,167**	**–87**	**–2.7**
J. Non-current assets held for sale	**(16)**			**448**	**552**	**–104**	**–18.9**
Total assets				**298,570**	**312,405**	**–13,834**	**–4.4**

1 You can download this information as an Excel file; please refer to the Financial Supplement under www.munichre.com/results-reports

Equity and liabilities

	Notes	31.12.2022		Prev. year		Change
		€m	€m	€m	€m	%
A. Equity	(17)					
I. Issued capital and capital reserve		7,422		7,432	–10	–0.1
II. Retained earnings		15,414		13,822	1,592	11.5
III. Other reserves		–5,205		6,642	–11,848	–
IV. Consolidated result attributable to Munich Reinsurance Company equity holders		3,432		2,933	499	17.0
V. Non-controlling interests		139		116	24	20.4
			21,202	**30,945**	**–9,743**	**–31.5**
B. Subordinated liabilities	**(19)**		**4,748**	**5,055**	**–307**	**–6.1**
C. Gross technical provisions						
I. Unearned premiums	(20)	14,510		13,474	1,036	7.7
II. Provision for future policy benefits	(21)	115,663		114,586	1,077	0.9
III. Provision for outstanding claims	(22)	89,438		81,671	7,767	9.5
IV. Other technical provisions	(23)	11,563		21,414	–9,851	–46.0
			231,173	**231,145**	**29**	**0.0**
D. Gross technical provisions for unit-linked life insurance	**(24)**		**7,780**	**8,998**	**–1,219**	**–13.5**
E. Other provisions	**(25)**		**2,661**	**4,958**	**–2,297**	**–46.3**
F. Liabilities						
I. Bonds and notes issued	(26)	300		293	7	2.4
II. Deposits retained on ceded business	(27)	1,106		1,502	–396	–26.4
III. Current tax liabilities		1,569		1,845	–277	–15.0
IV. Other liabilities	(28)	27,681		26,069	1,613	6.2
			30,656	**29,709**	**947**	**3.2**
G. Deferred tax liabilities	**(14)**		**136**	**1,300**	**–1,164**	**–89.5**
H. Liabilities related to non-current assets held for sale	**(16)**		**214**	**294**	**–80**	**–27.1**
Total equity and liabilities			**298,570**	**312,405**	**–13,834**	**–4.4**

Consolidated income statement for the 2022 financial year[1]

	Notes			2022	Prev. year	Change	
		€m	€m	€m	€m	€m	%
Gross premiums written		**67,133**			**59,567**	**7,565**	**12.7**
1. Earned premiums	**(30)**						
Gross		66,391			57,597	8,794	15.3
Ceded share		–2,929			–2,396	–534	–22.3
Net			63,462		55,202	8,260	15.0
2. Income from technical interest	**(31)**		**3,435**		**5,783**	**–2,348**	**–40.6**
3. Expenses for claims and benefits	**(32)**						
Gross		–49,405			–46,957	–2,448	–5.2
Ceded share		2,448			1,574	874	55.5
Net			–46,957		–45,383	–1,574	–3.5
4. Operating expenses	**(33)**						
Gross		–16,585			–14,111	–2,474	–17.5
Ceded share		678			437	241	55.1
Net			–15,907		–13,674	–2,233	–16.3
5. Technical result (1–4)				**4,032**	**1,927**	**2,105**	**109.2**
6. Investment result	**(34)**		**4,903**		**7,156**	**–2,253**	**–31.5**
Thereof: Income from associates and joint ventures accounted for using the equity method			52		219	–167	–76.4
7. Insurance-related investment result	**(35)**		**–994**		**1,119**	**–2,114**	**–**
8. Other operating income	**(36)**		**1,265**		**1,203**	**62**	**5.1**
9. Other operating expenses	**(36)**		**–2,190**		**–2,106**	**–84**	**–4.0**
10. Deduction of income from technical interest			**–3,435**		**–5,783**	**2,348**	**40.6**
11. Non-technical result (6–10)				**–450**	**1,590**	**–2,040**	**–**
12. Operating result				**3,582**	**3,517**	**65**	**1.8**
13. Other non-operating result	**(37)**			**–81**	**–91**	**9**	**10.3**
14. Currency result	**(37)**			**676**	**262**	**414**	**157.9**
15. Net finance costs	**(37)**			**–179**	**–205**	**26**	**12.7**
16. Taxes on income	**(38)**			**–580**	**–552**	**–27**	**–4.9**
17. Consolidated result				**3,419**	**2,932**	**487**	**16.6**
Thereof: Attributable to Munich Reinsurance Company equity holders				3,432	2,933	499	17.0
Attributable to non-controlling interests	(17)			–13	–1	–12	<–1.000,0
	Notes			€	€	€	%
Earnings per share	**(52)**			**24.63**	**20.93**	**3.69**	**17.6**

1 You can download this information as an Excel file; please refer to the Financial Supplement under www.munichre.com/results-reports

Statement of recognised income and expense for the 2022 financial year

€m	2022	Prev. year
Consolidated result	**3,419**	**2,932**
Currency translation		
Gains (losses) recognised in equity	882	1,110
Recognised in the consolidated income statement	0	0
Unrealised gains and losses on investments		
Gains (losses) recognised in equity	–12,316	–1,019
Recognised in the consolidated income statement	–107	–1,143
Change resulting from equity method measurement		
Gains (losses) recognised in equity	24	–60
Recognised in the consolidated income statement	0	0
Change resulting from cash flow hedges		
Gains (losses) recognised in equity	–4	0
Recognised in the consolidated income statement	0	0
Other changes	8	14
I. Items where income and expenses recognised directly in equity are reallocated into the consolidated income statement	–11,511	–1,097
Remeasurements of defined benefit plans	760	500
Other changes	0	0
II. Items where income and expenses recognised directly in equity are not reallocated to the consolidated income statement	760	500
Income and expense recognised directly in equity (I + II)	**–10,752**	**–597**
Total recognised income and expense	**–7,333**	**2,335**
Thereof:		
Attributable to Munich Reinsurance Company equity holders	–7,315	2,331
Attributable to non-controlling interests	–17	4

Group statement of changes in equity for the 2022 financial year

€m	Issued capital	Capital reserve
Balance at 31.12.2020	**588**	**6,845**
Allocation to retained earnings	0	0
Consolidated result	0	0
Income and expense recognised directly in equity	0	0
Currency translation	0	0
Unrealised gains and losses on investments	0	0
Change resulting from equity method measurement	0	0
Change resulting from cash flow hedges	0	0
Remeasurements of defined benefit plans	0	0
Other changes	0	0
Total recognised income and expense	0	0
Change in shareholdings in subsidiaries	0	0
Change in consolidated group	0	0
Dividend	0	0
Purchase of own shares	0	0
Retirement of own shares	0	0
Balance at 31.12.2021	**588**	**6,845**
Allocation to retained earnings	0	0
Consolidated result	0	0
Income and expense recognised directly in equity	0	0
Currency translation	0	0
Unrealised gains and losses on investments	0	0
Change resulting from equity method measurement	0	0
Change resulting from cash flow hedges	0	0
Remeasurements of defined benefit plans	0	0
Other changes	0	0
Total recognised income and expense	0	0
Change in shareholdings in subsidiaries	0	0
Change in consolidated group	0	0
Dividend	0	0
Purchase of own shares	–10	0
Retirement of own shares	0	0
Balance at 31.12.2022	**577**	**6,845**

					Equity attributable to Munich Reinsurance Company equity holders	Non-controlling interests	Total equity
Retained earnings				Other reserves	Consolidated result		
Retained earnings before deduction of own shares	Treasury shares	Unrealised gains and losses	Currency translation reserve	Remeasurement gains/losses from cash flow hedges			
13,568	**0**	**7,936**	**–262**	**9**	**1,211**	**100**	**29,994**
–162	0	0	0	0	162	0	0
0	0	0	0	0	2,933	–1	2,932
439	0	–2,152	1,109	3	0	4	–597
0	0	0	1,109	0	0	1	1,110
0	0	–2,161	0	0	0	0	–2,162
–72	0	9	0	2	0	0	–60
0	0	0	0	0	0	0	0
500	0	0	0	0	0	0	500
10	0	0	0	0	0	4	14
439	0	–2,152	1,109	3	2,933	4	2,335
0	0	0	0	0	0	0	0
–23	0	0	0	0	0	17	–6
0	0	0	0	0	–1,373	–5	–1,378
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
13,822	**0**	**5,784**	**848**	**11**	**2,933**	**116**	**30,945**
1,392	0	0	0	0	–1,392	0	0
0	0	0	0	0	3,432	–13	3,419
795	0	–12,435	884	8	0	–4	–10,752
0	0	0	884	0	0	–2	882
0	0	–12,412	0	0	0	–10	–12,423
35	0	–23	0	12	0	0	24
0	0	0	0	–4	0	0	–4
760	0	0	0	0	0	0	760
0	0	0	0	0	0	8	8
795	0	–12,435	884	8	3,432	–17	–7,333
0	0	0	0	0	0	0	0
0	0	–305	0	0	0	48	–256
0	0	0	0	0	–1,541	–8	–1,549
0	–595	0	0	0	0	0	–605
0	0	0	0	0	0	0	0
16,009	**–595**	**–6,956**	**1,732**	**19**	**3,432**	**139**	**21,202**

Consolidated cash flow statement for the 2022 financial year

€m	2022	Prev. year
Consolidated result	**3,419**	**2,932**
Net change in technical provisions	–2,860	11,409
Change in deferred acquisition costs	–419	–729
Change in deposits retained on assumed and ceded business	–848	–757
Change in other receivables and liabilities	–2,372	–2,252
Gains and losses on the disposal of investments and insurance-related investments	–3,018	–2,716
Change in securities at fair value through profit or loss	–2,327	–760
Change in other balance sheet items	–4,862	–1,229
Other non-cash income and expenses	5,643	–672
I. Cash flows from operating activities	–7,644	5,226
Change from losing control of consolidated subsidiaries	23	–20
Change from obtaining control of consolidated subsidiaries	14	–133
Change from the acquisition, sale and maturity of investments	11,823	–3,239
Change from the acquisition, sale and maturity of insurance-related investments	–547	–431
Other	34	5
II. Cash flows from investing activities	11,347	–3,818
Inflows from increases in capital and from non-controlling interests	0	0
Outflows to ownership interests and non-controlling interests	–605	0
Dividend payments	–1,549	–1,378
Change from other financing activities	–548	–303
III. Cash flows from financing activities	–2,702	–1,681
Cash flows for the financial year (I + II + III)[1]	**1,001**	**–273**
Effect of exchange-rate changes on cash and cash equivalents	35	146
Cash at the beginning of the financial year	5,413	5,615
Cash at the end of the financial year	6,448	5,487
Thereof:		
Cash not attributable to disposal group[2]	6,439	5,413
Cash attributable to disposal group	9	74
Restricted cash	59	10
Additional information		
Income tax paid (net) – included in the cash inflows from operating activities	–604	–1,094
Dividends received	1,132	1,001
Interest received	4,881	4,557
Interest paid	–325	–392

1 Cash mainly comprises cash at banks.
2 For a definition of the disposal group, see Assets J – Non-current assets held for sale.

Notes to the consolidated financial statements

Application of International Financial Reporting Standards (IFRSs)

Munich Re's consolidated financial statements have been prepared on the basis of the International Financial Reporting Standards (IFRSs), as adopted by the EU, and the additional requirements of German commercial law pursuant to Section 315e(1) of the German Commercial Code (HGB).

Declaration of Conformity with the German Corporate Governance Code in accordance with Section 161 of the German Stock Corporation Act (AktG)

In November 2022, the Board of Management and Supervisory Board of Munich Reinsurance Company published the most recent version of its Declaration of Conformity with the German Corporate Governance Code in accordance with Section 161 of the German Stock Corporation Act (AktG), and made this Declaration permanently available to shareholders on the internet at www.munichre.com/cg-en.

Recognition and measurement

Use of judgements and estimates in recognition and measurement

In preparing the consolidated financial statements, preparers must use their judgement in applying accounting policies, and make specific estimates and assumptions that affect the items shown in the consolidated balance sheet, the consolidated income statement and the disclosures on contingent liabilities.

Particularly in primary insurance and reinsurance, the use of estimates is of substantial significance in measuring technical provisions, given that measurement is based on models and the development of future cash flows from insurance contracts cannot be conclusively predicted. Judgements and estimates also play a significant role in the case of other items as well as in determining the basis of consolidation.

Our internal processes are geared to determining amounts as accurately as possible, taking into account all the relevant information. The basis for determining amounts is management's best knowledge regarding the items concerned at the reporting date. Nevertheless, it is in the nature of these items that estimates may have to be adjusted in the course of time to take account of new knowledge.

Discretionary judgements and estimates are of significance for the following items in particular and are described in more detail in the relevant disclosures:

- Consolidated group
- Goodwill and other intangible assets
- Fair values of and impairment losses on financial instruments
- Deferred acquisition costs
- Classification of insurance contracts and separating components from an insurance contract
- Technical provisions
- Provisions for post-employment benefits
- Deferred tax
- Contingent liabilities

A regular review of measurement differences between German GAAP and IFRS was carried out in the 2022 financial year regarding the proportion attributable to shareholders, and the proportion was adjusted for life and health insurers in the ERGO Life and Health Germany segment. The total impact on the result was around €230m after tax. An opposite amount was recognised in unrealised gains and losses, reducing equity. The "Other technical provisions" did not change significantly overall.

Presentation currency and rounding of figures

Our presentation currency is the euro (€). Amounts are rounded to million euros. Due to rounding, there may be minor deviations in summations and in the calculation of percentages, with figures in brackets referring to the previous year. We only add plus or minus signs where it is not clear from the context whether the amount in question is an expense/outflow or income/inflow.

Figures for previous years

The previous-year figures have been calculated on the same basis as the figures for the 2022 financial year.

Changes in accounting policies and other adjustments

Application of the recognition, measurement and disclosure methods follows the principle of consistency.

In the 2022 financial year, it was necessary to apply the following amended IFRSs for the first time because they had been adopted into European law.

- Amendments published under the project "Annual Improvements to IFRSs" 2018–2020 cycle (rev. 5/2020): amendments to IFRS 1, First-time Adoption of International Financial Reporting Standards; IFRS 9, Financial Instruments; IFRS 16, Leases; and IAS 41, Agriculture
- Amendments to IFRS 3 (rev. 5/2020), Business Combinations – Reference to the Conceptual Framework

- Amendments to IAS 16 (rev. 5/2020), Property, Plant and Equipment – Proceeds before Intended Use
- Amendments to IAS 37 (rev. 5/2020), Provisions, Contingent Liabilities and Contingent Assets – Onerous Contracts – Cost of Fulfilling a Contract

The amendments have little effect or no material effect on Munich Re.

Munich Re is exercising the option to defer application of IFRS 9, Financial Instruments, until the introduction of IFRS 17, Insurance Contracts, in order to prevent accounting mismatches arising from the measurement of underwriting liabilities and investments. As a consequence of deferring the introduction of IFRS 9, we must make additional disclosures until we apply the standard for the first time. This will make it possible to compare our presentation of investments and other financial instruments with those of companies that already apply IFRS 9.

To make use of this exception under IFRS 4, it was necessary to document on the basis of the financial statements as at 31 December 2015 that most of the Group's activity is in insurance. Insurance business is considered "predominant" if at the time of measurement more than 90% of total liabilities were related to insurance business. Besides liabilities that fall within the scope of IFRS 4, these also include liabilities from investment contracts measured at fair value and other liabilities resulting from insurance business.

At Munich Re, liabilities related to insurance business accounted for a share of around 96.5% of total liabilities as at 31 December 2015. In the meantime, there have been no changes to our business activities that would necessitate a reassessment.

The introduction of IFRS 9 changes the requirements related to the classification and measurement of our financial assets; the measurement of these assets under IFRS 9 is geared to their contractual cash flows and to the relevant business model. If the cash flows only comprise the payment of interest and principal on the nominal amount outstanding, measurement is either at amortised cost or at fair value through other comprehensive income, depending on the business model. By contrast, equities, derivatives and complex structured products are measured at fair value through profit or loss. We will similarly measure insurance-related investments at fair value through profit or loss, as we will manage these investments under IFRS 9 based on their fair value within the "Other" business model. The following table provides an overview of how we would measure our financial assets under IFRS 9. The financial assets that meet the cash flow requirement do not include those that are managed on the basis of their fair value within the "Other" business model under IFRS 9. Such assets are instead included in the "Cash flow requirement not met" columns, along with the instruments that do not meet the cash flow requirements.

Disclosures relating to fair value

	Cash flow requirement met			Cash flow requirement not met		
€m	31.12.2022	31.12.2021	Change	31.12.2022	31.12.2021	Change
Loans						
Mortgage loans	7,572	8,315	–743	0	0	0
Loans and advance payments on insurance policies	168	183	–15	0	0	0
Other loans	30,961	43,526	–12,566	4,890	6,635	–1,744
Other securities available for sale						
Fixed-interest securities						
Government bonds						
Germany	7,675	7,297	377	15	17	–2
Rest of EU	19,805	24,710	–4,906	22	26	–4
USA	19,998	21,418	–1,419	0	0	0
Other	25,683	28,624	–2,941	2	106	–104
Corporate debt securities	**40,068**	**44,700**	**–4,632**	**557**	**1,103**	**–546**
Other	**7,461**	**9,953**	**–2,492**	**294**	**253**	**41**
Non-fixed-interest securities						
Equities	**0**	**0**	**0**	**9,747**	**15,030**	**–5,283**
Investment funds						
Equity funds	0	0	0	409	945	–536
Bond funds	0	0	0	2,594	2,096	498
Real estate funds	0	0	0	330	304	26
Other	**0**	**0**	**0**	**5,725**	**5,882**	**–156**
Other securities at fair value through profit or loss						
Held for trading	26	14	13	2,094	1,809	284
Securities designated as at fair value through profit and loss	1,342	820	522	495	318	177
Other investments, deposits with banks	2,887	3,363	–476	0	0	0
Insurance-related investments						
Investments for unit-linked life insurance contracts	0	0	0	7,470	8,582	–1,112
Insurance contracts with non-significant risk transfer	0	0	0	4,834	4,088	745
Other insurance-related investments	0	0	0	3,660	3,703	–44
Other receivables[1], miscellaneous financial receivables	**3,633**	**2,645**	**989**	**0**	**0**	**0**
Cash at banks, cheques and cash in hand	**6,439**	**5,413**	**1,026**	**0**	**0**	**0**

1 We have broken down “Other receivables” into financial and non-financial receivables. The figures from the previous year were adjusted in line with IAS 1.41.

The following table provides for an assessment of the quality of our investments that will not be measured at fair value through profit or loss in line with IFRS 9, as their contractual cash flows only comprise the payment of interest and principal on the nominal amount outstanding. The amounts shown are the carrying amounts of these investments pursuant to IAS 39, Financial Instruments: Recognition and Measurement.

The table does not include cash with banks, cheques, cash in hand or other receivables. However, these mainly comprise business with counterparties of first-class financial strength with a rating of at least BBB.

Ratings for investments that meet the cash flow requirement

€m	31.12.2022	Prev. year
AAA	72,346	78,212
AA	36,394	40,276
A	19,770	24,666
BBB	22,342	25,415
Lower	8,033	9,170
No rating	9,663	8,758
Total	**168,546**	**186,498**

From the Group’s perspective, financial assets with a higher credit risk – i.e. rated BB or lower, and measured at amortised cost under IAS 39 – were immaterial.

Financial assets held by subsidiaries already required to use IFRS 9 under national law were also immaterial from the Group’s perspective.

For details on IFRS 9 in conjunction with IFRS 17, Insurance Contracts, please refer to the section "New standards and amendments to standards that are not yet effective".

For several associates and joint ventures that already use IFRS 9 and accounted for in Munich Re's consolidated financial statements using the equity method, we applied the exemption from IAS 28.36 provided in IFRS 4.20O(b) and retained the financial statements of these associates and joint ventures prepared under IFRS 9 when applying the equity method.

Application of the amendments to IFRS 9, IAS 39, IFRS 7, IFRS 4 and IFRS 16 (rev. 8/2020) with regard to the effects of the IBOR reform (Phase 2) has been mandatory since 2021. In particular, they include rules on how to recognise the adjustments to contractual cash flows that must be made as a result of this amendment. We expect the impact from the reference rate reform to be minor. On account of the discontinuation of LIBOR rates (except LIBOR rates quoted in US dollars) and other reference rates as from 2022, Munich Re has modified some contracts such that they are now based on alternative interest rates; in other instances, fallback arrangements embedded in contracts have entered into force. This did not result in any material economic impact.

The following table provides an overview of our financial assets and financial liabilities which are subject to reference rates that have not yet been changed. In the 2022 financial year, preparations advanced with regard to changing such reference rates. The table includes the most important reference rates.

However, reference rates that were already changed as at the end of the reporting period, such as the GBP LIBOR and EONIA, are no longer listed in the table for the 2022 financial year.

Carrying amounts of financial assets and financial liabilities per reference rates

31.12.2022 €m	Non-derivative financial assets – Carrying amount	Non-derivative financial liabilities – Carrying amount	Derivatives (assets) – Carrying amount	Derivatives (liabilities) – Carrying amount
USD LIBOR: USD London InterBank Offered Rate	3,797	1,939	65	213
CAD CDOR: Canadian Dollar Offered Rate	46	7	362	14
THBFIX: Thai Baht Interest Rate Fixing	203	13	0	0
USD Constant Maturity Swap Rate	248	0	39	0
Other interest rates subject to reform	14	6	39	31
Not affected	218,094	19,117	14,417	4,319
Total	**222,403**	**21,082**	**14,923**	**4,576**

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Prev. year €m	Non-derivative financial assets – Carrying amount	Non-derivative financial liabilities – Carrying amount	Derivatives (assets) – Carrying amount	Derivatives (liabilities) – Carrying amount
GBP LIBOR: Pound Sterling London InterBank Offered Rate	516	564	2	4
USD LIBOR: USD London InterBank Offered Rate	2,238	51	198	30
CAD CDOR: Canadian Dollar Offered Rate	35	0	81	261
EONIA: Euro Overnight Index Average	81	33	1,497	88
GBP Steepener Constant Maturity Swap Rate	234	0	0	0
HKD HIBOR: Hong Kong Interbank Offered Rate	150	0	254	0
Other interest rates subject to reform	163	10	95	99
Not affected	232,770	22,015	13,005	2,974
Total	**236,187**	**22,674**	**15,132**	**3,457**

Material effects on Munich Re as a result of the coronavirus pandemic are shown in the section "Segment reporting" and in (21) Provisions for future policy benefits and (32) Expenses for claims and benefits.

As regards the impact of the war in Ukraine, please refer to the section "Segment reporting" and to (1) Goodwill, (7) Other securities available for sale, (32) Expenses for claims and benefits, and (34) Investment result.

Information on the effects of the changed interest-rate environment and the rise in inflation can be found in (21) Provision for future policy benefits and (22) Provision for outstanding claims.

We report on the importance of climate risks in (1) Goodwill, (3) Land and buildings, including buildings on third-party land, (4) Hierarchy for the fair value measurement of assets, (21) Provision for future policy benefits, and (22) Provision for outstanding claims.

New standards and amendments to standards that are not yet effective

Unless otherwise stated, Munich Re intends to initially apply all new standards or amendments to standards that are not yet effective as at the mandatory effective date for entities whose registered office is in the European Union. The relevant dates for mandatory initial application are shown in the following list of new standards.

IFRS 9, Financial Instruments

IFRS 9 (7/2014), Financial Instruments, supersedes the IAS 39 requirements relating to recognition and measurement of financial instruments. The classification of financial assets will be geared in future to an entity's business model for managing financial assets and to the contractual cash flow characteristics of its financial assets. Accordingly, they are subsequently measured at amortised cost, at fair value through other comprehensive income or at fair value through profit or loss.

For financial liabilities, there are no changes in the measurement rules – except that if the fair value option is applied, value changes attributable to a change in the entity's own credit risk must in future be recognised in other comprehensive income, provided that this does not create or increase an accounting mismatch.

IFRS 9 sets out an expected credit loss model for recognising impairment losses, under which – unlike under the current IAS 39 incurred loss model – expected credit losses are anticipated before they arise and must be recognised as an expense. There will only be one model for recognising impairment losses. It must be used consistently for all financial assets falling under the IFRS 9 impairment rules.

Hedge accounting under IFRS 9 focuses more strongly on the entity's risk management activities than was the case under the rules of IAS 39. Hedge accounting is of minor significance for Munich Re overall.

Besides the stipulations set out in IFRS 9, additional extensive disclosures pursuant to IFRS 7, Financial Instruments: Disclosures are required in the Notes.

Generally, IFRS 9 requirements are mandatory for financial years beginning on or after 1 January 2018. However, we as an insurance company are exercising the option under IFRS 4 to defer initial application of IFRS 9 in order to implement it at a later date together with IFRS 17. For more information, please see the comments on IFRS 17 below and "Changes in accounting policies and other adjustments".

A Group-wide project ensures that we implement the required processes within the specified period. As part of this project, we successfully conducted a global integration test of our accounting systems in 2022. The successful testing will be followed by the initial application of IFRS 9 as at 1 January 2023.

Concerning the classification of financial assets based on the business model for managing financial assets and the contractual cash flow characteristics of the financial assets as well as the resulting measurement, we anticipate the following impacts in particular owing to initial application as at 1 January 2023:

Our financial assets will mainly be measured at fair value through other comprehensive income, particularly bonds and loans that are managed in a "hold and sell" business model and also meet the contractual cash flow requirement. In contrast to IAS 39, under IFRS 9 a higher overall percentage of our financial assets will be measured at fair value through other comprehensive income. There will be a lower proportion of financial assets measured at amortised cost and a higher percentage of financial assets measured at fair value through profit or loss. Financial assets measured at fair value through profit or loss include, in particular, bonds and loans that do not meet the contractual cash flow requirement, equities, investment fund units, and derivatives.

Further explanatory information on the impacts of the classification requirements for financial assets can be found in the disclosures pertaining to fair value and risk of default in "Changes in accounting policies and other adjustments".

Based on the current situation in the capital markets, we anticipate merely a slight decrease in equity as at 1 January 2023 owing to the initial application of impairment requirements under the expected credit loss model. The decrease is expected to be slight primarily because just a very small proportion of financial assets will continue to be measured at amortised cost under IFRS 9; moreover, these assets are generally of high credit quality. By contrast, the vast majority of the financial assets will be measured at fair value through other comprehensive income; any change in value will be recognised in equity under "Other reserves". Accordingly, the recognition of expected credit losses on the above-mentioned financial assets as at the transition date merely results in a reclassification within equity from "Retained earnings" to "Other reserves".

In line with IFRS 9, comparative information for 2022 regarding financial instruments will generally not be adjusted in the 2023 consolidated financial statements. By contrast, Munich Re will make use of the classification overlay approach in order to present the 2022 comparative information in the scope of the initial application of IFRS 17. As a result, the measurement rules as per IFRS 9 (excepting impairment requirements) will be applied during the comparative period to some of the loans previously measured at amortised cost – which are financial assets held to back insurance contracts with direct participation features. Doing so will not affect the 2022 consolidated financial statements pursuant to IFRS 4 and IAS 39.

IFRS 17, Insurance Contracts

In **IFRS 17 (5/2017), Insurance Contracts,** the IASB has for the first time published a standard that governs the recognition, measurement and disclosure of insurance contracts in a comprehensive and uniform manner. The rules require extensive new disclosures in the Notes to the consolidated financial statements. The new standard will replace IFRS 4, Insurance Contracts.

IFRS 17 is applicable to insurance contracts (including reinsurance contracts) issued, reinsurance contracts held and investment contracts with discretionary participation features. Measurement is not performed at the individual contract level, but on the basis of portfolios that are divided into groups of contracts based on their profitability and on contracts concluded in annual cohorts. We do not make use of the option of exempting groups of insurance contracts from the annual cohort requirement (annual cohort exemption).

IFRS 17 provides a consistent accounting model for all insurance contracts. The basic approach consists in applying the general measurement model, which is mainly used in life reinsurance and in parts of our property-casualty primary insurance business. In view of the high complexity of the general measurement model, IFRS 17 provides the option of using a simplified measurement approach, called the premium allocation approach (PAA), primarily for short-term contracts. After transitioning to IFRS 17, we will make use of this option particularly for our property-casualty reinsurance business and for a substantial part of our property-casualty primary insurance business. In addition, the standard provides for a modified accounting model, called the variable fee approach (VFA), for certain participating primary insurance contracts. We apply this model for eligible life and health primary insurance contracts. A more detailed explanation of the basic features of these approaches is given below.

Insurance contracts measured using the general measurement model (GMM)

General requirements

The general measurement model is based on a building block approach that consists of four blocks: The expected future cash flows for contract fulfilment form the basis for measuring the insurance contracts under the general measurement model (building block 1). The cash flows are discounted in order to reflect the time value of money and financial risks related to the cash flows (building block 2). By comparing the present value of expected cash inflows against the present value of expected cash outflows, we arrive at the present value of the net cash flows relevant for the measurement. This present value is subjected to a risk adjustment for non-financial risk (building block 3). The risk adjustment for non-financial risk essentially reflects the assumption of underwriting risk, i.e. uncertainty about the amount and timing of cash flows. For groups of insurance contracts classified as profitable at initial recognition, we recognise a contractual service margin which represents the unearned profit (building block 4). The latter is recognised over time as insurance contract services are provided over the coverage period.

For all measurement models, there is a general distinction between a pre-claims stage (liability for remaining coverage) and a claims stage after the occurrence of an insured event (liability for incurred claims).

Upon initial recognition of insurance contracts, we compare the present value of the expected inflows, the present value of the expected outflows and the risk adjustment for non-financial risk. If the present value of the expected inflows exceeds the present value of the expected outflows plus the risk adjustment for non-financial risk, there is an expected profit, which we defer through the contractual service margin. By contrast, for measurement groups where the sum of the present value of cash outflows and the risk adjustment for non-financial risk exceeds the present value of the expected inflows, a loss component that reflects the expected loss on initial recognition is recognised directly as an expense.

For subsequent measurement of the liability for remaining coverage, building blocks 1, 2 and 3 are remeasured using updated assumptions and inputs. The contractual service margin is adjusted to reflect changes in non-financial assumptions of future coverage and new business margins, among other things, and is amortised as insurance contract services are provided over time. The carrying amount of the liability for remaining coverage is – at the end of each reporting period – the sum of the present value of expected net outflows, the risk adjustment for non-financial risk and the contractual service margin.

Cash flows (building block 1)

The starting point for measuring groups of insurance contracts is based on a current estimate of all cash flows required to fulfil the contract within the contract boundaries.

Cash flows that need to be taken into account include premium payments, expenses for claims and benefits, acquisition and administration costs, and loss adjustment expenses. The cash flows included in the measurement model reflect our current estimate and expectations regarding the fulfilment of our insurance liabilities at the reporting date.

Discounting (building block 2)

Under the general measurement model, all future cash flows are discounted using current discount rates. Measurement thus takes account of the time value of money, so that cash flows expected to occur at different times are made comparable. In this context, we select discount rates that are as consistent as possible with the overall cash flow characteristics of the groups of insurance contracts, and make use of observable market inputs wherever possible. Discount rates are determined using a bottom-up approach, with the Solvency II interest-rate curves published by the supervisory authority EIOPA (European Insurance and Occupational Pensions Authority) serving as the starting point for risk-free interest rates. As a consequence, credit spreads have no influence on discounting the cash flows and the risk adjustment for non-financial risk. The discount rates we use under IFRS 17 do not take into account any type of default risk. Furthermore, an illiquidity premium may be added to take account of the differences in liquidity between the insurance liabilities and the liquid reference instruments used in determining the risk-free interest rate. We do this for the relevant portfolios in life primary insurance business, in particular.

At each reporting date, the expected future cash flows for the liability for remaining coverage and for the liability for incurred claims are remeasured using current discount rates. The same applies to the risk adjustment for non-financial risk (building block 3), which is determined using current discount rates. IFRS 17 provides for the option, applied at portfolio level, to recognise the impact of changes in discount rates and financial risk in other comprehensive income rather than in profit or loss. Under the simplified approach of the PAA (premium allocation approach), this option only affects the impact of discount rates on the measurement of the liability for incurred claims. We make use of this option for the majority of our insurance portfolio, irrespective of the measurement model used.

Risk adjustment for non-financial risk (building block 3)

Cash flows arising from insurance contracts usually involve a high degree of uncertainty regarding the timing and amount of a claim. In addition, there may be changes to the assumptions made about the insurance business as a result of changes in policyholder behaviour or in the use of available options. To account for this uncertainty, IFRS 17 provides for a third building block, namely an explicit risk adjustment for bearing non-financial risk. It represents the compensation we require for bearing the risk, and is added to the present value of the net cash flows to arrive at the fulfilment cash flows relevant for the measurement.

The risk adjustment for non-financial risk is determined in accordance with our internal risk model, taking Group-wide risk diversification into account. We apply a cost-of-capital method for determining the risk adjustment for non-financial risk. Like the present value of the cash flows, the risk adjustment for non-financial risk is reviewed at the end of each reporting period and updated to reflect the current conditions.

Contractual service margin (building block 4)

The contractual service margin represents the unearned profit of a contract at initial recognition that is spread over the coverage period as insurance contract services are provided. If at initial recognition the present value of expected inflows exceeds the present value of expected outflows plus the risk adjustment for non-financial risk, the expected profit from the insurance cover is initially recognised as a contractual service margin, and taken into account as a liability item in measuring the insurance liabilities. Groups of insurance contracts classified as profitable thus do not affect profit or loss. If additional profitable contracts are added to a group of contracts within an annual cohort over time, the expected profit from the new business is added to the contractual service margin at initial recognition. On subsequent measurement, the contractual service margin is recognised through profit or loss in the income statement as part of insurance revenue. The amount of the contractual service margin to be released for each period is determined by coverage units. These are used to determine the quantity of services provided for the in-force insurance contracts in the current reporting period in relation to the expected total insurance contract services provided over the whole of the coverage period. For all of our insurance business, we define the coverage units in such a way as to ensure that they reflect the services provided as accurately as possible. We generally use volume-based coverage units such as the sum insured or the capital at risk, which may be adjusted to reflect the specific characteristics of the (re)insurance business concerned.

By contrast, if at inception of the contract we expect the insurance cover to produce a loss, we identify a corresponding portion of the present value of the expected net cash flows plus the risk adjustment for non-financial risk as a loss component. We recognise the expected loss in the income statement at initial recognition of the group of contracts, or as soon as we become aware that the group of insurance contracts is onerous. When grouping contracts, we always strive to ensure that contracts classified as onerous are not grouped with profitable contracts. At subsequent measurement, our control procedures are also designed to identify at an early stage any groups of insurance contracts that are to be classified as onerous in terms of future coverage. A loss component will always reflect the expected loss from the insurance contract services still to be provided at a given point in time. We systematically amortise the loss component based on the remaining cash flows and the risk adjustment for non-financial risk until the end of the coverage period.

A profitable group of insurance contracts within an annual cohort may become onerous on subsequent measurement. In this case, a loss component has to be recognised. Similarly, a group of contracts classified as onerous may become profitable on subsequent measurement, giving rise to a contractual service margin. At the end of the coverage period, both the loss component and the contractual service margin have been completely amortised in profit or loss.

Insurance contracts measured using the premium allocation approach (PAA)

Scope of application

We use the premium allocation approach for all groups of insurance contracts that meet the requirements for applying the simplified measurement model. This is always the case if the coverage period of such contracts is one year or less – or, if the coverage period is longer, it can be reasonably assumed that applying the simplified measurement model will for the group lead to a measurement of the liability for remaining coverage that would not differ materially from the measurement that would result from applying the requirements of the general measurement model. The length of the coverage period is mainly determined by the concept of contract boundaries under IFRS 17. We use the premium allocation approach for our property-casualty reinsurance business and for a substantial part of our property-casualty primary insurance business. In addition, we generally use the PAA to account for health primary insurance contracts not similar to life insurance.

General requirements

On initial recognition of a group of insurance contracts, we recognise a liability for remaining coverage, equal to the premiums received less acquisition costs paid. For business classified as profitable, neither the present value of the expected net cash flows nor the risk adjustment for non-financial risk nor the contractual service margin is explicitly determined and recognised. If the coverage period of the contracts in the group is one year or less, any acquisition costs incurred may be recognised directly as an expense. We use this option for a substantial part of our property-casualty primary insurance business. Moreover, IFRS 17 provides for simplifications in terms of the discounting of future cash flows compared with the general measurement model. If there is no significant financing component and if claims settlement is expected within a year of the occurrence of loss, no discounting is required. We currently do not apply this option. In order to provide for maximum transparency and comparability in measuring our business, we consistently take account of the time value of money also when using the premium allocation approach.

If we are aware of any indications that the contracts should be classified as onerous under the general measurement model, we compare the amount of the liability determined under the PAA with the result of the measurement under the general measurement model. If the comparison shows that the fulfilment cash flows for the liability for remaining coverage under the GMM exceed the carrying amount determined under the PAA, we directly recognise the balance as an expense in the form of a loss component. To this end, we explicitly calculate the present value of the net cash flows and the risk adjustment for non-financial risk to facilitate a comparison with the general measurement model. Our onerosity testing is consistently geared to identifying onerous contracts as soon as possible and ensures adequate reserving at all times.

For subsequent measurement of a profitable group of insurance contracts, the carrying amount of the liability for remaining coverage is updated as follows: First, the carrying amount is either increased outside profit or loss by adding the further premium payments received or decreased by subtracting the acquisition costs paid. If the acquisition costs are expensed directly to profit or loss, the carrying amount of the liability is increased accordingly. The liability for remaining coverage is reduced by the amount of insurance revenue earned as insurance contract services are provided. We earn the insurance revenue by spreading the expected total premium for the coverage period within the contract boundaries over the accounting periods in a risk-commensurate manner. Again, for subsequent measurement of profitable contracts, the present value of the net cash flows, the risk adjustment for non-financial risk and the contractual service margin are not explicitly determined, so that the PAA provides for effective simplification. By contrast, in keeping with the general measurement model, we explicitly determine risk-adjusted net outflows for groups of insurance contracts that are expected to be onerous, and following the occurrence of an insured event.

Also for the premium allocation approach, a distinction is made between the liability for remaining coverage and the liability for incurred claims. Likewise, a risk adjustment for non-financial risk needs to be determined for the liability for incurred claims when using the premium allocation approach.

Insurance contracts measured using the variable fee approach (VFA) for insurance contracts with direct participation features

Scope of application

Under an insurance contract, the insurer may not only be liable to pay for a claim after the occurrence of an insured event, but may also have to give policyholders a share in the profits. IFRS 17 also governs liabilities arising from insurance contracts with direct participation features. These are measured using the VFA, subject to certain criteria. The VFA is a modified version of the general measurement model, and we use it for certain primary insurance contracts with direct participation features in the ERGO Life and Health Germany segment and the ERGO International segment. Contracts falling within the scope of application of the VFA have in common that they provide for policyholder participation in the performance of a reference value for the underlying items. This is the case for our German participating life and health primary insurance business and a substantial part of our international life and health primary insurance contracts. Unit-linked life insurance is another typical case for application of the VFA. However, both reinsurance contracts held and reinsurance contracts issued are excluded from the scope of this measurement approach.

General requirements

Because of the special characteristics of insurance contracts with direct participation features, we consider our share of the income from the underlying items to be a variable fee, which we recognise in accordance with the requirements of the VFA. The variable fee comprises our share of the fair value of the underlying items, and is our compensation for administering and managing the underlying items. While the initial measurement of participating contracts is the same as under the general measurement model, special rules apply under IFRS 17 for subsequent measurement. For example, we offset against the contractual service margin any and all effects that have an impact on our variable fee, i.e. on our share of the fair value of the underlying items.

For German life and health (similar to life) primary insurance business, profit participation provides for policyholders essentially sharing in the investment result, risk result and cost result. The value of the underlying items is based on this profit participation, and consists of the present value of future payments and payments made in the current and prior periods. We use the fair values of the net assets backing our liabilities, including the assets backing equity, to measure the fair value of the underlying items. Because of the mechanics of German profit participation in particular, all financial and underwriting effects and assumption changes have an impact on profit participation, i.e. on our variable fee, which is the company's share in the underlying items. As a result, developments such as changes in the fair value of assets backing our liabilities, current loss realisations, effects related to policyholder lapse behaviour and other changes in financial and non-financial assumptions are initially offset against the contractual service margin.

The fulfilment cash flows for German life and health primary insurance business are determined on a market-consistent basis in accordance with the contractual options and guarantees, applying a risk-neutral measurement where risk-free interest rates only can be generated under the no-arbitrage principle. The actual returns generated from the underlying items are usually higher, and the company's share in any excess return over the risk-neutral measurement is included in the contractual service margin under the VFA. After the contractual service margin has been adjusted, it is released to profit or loss based on the expected provision of future services, which are spread proportionally over the coverage period by coverage units. For participating contracts, we take into account that we provide not only insurance services, but also investment-related services in managing the assets backing our liabilities.

Another difference compared with the general measurement model relates to the option of recognising the effect of changes in financial risks on the measurement either in profit or loss, or in equity. This effect is not explicitly captured when using the VFA. Instead, because of the special link to the asset side, the result recognised in profit or loss for the liability side is mirrored in the income statement. A positive investment result is offset by corresponding finance expenses from insurance contracts issued. Changes outside profit or loss in the fair value of assets that are part of the underlying items are recognised in other comprehensive income as insurance finance income or expenses. This value corresponds to the amounts recognised for the assets directly in equity plus off-balance-sheet valuation reserves.

Effects from the initial application of IFRS 17

Measurement at the transition date

IFRS 17, including the Amendments to IFRS 17 issued in June 2020, was adopted into European law in November 2021 and must be applied for the first time as at 1 January 2023. In addition, the amendment to IFRS 4 resulted in a deferral until 2023 of the mandatory initial application of IFRS 9 for those insurance undertakings that do not yet apply this standard, as a result of which the simultaneous initial application of the two standards is possible. Certain transitional rules simplify the interplay of IFRS 17 and IFRS 9 upon initial joint application of both standards as at the mandatory effective date, particularly with regard to the requirements for reporting comparative information. In this context, the IASB published in December 2021 a further amendment to IFRS 17 (rev. 12/2021), Insurance Contracts: Initial Application of IFRS 17 and IFRS 9 – Comparative Information.

Unless it is impracticable, changes in accounting policies resulting from the introduction of IFRS 17 are applied retrospectively to the contracts in force as at 1 January 2023 to prepare the opening balance sheet. Depending on the availability of the information required, we use one of the following three transition approaches for the initial application of IFRS 17 to our in-force business.

We apply the full retrospective approach to remeasure insurance contracts for which reasonable and supportable information was available as at the transition date. To this end, we identify and measure groups of contracts as if IFRS 17 had always been applied, without making use of transition simplifications. The information used for the full retrospective approach is primarily based on existing regular processes and internal reporting.

If it is impracticable to apply the full retrospective approach, e.g. information required for the full retrospective approach is not fully available, or cannot reasonably be made available, we apply the modified retrospective approach or the fair value approach to transition the contracts in force as at 1 January 2022 to the new accounting regime.

The aim of the modified retrospective approach is to achieve the outcome that is as close as possible to the full retrospective approach using available historical information. Under the modified retrospective approach, we use the simplifications and modifications specified in the standard only to the extent that the information required for a full retrospective approach is not available. More specifically, this applies to simplifications used in identifying groups of insurance contracts, determining the contractual service margin or the loss component, and determining insurance finance income or expenses. For certain existing contracts in property-casualty business in both primary insurance and reinsurance as well as for certain parts of our life reinsurance business, we apply the full retrospective approach for the one-off transition to IFRS 17; otherwise, we use the modified retrospective approach or the fair value approach.

In life reinsurance, if the available historical information is insufficient to use the full retrospective approach, we mostly use the fair value approach to measure our insurance contracts, striving to ensure market consistency as much as possible. In addition, the fair value approach is also used to measure certain contracts in property-casualty reinsurance business and primary insurance in Germany. Among other things, we rely on market analyses to validate the cost of capital used. In terms of the net technical provisions as at the transition date, the modified retrospective approach and the fair value approach make up a share of over 90%.

Comparative information

In contrast to adjusting comparative information as required by IFRS 17, we make use of the option under IFRS 9 to continue measuring the prior-year figures for the financial instruments accounted for under IFRS 9 in accordance with the provisions of IAS 39 instead of adjusting them. However, adjustments are necessary for those items which will be included in the measurement of insurance items under IFRS 17 going forward. In addition, we make use of the classification overlay approach for some of our financial instruments in order to avoid measurement mismatches when transitioning to IFRS 17. This approach allows us to measure certain financial instruments for the 2022 comparative period in the 2023 consolidated financial statements as if the measurement rules of IFRS 9 had already been applied. We make use of this option for financial instruments which back primary insurance business with direct participation features within the scope of the VFA, and which have previously been accounted for at amortised cost. Because the measurement of our primary insurance contracts with direct participation features is always based on the fair value of the assets, fair value measurement of loans backing our liabilities, in particular, helps us to avoid accounting mismatches and ensures that the presentation of our equity accurately reflects the economic situation. When applying the classification overlay approach, we do not make use of the concept for recognising expected credit losses under IFRS 9.

Current implementation status

IFRS 17 will involve fundamental changes to the recognition and measurement of insurance and reinsurance contracts and related processes. As the required adjustments involve a considerable amount of work, shortly after the initial publication of the new requirements we set up an implementation project based on preparatory analyses conducted from an early stage in which all the affected units of reinsurance and primary insurance were involved. Since the successful completion of the project, the various units involved have continued their close and multidisciplinary cooperation. We thus consistently ensure that the specific characteristics of our individual lines of business are taken into account and implemented in our central IT solution. In the first half of 2022, we prepared the opening balance sheet as at 1 January 2022 under IFRS 17.

Condensed opening balance sheet as at 1 January 2022

€m	1.1.2022		1.1.2022
Intangible assets	4,099	Equity	28,466
Reinsurance contracts held that are assets	3,581	Subordinated liabilities	5,055
Insurance contracts issued that are assets	6,878	Reinsurance contracts held that are liabilities	17
Investments	241,666	Insurance contracts issued that are liabilities	233,629
Insurance-related investments	8,582	Other provisions	4,960
Insurance-related financial instruments[1]	18,474	Liabilities	26,652
Receivables	4,513	Deferred tax liabilities	2,348
Cash and cash equivalents	5,413	Liabilities related to non-current assets held for sale	370
Deferred tax assets	3,021		
Other assets	4,764		
Non-current assets held for sale	505		
Total assets	**301,496**	**Total equity and liabilities**	**301,496**

1 Mainly comprises insurance contracts with non-significant risk transfer under IFRS 9.

The condensed opening balance sheet as at 1 January 2022 includes the effects of the classification overlay approach applied to certain financial instruments. As part of the transition to IFRS 17, properties previously measured at amortised cost are now measured at fair value – provided that the properties are part of the primary insurance business with direct participation features (scope of application of the VFA).

Our equity as at 1 January 2022 will decrease by €2.5bn in the opening balance sheet when compared to the application of IFRS 4. This is due in particular to the fact that for participating contracts, unrealised valuation reserves from investments previously recognised in equity will in future be taken into account in determining technical provisions for future expenses for claims and benefits, as well as in the contractual service margin. The effects of the classification overlay approach and the effects of discounting have a contrary impact.

As a component of insurance contracts issued and held that are assets or liabilities, the contractual service margin reflects the unearned profits at initial recognition and is released over time as insurance contract services are provided. At €22.7bn, the contractual service margin clearly surpasses the overall decrease in equity resulting from the initial application of IFRS 17 as at 1 January 2022. Our life reinsurance business and our life and health primary insurance business both have a particular impact on the amount of the contractual service margin. It should be noted that insurance contracts that are accounted for under the simplified measurement approach (PAA) do not include contractual service margins under IFRS 17.

The risk adjustment for non-financial risk is considered when measuring the insurance contracts issued and held that are assets or liabilities. We base the risk adjustment for non-financial risk on the risk capital requirements of our internal risk model. The risk adjustment for non-financial risk closely corresponds to the calculation of the non-financial risk in accordance with Solvency II. Solvency II requires the value at risk of basic own funds to be calculated with a confidence level of 99.5% over a one-year period. The level of risk adjustment for non-financial risk used by Munich Re corresponds to a confidence level of approximately 90% over a one-year period. The risk adjustment for non-financial risk is lower in this instance than the risk margin under Solvency II as at 31 December 2021. This is due to the fact that – unlike in the calculation of the risk margin – the Group-wide risk diversification is included in the calculation of the risk adjustment for non-financial risk. It should also be noted that neither operational nor credit risks are taken into account in the calculation of the risk adjustment for non-financial risk under IFRS 17, and that there are also differences in the classification of insurance contracts and financial instruments compared to Solvency II. To determine the risk adjustment for non-financial risk, we applied a cost-of-capital method with a cost-of-capital rate of 6%, in the same way as we do under Solvency II.

The loss component reduces equity and reflects the expected loss from services still to be provided under insurance contracts issued that are assets or liabilities. The loss component is amortised over the coverage period. The loss component is primarily attributable to our property-casualty reinsurance business and reflects our generally conservative reserving approach regarding the application of assumptions to both future cash flows and the risk adjustment for non-financial risk as well as the use of a granular level of aggregation when identifying groups of insurance contracts. The loss component can balance out over time and help to produce run-off profits.

With the introduction of IFRS 17, certain items that have thus far been disclosed separately in our financial statements will be omitted, since the resulting cash flows are already recognised as part of the measurement models. This mainly affects the items deferred acquisition costs and insurance-related receivables and liabilities such as accounts receivable and payable. Following the transition to IFRS 17, deposits retained will also no longer be disclosed separately, but will rather be included in the insurance items.

Further effects expected due to the initial application of IFRS 17

In addition to the above-mentioned effects on the opening balance sheet as at 1 January 2022, we also anticipate the following material effects due to the initial application of IFRS 17:

Insurance revenue under IFRS 17 will be considerably lower than gross premiums written because amounts that are repaid to policyholders under all circumstances, regardless of whether an insured event occurs, are not recognised as insurance revenue under IFRS 17. This relates in particular to commissions and profit commissions in reinsurance business. The reduction in revenue will not affect the insurance service result, as the insurance service expenses will likewise be reduced.

At Group level, we expect a higher consolidated result under IFRS 17 compared to IFRS 4 in the 2022 comparative period. One reason for this is, in contrast to IFRS 4, the earlier recognition of profits in life reinsurance from the provision of services during the current year and the corresponding release of the contractual service margin. A second reason is that the overall result under IFRS 17 is affected by the interest rate levels as at the transition date and by the interest-rate developments in 2022. On account of the comparatively very low interest rates as at 1 January 2022, there are minor unwinding-of-discount effects on the insurance portfolio overall. By contrast, losses that occurred during 2022 are discounted at higher discount rates for the 2022 accident year as a result of the substantial rise in interest rates over the course of 2022. It is currently not possible to precisely quantify the 2022 consolidated result under IFRS 17 or the effects on equity as at 1 January 2023 because quality-control checks are still being conducted with respect to the calculation of comparative figures.

Amendments to other standards

The IASB also published amendments to the following standards, which have been adopted into European law – with the exception of the amendments to IAS 1 regarding the classification of liabilities, the amendments to IAS 1 with respect to non-current liabilities with covenants, and the amendments to IFRS 16:

- Amendments to IAS 1, Presentation of Financial Statements – Classification of Liabilities as Current or Non-current (rev. 1/2020); Deferral of Effective Date of this Amendment (rev. 7/2020)
- Amendments to IAS 1 (rev. 10/2022), Presentation of Financial Statements – Non-current Liabilities with Covenants
- Amendments to IAS 1 and IFRS Practice Statement 2 (rev. 2/2021), Making Materiality Judgements – Disclosure of Accounting Policies
- Amendments to IAS 8 (rev. 2/2021), Accounting Policies, Changes in Accounting Estimates and Errors – Definition of Accounting Estimates
- Amendments to IAS 12 (rev. 5/2021), Income Taxes – Deferred Tax related to Assets and Liabilities arising from a Single Transaction
- Amendments to IFRS 16 (rev. 9/2022), Leases – Lease Liability in a Sale and Leaseback

According to the IASB, the above-mentioned amendments are effective from 2023 – with the exceptions of IAS 1 regarding the classification of liabilities, IAS 1 with respect to non-current liabilities with covenants, and the amendments to IFRS 16. The following amendments are to be effective from 2024: IAS 1 regarding the classification of liabilities, IAS 1 with respect to non-current liabilities with covenants, and the amendments to IFRS 16.

The amendments to other standards listed above will have little or no material effect on Munich Re.

Consolidation

Consolidated group

The consolidated financial statements include Munich Reinsurance Company and all the entities over which Munich Reinsurance Company directly or indirectly exercises control (subsidiaries).

Munich Reinsurance Company directly or indirectly holds all, or a clear majority of, the voting rights in most of the entities included in the consolidated group.

We include a small number of entities in the consolidated group on the basis that contractual rights are taken into consideration that result in determination of control over the relevant business activities. In assessing the need to consolidate shares in investment funds, we take particular account of the degree of variability in the remuneration of the fund manager, of dismissal rights, and of the role of the investors in committees and bodies of the investment fund. As a result, an assessment that we do exercise control sometimes occurs even though the shareholding is below 50%.

In assessing whether control exists for structured entities, we focus our analysis on the decisions still to be made within the corresponding unit and on the agency relationships between the parties. For structured entities used by us to issue catastrophe bonds, we focus above all on our relationship to the trustees and our possibilities to influence their decision-making. Generally, we do not control such structured entities, even if we hold their bonds.

A list of all our shareholdings can be found in the section "List of shareholdings as at 31 December 2022 pursuant to Section 313(2) of the German Commercial Code (HGB)".

Cash flows and net assets from obtaining and losing control of consolidated subsidiaries or other operations are shown in the tables:

Cash flows arising from obtaining control

€m	2022	Prev. year
Total consideration for obtaining control	-192	-229
Non-cash consideration for obtaining control	0	-84
Cash consideration for obtaining control	-192	-146
Cash over which control was obtained	206	13
Total	**14**	**-216**

Net assets acquired

€m	31.12.2022	Prev. year
Goodwill/gain from bargain purchase	27	174
Other intangible assets	32	73
Investments	97	54
Cash	206	13
Other assets	156	43
Technical provisions (net)	-91	0
Other liabilities	-169	-129
Total	**260**	**229**

Cash flows arising from losing control

€m	2022	Prev. year
Total consideration for losing control	1,956	127
Non-cash consideration for losing control	1,871	0
Cash consideration for losing control	84	127
Cash over which control was lost	-61	-148
Total	**1,895**	**-20**

Net assets disposed of

€m	31.12.2022	Prev. year
Goodwill	0	0
Other intangible assets	-11	-21
Investments	-1,928	-247
Cash	-61	-148
Other assets	-126	-115
Technical provisions (net)	49	94
Other liabilities	142	252
Total	**-1,933**	**-186**

The following companies were sold and deconsolidated in the 2022 financial year: ERGO ASIGURARI S.A., Bucharest, ERGO ASIGURARI DE VIATA S.A., Bucharest, Digital Affect Insurance Company, New York City, Digital Edge Insurance Company, Dover, Delaware, JSC ERV Travel Insurance, Moscow, and D.A.S. Defensa del Automovilista y de Siniestros – Internacional S.A. de Seguros y Reaseguros, Madrid. Gains/losses on disposal of the above-mentioned companies were of minor significance for Munich Re overall.

Business combinations occurring during the reporting period

On 1 January 2022, via its subsidiary GroupHealth Northern Partners Inc., Vancouver, Munich Re acquired 75% of the voting shares in Blewett & Associates Inc. (Blewett), London, Ontario. Blewett's principal business activity is brokering group benefit sales. The purpose of acquiring Blewett was to secure and expand distribution, improve product range, and leverage the licensing model to optimise operations at GroupHealth Northern Partners Inc.

On 1 April 2022, via its UK subsidiary HSB Engineering Insurance Limited, Manchester, Munich Re acquired 100% of the voting shares in MD Insurance Services Limited and its seven subsidiaries, MDIS (International) Limited and MD Affinity Schemes Limited (together the MD Group), each having its registered office in Birkenhead, UK. The MD Group comprises a Managing General Agent, which sells and handles structural warranty insurance products, together with several related inspection services companies. The acquisition was intended to expand HSB's specialist core insurance offerings and enhance its distribution capabilities within the UK construction sector.

On 14 April 2022, via its subsidiary Munich Life Holding Corporation, Dover, Delaware, Munich Re acquired 100% of the voting shares in MedVirginia Inc. (Clareto), Dover, Delaware. Clareto partners with health information exchanges and other data sources for electronic health records to facilitate the collection of electronic health information in accordance with Health Insurance Portability and Accountability Act (HIPAA)-compliant authorisations in order to support underwriting, claims, and other business processes in the life insurance industry. The acquisition was intended to allow Munich Re to structure electronic health records for optimal use in life insurance underwriting, thereby streamlining our life insurer clients' underwriting processes and delivering a better customer experience.

Via its subsidiary ERGO International AG, Düsseldorf, Munich Re acquired additional voting shares in Thaisri Insurance Public Co., Ltd. (Thaisri), Bangkok. Through the acquisition and over-proportionate capital increases, Munich Re increased its total stake to 75% in 2022. Altogether, Munich Re paid €81m for the shares and capital increases; the payments were made in cash from own funds. Munich Re obtained control of the company upon conclusion of a new shareholders' agreement on 30 December 2022. Thaisri is a property-casualty insurer in Thailand. This investment and the assumption of control associated with it enables Munich Re to strengthen its business in Thailand. ERGO's international growth strategy puts a focus on the highly attractive property-casualty markets in Southeast Asia. The increased stake in Thaisri opens up further investment opportunities in Thailand, in turn complementing ERGO's international growth strategy.

The transaction resulted in provisional goodwill of €6m. Measurement of Thaisri's net assets was still incomplete at the end of the reporting period. The fair value of Munich Re's equity interest in Thaisri immediately prior to the acquisition was €42m. A profit of €3m from the remeasurement of this interest was recognised as investment income. The provisional fair value of the non-controlling interests in Thaisri was measured at €49m at the acquisition date.

The provisional fair values of Thaisri's assets and liabilities at the acquisition date were as follows: Investments of €97m, ceded share of technical provisions of €29m, cash at banks, cheques and cash in hand of €93m, receivables and other assets of €95m, equity of €144m, gross technical provisions of €119m, and other provisions and liabilities of €51m. The fair value of the receivables acquired as part of the transaction largely corresponds to the carrying amount. There were no significant bad debts at the acquisition date. No significant contingent liabilities existed at the acquisition date.

No revenue and no contribution to the consolidated result were recognised for the period from 30 December 2022 to the reporting date. If the acquisition had taken place on 1 January 2022, Thaisri would not have made a significant contribution to the consolidated revenue and the consolidated result.

Associates and joint ventures

Entities and special funds are considered associates if we are able to significantly influence their financial and operating policies. We regularly operate on this assumption if we hold between 20% and 50% of the voting power or similar rights, unless the financial and operating policies of the entity or special fund are largely pre-determined.

Entities and special funds are considered joint ventures if we are able to determine their relevant operations solely by unanimous agreement of all parties entitled to joint control, and we only have rights to their net assets.

On 18 January 2022, via its subsidiary MR Falcon LP, Dover, Delaware, Munich Re acquired from EDF Renewables Development Inc., Wilmington, 50% of the shares in Maverick 67 HoldCo, LLC, Wilmington, and 62.5% of the shares in Maverick 67 Class B HoldCo, LLC, Wilmington, as a result of which we acquired 50% in Maverick Solar 6, LLC, Wilmington, and 50% in Maverick Solar 7, LLC, Wilmington.

On 22 December 2022, Munich Reinsurance Company sold 50% of the shares in its wholly owned subsidiary MR Beteiligungen 23. GmbH (which in future will be operating under the name of Joint HR MR Private Equity GmbH), Munich, to Hannover Rück SE, Hannover, and E+S Rückversicherung AG, Hannover, thereby obtaining joint control of the company together with Hannover Rück SE and E+S Rückversicherung AG. As part of the sale of the shares, Munich Reinsurance Company agreed to entirely contribute its wholly owned subsidiary MR Beteiligungen 1. GmbH, Munich, to MR Beteiligungen 23. GmbH (which in future will be operating under the name of Joint HR MR Private Equity GmbH) with effect from 31 December 2022.

Joint operations

A joint operation exists if its relevant operations can only be determined by unanimous agreement of all parties entitled to joint control, and these parties – due to the legal form of the joint operation, contractual provisions or other circumstances – have rights to assets and obligations for the liabilities of the joint operation, instead of rights to net assets.

We recognise our share of assets, liabilities, income and expenses of joint operations in which we have joint control in the balance sheet in accordance with the relevant IFRSs.

Structured entities

Structured entities are entities that have been conceived in a way that voting or comparable rights are not the dominant factor in deciding who controls the entity, such as when any voting rights relate to administrative tasks only and the relevant business activities are directed by means of contractual arrangements.

Munich Re has interests in both consolidated and unconsolidated structured entities.

Munich Re classifies **unconsolidated structured entities** as either investment funds or securitisation vehicles on the basis of the type of structured entity.

A distinction is made between **investment funds** in which Munich Re invests on its own behalf within the framework of its investment activities and investment funds in which Munich Re invests as part of its insurance-related investments. Investment funds are mainly financed by issuing redeemable shares or units. Some of the investment funds are managed by MEAG, others by fund managers outside the Group. In the table below, we also report under "Investment funds" all investments in infrastructure, forestry, private equity and other investments.

Munich Re invests in asset-backed securities that are issued by **securitisation vehicles** which are not set up by Munich Re. Furthermore, Munich Re uses securitisation vehicles to issue catastrophe bonds, and it also invests in third-party catastrophe bonds. Securitisation vehicles are self-financed by issuing securities.

In order to protect its own portfolio, Munich Re uses alternative risk transfer in addition to traditional retrocession. Under this process, underwriting risks are transferred to the capital markets with the assistance of securitisation vehicles.

Munich Re also invests in the area of catastrophe risks, for example in various securities whose repayment and interest is generally linked to the occurrence of natural catastrophes. The securities are issued by securitisation vehicles which as a matter of general policy are not set up by Munich Re.

For investment funds, including investments in infrastructure, forestry, private equity and other investments, as well as insurance-related investments, the carrying amount gives an indication of the **size of the structured entity**. For asset-backed securities and the securitisation of underwriting risks, the emission volume (nominal value) is used as an indicator for measuring the size of the structured entity. The size of the funds refers to both the issued volume of the securitisation vehicles set up by Munich Re and that of those securitisation vehicles in which Munich Re has invested.

With the exception of investment funds for investments in unit-linked life insurance, which are recognised as insurance-related investments, the **maximum exposure** to loss is the carrying amount of the respective items on the assets side, and zero for the items on the liabilities side. Therefore, for the items on the assets side, there is usually no difference between the carrying amount of interests in unconsolidated structured entities and the maximum exposure to loss.

Normally, the maximum exposure to loss in the case of investments for unit-linked life insurance contracts is also the carrying amount of the interests. However, this investment is held for the benefit of policyholders who bear the investment risk.

MEAG MUNICH ERGO Kapitalanlagegesellschaft mbH also **manages fund assets** for private clients and institutional investors, for which it receives a management fee. The management fees are recognised as income in the consolidated income statement.

The maximum exposure to loss relates to the loss of future management fees. Fund management activities generated income of €52m (53m) in the financial year. The value of fund assets under management provides information about the size of the unconsolidated structured entities. As at 31 December 2022, the managed fund assets amounted to €4,501m (5,269m), and Munich Re itself also holds a small interest in these funds.

Unconsolidated structured entities

€m	Investment funds – Munich Re investments	Investment funds – Insurance-related investments	Securitisation vehicles – Debt securities	Securitisation vehicles – Underwriting risks	Total
	31.12.2022	31.12.2022	31.12.2022	31.12.2022	31.12.2022
Loans	95	0	0	0	95
Other securities					
Available for sale	6,860	0	3,625	286	10,771
At fair value through profit or loss	0	0	0	0	0
Deposits retained on assumed reinsurance	0	0	0	1,139	1,139
Insurance-related investments	0	7,695	0	0	7,695
Ceded share of technical provisions	0	0	0	179	179
Non-current assets held for sale	90	0	0	0	90
Total assets	**7,044**	**7,695**	**3,625**	**1,603**	**19,967**
Technical provisions	0	0	0	3	3
Other liabilities	0	0	0	22	22
Total equity and liabilities	**0**	**0**	**0**	**25**	**25**
Size of structured entity	7,044	7,695	116,709	7,506	138,954

Unconsolidated structured entities

€m	Investment funds – Munich Re investments	Investment funds – Insurance-related investments	Securitisation vehicles – Debt securities	Securitisation vehicles – Underwriting risks	Total
	Prev. year	Prev. year	Prev. year	Prev. year	Prev. year
Loans	129	0	0	0	129
Other securities					0
Available for sale	5,386	0	3,782	239	9,406
At fair value through profit or loss	0	0	0	0	0
Deposits retained on assumed reinsurance	0	0	0	930	930
Insurance-related investments	0	8,851	0	0	8,851
Ceded share of technical provisions	0	0	0	168	168
Non-current assets held for sale	125	1	0	0	125
Total assets	**5,639**	**8,852**	**3,782**	**1,338**	**19,611**
Technical provisions	0	0	0	2	2
Other liabilities	0	0	0	0	0
Total equity and liabilities	**0**	**0**	**0**	**2**	**2**
Size of structured entity	5,639	8,852	92,823	8,860	116,174

Assets

A Intangible assets

Goodwill resulting from the first-time consolidation of subsidiaries is tested for impairment at least annually. We carry out additional tests if there are indications of impairment.

For impairment testing, the goodwill is allocated to the cash-generating units that derive benefit from the synergies of the business combinations. At the same time, the unit to which the goodwill is allocated represents the lowest level at which goodwill is monitored for internal management purposes. Goodwill is allocated in reinsurance to divisions, and in primary insurance to the ERGO segment Property-casualty Germany, and to legal entities. We regard amounts of 10% or more of total Group goodwill as significant.

The **other intangible assets** mainly comprise acquired insurance portfolios as well as software assets and licence assets.

Acquired insurance portfolios are recognised at their present value on acquisition (PVFP – present value of future profits). This is determined as the present value of expected profits from the portfolio acquired, without consideration of new business and tax effects. The acquired insurance portfolios are amortised in accordance with the realisation of the profits from the insurance portfolios underlying the PVFP calculation. They are regularly tested for impairment using a liability adequacy test as per IFRS 4 (see “Equity and liabilities – C Gross technical provisions”). Write-downs are recognised under operating expenses.

Software assets are carried at cost and are amortised on a straight-line basis over a useful life of three to five years. The depreciations and amortisations are distributed in the consolidated income statement between investment expenses, expenses for claims and benefits, and operating expenses. If it is not possible to allocate the write-downs to the functional areas, they are shown under “Other non-operating result”. If necessary in the case of the software assets, impairment losses are recognised or reversed up to a maximum of the amortised acquisition cost or production cost.

B Investments

Land and buildings shown under investments comprise property used by third parties and are carried at cost. Maintenance expenses are recognised as an expense. Structural measures equivalent to 5% or more of the historical cost of a building are generally assessed with regard to whether they have to be capitalised. Buildings are depreciated on a straight-line basis in accordance with the component approach, depending on the weighted useful life for their specific building class. The underlying weighted-average useful life amounts to around 41 years. If the recoverable amount of land and buildings falls below their carrying amount, the carrying amount is written down to the recoverable amount.

Investments in affiliated companies, associates and joint ventures that are not material for assessing the Group’s financial position are generally accounted for at fair value. Changes in the fair value are recognised in “Other reserves” under unrealised gains and losses. For the consolidated financial statements, material investments in associates and joint ventures are measured using the equity method, i.e. with our share of their equity. Our share in the earnings is included in the investment result. As a rule, the equity and annual result from the most recent individual or consolidated financial statements of the associate or joint venture are used. In the case of financial statements of important associates or joint ventures, appropriate adjustments are made to ensure they conform with Munich Re’s accounting policies and exceptional transactions are recognised in the same reporting period.

Loans are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market. They are measured at amortised cost in accordance with the effective interest method.

Fixed-interest or non-fixed-interest securities available for sale that are not designated as at fair value through profit or loss or recognised under loans are accounted for at fair value, with resulting changes in value recognised in equity with no effect on profit or loss. Unrealised gains or losses are calculated taking into account interest accrued and, after deduction of deferred taxes and the amounts apportionable to policyholders by the life and health insurers on realisation (provision for deferred premium refunds), are recognised directly in equity under “Other reserves”.

Securities at fair value through profit or loss comprise securities held for trading and securities classified as at fair value through profit or loss. Securities held for trading mainly include all derivative financial instruments with positive fair values which we have acquired to manage and hedge risks but which do not meet the requirements of IAS 39 for hedge accounting. The securities that are designated as at fair value through profit or loss include embedded derivatives that must be separated. In addition, loan portfolios are managed based on the fair value of the entire portfolio, which is why it was also designated as at fair value through profit or loss.

Deposits retained on assumed reinsurance are receivables from our cedants for cash deposits that have been retained under the terms of reinsurance agreements; they are accounted for at face value.

Other investments include deposits with banks and investments in renewable energies, physical gold and forestry. With the exception of forestry investments, these are measured at amortised cost. We apply the effective interest method for deposits with banks. Investments in renewable energies are depreciated on a straight-line basis over a useful life of 20–30 years, but mostly over 20 years. If required, impairment losses or impairment losses reversed follow the annual impairment test. If the recoverable amount of physical gold is lower than the carrying amount, a write-down for impairment is carried out. If higher, the impairment is reversed, with impact on the income statement. The resultant carrying amount may not exceed the acquisition cost.

Forestry investments fall into the category of biological assets and include standing wood. These investments are measured at fair value less costs of disposal, with impact on profit or loss.

Repurchase agreements and securities lending

Under repurchase agreements we, as the lender, acquire securities against payment of an amount with the obligation to sell them back to the borrower at a later date. As the risks and rewards from the securities remain with the borrower, the amounts paid are not posted as such in our accounts but are shown as a receivable from the borrower under “Other investments, deposits with banks”. Interest income from these transactions is recognised in the investment result. Similarly, securities sold by us as the borrower are not derecognised, and the amount received from the lender is shown as a liability in our accounts.

Securities that we lend by way of securities lending continue to be recognised in our balance sheet, as the main risks and rewards remain with Munich Re; securities that we have borrowed are not recognised in the balance sheet. Fees from securities lending are recognised in the investment result.

Recognition of financial instruments

Financial assets are accounted for at the trade date.

Offsetting of financial instruments

We offset financial assets and financial liabilities if the requirements are met in accordance with IAS 32, Financial Instruments: Presentation, and if doing so is legally enforceable.

Determining fair values

IFRS 13, Fair Value Measurement, defines fair value as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. All investments and other assets and liabilities that are recognised at fair value, and such investments and other items for which a fair value is disclosed solely in the Notes, are allocated to one of the fair value hierarchy levels of IFRS 13, which provides for three levels.

The allocation of an instrument to a level indicates the extent to which observable market inputs helped to measure the instrument. The fair value hierarchy categorises three levels of inputs: quoted prices in active markets (Level 1), inputs based on observable market prices (Level 2) and inputs that are not directly observable in active markets (Level 3). If market prices are available, these constitute the most objective yardstick for measurement at fair value and are to be used. If measurement is carried out using a model, any available inputs observable in the market are used first. If necessary, these inputs are supplemented with unobservable input factors and internal estimates.

Information on the valuation models and processes can be found in the Notes to the consolidated balance sheet – Assets (4) Hierarchy for the fair value measurement of assets. We verify the allocations to the levels as per IFRS 13 at every reporting date.

In the case of Level 1, valuation is based on quoted prices in active markets for identical financial assets which Munich Re can refer to at the valuation date. The financial instruments we have allocated to this level mainly comprise equities, equity funds, exchange-traded derivatives, and exchange-traded subordinated liabilities.

Assets allocated to Level 2 are valued using models based on observable market data. If the financial instrument concerned has a fixed contract period, the inputs used for valuation must be observable for the whole of this period. In addition, Level 2 includes financial assets for which valuation and the market data required for valuation are provided by price quoters, but for which it is not possible to completely determine to which extent the data used is observable in the market. The financial instruments we have allocated to this level mainly comprise bearer bonds and bond funds, borrowers’ note loans, covered bonds, subordinated securities, specified credit structures and derivatives not traded on the stock market.

For assets allocated to Level 3, we use valuation techniques that are also based on unobservable inputs which have more than an insignificant impact on the valuation. The inputs used reflect Munich Re's assumptions regarding the factors which market players would consider in their pricing. To this end, we use the best available market information, supplemented with internal company data. The assets allocated to this level of the fair value hierarchy largely comprise land and buildings and real estate funds. Funds that mainly invest in theoretically valued instruments, and investments in infrastructure and in private equity are also allocated to Level 3, along with investments in subsidiaries, associates and joint ventures measured at fair value, as well as insurance derivatives and derivative components of variable annuities.

In the case of loans, bank borrowing, liabilities from financial transactions, and bond and note liabilities not traded on an active market, we decide on a case-by-case basis to which level of the fair value hierarchy to allocate the respective fair values.

To the extent that a change in individual inputs significantly affects the fair value shown, we will disclose the change and the resulting impact. This is particularly applicable to instruments measured under Level 3, as their measurement is predominantly dependent on unobservable inputs.

Investment result

The investment result comprises regular income, income from write-ups, gains and losses on the disposal of investments, other income, write-downs of investments, management expenses, interest charges and other expenses. Regular income and expenses from investments not measured at fair value through profit or loss are calculated in accordance with the effective interest method, i.e. any premiums or discounts are spread over the period of maturity, with impact on profit or loss.

Impairment

At each balance sheet date, we assess whether there is any substantial objective evidence of impairment in a financial asset or group of financial assets. As the recognition of impairments – both on the merits and in terms of amount – is based on discretionary judgement and estimates, we have established a process that guarantees that at every reporting date all investments that might be subject to impairment are identified and tested for impairment. On the basis of these test results, a list of investments will be prepared for which an impairment must be recognised; this list will then be verified once again with the involvement of management.

IAS 39.59 contains a list providing objective evidence of impairment of financial assets. In addition, IAS 39.61 states that, for equity investments, a significant or prolonged decline in the fair value of the investment below its acquisition cost is objective evidence of impairment. These rules are given more concrete form by means of internal guidelines. For equities quoted on the stock exchange, we assume a significant decline in fair value if the market price at the review date is at least 20% below the average purchase price or has been lower than this amount for at least six months. In the case of fixed-interest securities and loans, the main basis for establishing impairment is an indication of substantial financial difficulty on the part of the issuer, the current market situation or media reports on the issuer.

We determine acquisition cost on the basis of the average purchase price. In the case of an impairment, a write-down is made to the fair value at the balance sheet date and recognised in profit or loss.

C Insurance-related investments

Investments for unit-linked life insurance contracts are measured at fair value. Unrealised gains or losses from changes in fair value are included in the insurance-related investment result. They are matched by corresponding changes in the technical provisions (see "Equity and liabilities – D Gross technical provisions for unit-linked life insurance"), which are included in the technical result.

Other insurance-related investments are not utilised for asset-liability management. These include insurance derivatives, derivative components of variable annuities, derivatives for hedging variable annuity contracts and, on a limited scale, loans. In the case of loans, contractual wording largely waives the right to reimbursement triggered by the occurrence of insurance events. Similar agreements also exist for quasi-equity instruments. Insurance-linked derivatives include retrocessions in the form of derivatives, the derivative components of natural catastrophe bonds and from securitisations of mortality and morbidity risks, individually structured insurance-linked derivatives, and derivative components which are separated from their host insurance contract in accounting. Other insurance-related investments are predominantly measured at fair value through profit or loss. In addition, we designate contracts containing embedded derivatives that would generally have to be separated as measured at fair value through profit or loss in order to achieve an appropriate accounting statement. Insurance risks are defined as risks which – in a modified form – can also be covered by an insurance contract within the meaning of IFRS 4. We regularly apply judgement in identifying embedded derivative components and in assessing whether designation of contracts with embedded derivatives would result in a more appropriate presentation.

Result from insurance-related investments

The breakdown of the insurance-related investment result matches that of the investment result.

D Ceded share of technical provisions

The share of technical provisions for business ceded by us is determined from the respective technical provisions in accordance with the terms of the reinsurance agreements (see "Equity and liabilities – C Gross technical provisions"). Appropriate allowance is made for the credit risk.

E Receivables

Current tax receivables are accounted for in accordance with local tax regulations and other receivables at amortised cost. The impairment test of our receivables is performed in a two-stage process, firstly at the level of individual items, and then on the basis of groups of similar receivables. The impairment is recognised as an expense. If, in a subsequent period, the reasons for the impairment cease to apply, the impairment is reversed, with impact on the income statement. The resultant carrying amount may not exceed the amortised cost.

Current tax receivables comprise current taxes on income of the individual companies, based on their respective national taxation. Other tax receivables are shown under "Other receivables".

F Cash at banks, cheques and cash in hand

Cash and cash equivalents as well as other liquid assets are accounted for at face value.

G Deferred acquisition costs

Deferred acquisition costs comprise commissions and other variable costs directly connected with acquisition or renewal of insurance contracts. In life business and long-term health primary insurance, deferred acquisition costs are recognised and amortised over the period of cover in accordance with the anticipated recognition of income. In determining the amount of amortisation, we take into account an actuarial interest rate and changes resulting from the disposal or withdrawal of contracts from the portfolio. In property-casualty business, short-term health primary insurance and health reinsurance, the deferred acquisition costs are customarily amortised on a straight-line basis over the average term of the policies, from one to five years.

H Deferred tax assets

Deferred tax assets must be recognised in cases where asset items have to be valued lower, or liability items higher, in the consolidated balance sheet than in the tax accounts of the Group company concerned and these differences will be eliminated at a later date with a corresponding effect on taxable income (temporary differences). Also included are tax assets deriving from tax loss carry-forwards. Deferred tax assets are recognised if there are sufficient taxable temporary differences which are expected to reverse in the same period as the deductible temporary differences. For any additional deductible temporary differences, deferred tax assets are recognised only to the extent that it is probable that future profits are available in the same period in which the deductible temporary differences are expected to reverse. As a rule, a five-year forecast period is considered. We take into account the tax rates of the countries concerned and the consolidated company's respective tax situation; in some cases, for purposes of simplification, we use uniform tax rates for individual circumstances or subsidiaries. Changes in tax rates and tax legislation that have already been adopted by the government at the balance sheet date are taken into account.

Deferred tax assets and tax liabilities are reported on a net basis, provided that they refer to the same taxable entity and the same tax authority. Netting out is done here if it is generally possible to offset the underlying tax receivables and tax liabilities.

I Other assets

Other assets are generally recognised at amortised cost. Amortisations or depreciations mainly occur on a straight-line basis; the underlying weighted-average useful life is about 50 years. Where required, impairment losses either are recognised or are reversed up to a maximum of the amortised cost for the Group's owner-occupied property, plant and equipment. These impairment losses and impairment losses reversed are distributed between the functional areas.

Right-of-use assets under leases are comprised of lease liabilities, lease payments made at the time or before the asset is made available for use, initial direct costs, and restoration obligations. Right-of-use assets are depreciated on a straight-line basis over the term of the lease.

J Non-current assets held for sale

Non-current assets held for sale are assets that can be sold in their current condition and whose sale is highly probable. The item may comprise individual assets or groups of assets. Non-current assets held for sale are recognised at the lower of the carrying amount and fair value less costs of disposal. They are no longer depreciated. Measurement of financial instruments remains unchanged; the only difference is how they are disclosed.

Equity and liabilities

A Equity

The line item **issued capital and capital reserve** contains the amounts that the equity holders of Munich Reinsurance Company have paid in on shares.

Under **retained earnings,** we show the profits which consolidated companies have earned and retained since becoming part of Munich Re. In addition, the adjustment amount resulting from changes in accounting policies for earlier periods not included in the consolidated financial statements is recognised in the opening balance of the retained earnings for the earliest prior period reported. Retained earnings also include the effects from remeasurement of defined benefit plans.

Own shares are deducted from equity. The purchase, sale or retirement of these shares is recognised in equity items, without impact on profit or loss.

Other reserves primarily contain unrealised gains and losses resulting from the recognition at fair value of other securities available for sale and from interests in unconsolidated affiliated companies, and in associates and joint ventures not accounted for using the equity method. In addition, they include unrealised gains and losses from the measurement of associates and joint ventures using the equity method. Differences resulting from the currency translation of foreign subsidiaries' figures and remeasurement gains/losses from the hedging of cash flows are also shown under "Other reserves".

B Subordinated liabilities

Subordinated liabilities are liabilities which, in the event of liquidation or insolvency, are only satisfied after the claims of other creditors. They are measured at amortised cost in accordance with the effective interest method.

C Gross technical provisions

Technical provisions are shown as gross figures in the balance sheet, i.e. before deduction of the ceded share (see "Assets – D Ceded share of technical provisions"). The ceded share is calculated and accounted for on the basis of the individual reinsurance agreements. Acquisition costs for insurance contracts are recognised and amortised over the terms of the contracts (see "Assets – G Deferred acquisition costs"). The measurement of technical provisions is based on US GAAP FAS 60 (life primary insurance without performance-related participation in surplus, health primary insurance and the bulk of reinsurance treaties), FAS 97 (life primary insurance based on the universal life model, unit-linked life insurance and life reinsurance for assumed business based on FAS 97) and FAS 120 (life primary insurance with performance-related participation in surplus).[1] Credit insurance contracts are accounted for in accordance with the rules of IFRS 4.

Unearned premiums are accrued premiums already written for future risk periods. For primary insurance, these premiums are calculated separately for each insurance policy pro rata temporis; for reinsurance, nominal percentages are used in some cases where the data for a calculation pro rata temporis is not available. The posting of unearned premiums is restricted to short-term underwriting business, i.e. property-casualty business and parts of accident and health business. In the case of long-term business, a provision for future policy benefits is established.

The **provision for future policy benefits** in long-term underwriting business is posted for the actuarially calculated value of obligations arising from policyholders' guaranteed entitlements. As well as life insurance, this concerns portions of health and personal accident insurance, insofar as the business is conducted like life insurance. Measurement is usually based on the prospective method, by determining the difference between the present values of future benefits

1 At initial adoption on 1 January 2005.

and future premiums. The actuarial assumptions used for their calculation include, in particular, assumptions relating to mortality, disability and morbidity, as well as assumptions regarding interest-rate development, lapses and costs. These are estimated on a realistic basis at the time the insurance contracts are concluded, and they include adequate provision for adverse deviation to make allowance for the risks of change, error and random fluctuations.

In reinsurance, measurement is carried out partly individually for each risk and partly collectively for reinsured portfolios, using biometric actuarial assumptions based on the tables of the national actuarial associations. These are adjusted for the respective reinsured portfolio, in line with the probabilities observed for the occurrence of an insured event. Discount rates are chosen that reflect the best estimate of expected investment income, less a safety margin. For the major part of the portfolio, these assumptions are fixed at the beginning of the contract and not changed over its duration.

In primary insurance, measurement is generally carried out individually for each risk. In German life primary insurance, biometric actuarial assumptions based on the tables of the German Association of Actuaries (Deutsche Aktuarvereinigung e.V.) are used. We also largely use the tables of the national actuarial associations for the rest of primary insurance business. The actuarial interest rate employed for discounting in life primary insurance is limited by the respective maximum actuarial interest rate prescribed by the supervisory authorities. In health primary insurance, discount rates are chosen that reflect the best estimate of expected investment income, less a safety margin.

The **provision for outstanding claims** is for payment obligations arising from insurance contracts in primary insurance and reinsurance where the size of the claim or the timing of the payment is still uncertain. Part of the provision is for known claims for which individually calculated provisions are posted. Another part is for expenses for claims whose occurrence is not yet known. There are also provisions for claims that are known, but whose extent has turned out to be greater than originally foreseen. All these provisions include expenses for internal and external loss adjustments. The provision for outstanding claims is based on estimates; the actual payments may be higher or lower. The amounts posted are the realistically estimated future amounts to be paid; they are calculated on the basis of past experience and assumptions about future developments (for example social, economic – e.g. inflation-related – or technological factors). The claims payments also include estimated adjustments to accounts payable recognised in the previous year with a corresponding impact on the provision; these adjustments are the result of an altered assessment of payment behaviour. Future payment obligations are generally not discounted; exceptions are some provisions for occupational disability pensions and annuities in workers' compensation and other lines of property-casualty business. For determining the provision for outstanding claims, Munich Re uses a range of actuarial projection methods. Where ranges have been calculated, a realistic estimated value for the ultimate loss is determined within these. In applying the statistical methods, we regard large exposures separately.

Other technical provisions mainly include the provision for premium refunds in primary insurance and the provision for profit commission in reinsurance. The former is posted in life and health primary insurance for obligations involving policyholder bonuses and rebates that have not yet been irrevocably allocated to individual contracts at the end of the reporting period. These provisions are posted on the basis of national regulations almost entirely for primary insurance business in Germany; a retrospective approach is usually taken based on supervisory or individual contract regulations.

Besides this, there are provisions for deferred premium refunds, which are posted for the amounts apportionable to policyholders from the measurement differences between IFRS and local GAAP on the basis of the expected future participation quotas. For unrealised gains and losses on investments available for sale, which are recognised directly in equity (see "Assets – B Investments – Fixed-interest or non-fixed-interest securities available for sale"), the resultant provision for deferred premium refunds is also posted without impact on profit or loss; otherwise, changes in this provision are recognised in the income statement.

Liability adequacy test

All technical provisions are regularly subjected to a **liability adequacy test in accordance with IFRS 4**. If current experience shows that the provisions posted on the basis of the original assumptions – less the related deferred acquisition costs and the present value of the related premiums – are inadequate to cover the expected future benefits, we adjust the relevant technical provisions with recognition in profit or loss and disclose this under impairment losses in the Notes to the consolidated balance sheet (see (2) Other intangible assets, (13) Deferred acquisition costs, and (21) Provision for future policy benefits). The appropriateness of unearned premiums and of the provision for outstanding claims is assessed in relation to the current realistic estimate of the future amount to be paid. The appropriateness of the provision for future policy benefits is assessed on the basis of current realistic estimates of the actuarial assumptions, the proportional investment result and, for contracts with participation in surplus, future profit sharing.

D Gross technical provisions for unit-linked life insurance

This item encompasses the provision for future policy benefits in life primary insurance where policyholders bear the investment risk themselves (unit-linked life insurance). The value of the provision for future policy benefits essentially corresponds to the fair value of the relevant investments shown under "Assets – C Insurance-related investments – Investments for policyholders under unit-linked life insurance contracts”. Changes in this provision are fully recognised in the technical result. Insofar as these changes derive from unrealised gains and losses from alterations in the fair values of the related investments, they are matched by opposite changes of the same amount in the insurance-related investment result.

E Other provisions

This item includes **provisions for post-employment benefits and similar obligations**. Under defined contribution plans, the companies pay fixed contributions to an insurer or a pension fund. This fully covers the companies' obligations. Under defined benefit plans, the staff member is promised a particular level of retirement benefit either by the companies or by a pension fund. The companies' contributions needed to finance this are not fixed in advance. If pension obligations are covered by assets held by a legally separate entity (e.g. a fund or a contractual trust agreement in the form of a two-way trust) – assets that may only be used to cover the pension commitments given and are not accessible to creditors – the pension obligations are shown less the amount of these plan assets. If the fair value of the assets exceeds the related outsourced pension commitments, this reimbursement right is recognised under “Other receivables”.

Pension obligations are recognised in accordance with IAS 19, Employee Benefits, using the projected unit credit method. The calculation includes not only the pension entitlements and current pensions known at the end of the reporting period, but also their expected future development. The assumptions for the future development are determined on the basis of the circumstances in the individual countries.

The discount rate applied to the pension obligations is based on the yields for long-term, high-quality corporate bonds.

The item also includes **miscellaneous provisions**, which we establish in the amount of the probable requirement. Such amounts are not discounted if the interest-rate effect is insignificant.

F Liabilities

This item comprises bonds and notes issued, deposits retained on ceded business, current tax liabilities, and other liabilities. Financial liabilities are generally recognised at amortised cost. Derivative financial instruments are recognised at fair value. Details of how the fair value is determined are provided under “Assets – B Investments – Determining fair values”.

We offset financial assets and financial liabilities if the necessary requirements are met in accordance with IAS 32 and doing so is legally enforceable.

Current tax liabilities comprise current taxes on income of the individual companies, based on their respective national taxation. Other tax liabilities are shown under “Other liabilities”.

Lease liabilities are included in “Other liabilities”. The lease liability represents the present value of the payment obligations entered into. As a rule, lease payments are discounted at the incremental borrowing rate. Lease payments are discounted at the interest rate on which the lease is based, provided that this rate can be determined.

G Deferred tax liabilities

Deferred tax liabilities must be recognised if asset items have to be valued higher, or liabilities items lower, in the consolidated balance sheet than in the tax accounts of the reporting company, and these differences will be eliminated at a later date with a corresponding impact on taxable income (temporary differences); see “Assets – H Deferred tax assets”.

H Liabilities related to non-current assets held for sale

Liabilities to be transferred together with disposal groups are recognised in this item (see “Assets – J Non-current assets held for sale”).

Foreign currency translation

Munich Re's presentation currency is the euro (€). Our subsidiaries largely recognise differences resulting from the translation into their respective national currencies in profit or loss. The thus converted net assets of foreign subsidiaries whose national currency is not the euro are then translated using the year-end exchange rates, and results using quarterly average exchange rates. Any exchange differences arising in the process are recognised in equity.

The following table shows the exchange rates of the most important currencies for our business:

Currency translation rates

	Balance sheet		Income statement				Income statement			
One foreign currency unit is equivalent to €	31.12.2022	Prev. year	Q4 2022	Q3 2022	Q2 2022	Q1 2022	Q4 2021	Q3 2021	Q2 2021	Q1 2021
Australian dollar	0.6354	0.6393	0.6438	0.6783	0.6706	0.6453	0.6374	0.6232	0.6390	0.6412
Canadian dollar	0.6915	0.6961	0.7213	0.7605	0.7358	0.7035	0.6940	0.6733	0.6756	0.6553
Pound sterling	1.1271	1.1910	1.1495	1.1680	1.1792	1.1953	1.1791	1.1689	1.1602	1.1442
Polish zloty	0.2136	0.2182	0.2117	0.2109	0.2151	0.2164	0.2166	0.2190	0.2208	0.2200
Swiss franc	1.0127	0.9651	1.0170	1.0273	0.9737	0.9647	0.9489	0.9239	0.9109	0.9165
US dollar	0.9370	0.8794	0.9793	0.9930	0.9392	0.8910	0.8747	0.8483	0.8297	0.8299
Yen	0.0071	0.0076	0.0069	0.0072	0.0072	0.0077	0.0077	0.0077	0.0076	0.0078
Yuan renminbi	0.1348	0.1380	0.1377	0.1449	0.1421	0.1403	0.1368	0.1311	0.1285	0.1281

Segment reporting

In accordance with the management approach, the segmentation of our business operations is based on the way in which Munich Re is managed internally.

We have identified five segments to be reported:

- Life and health reinsurance (global life and health reinsurance business)
- Property-casualty reinsurance (global property-casualty reinsurance business)
- ERGO Life and Health Germany (German life and health primary insurance business, global travel insurance business and Digital Ventures business)
- ERGO Property-casualty Germany (German property-casualty primary insurance business, excluding Digital Ventures)
- ERGO International (ERGO's primary insurance business outside Germany)

Certain primary insurers whose business requires special solution-finding competence are coupled to reinsurance as the risk carrier. We therefore transact their business from within reinsurance and consequently allocate them to the reinsurance segments.

The IFRS result contributions are the basis of planning and strategy in all segments, hence the IFRS segment result is the uniform assessment basis for internal control.

Income and expenses from intra-Group loans are shown unconsolidated under "Other non-operating result" for the segments concerned. These are otherwise shown after elimination of intra-Group transactions and shareholdings.

Since Q1 2022, receivables and liabilities in connection with intra-Group loans have been presented in an unconsolidated form in the segment balance sheet to reflect changes in internal management, and simultaneously aligned with the presentation of income and expenses in connection with intra-Group loans in the segment income statement. The previous year's figures in the segment balance sheet have been adjusted accordingly. With regard to the item "Other segment liabilities", this has led to increases in the life and health reinsurance segment (€3m), in ERGO Property-casualty Germany (€493m) and in ERGO International (€1,497m), as well as reductions in the property-casualty reinsurance segment (€728m) and in ERGO Life and Health Germany (€1,265m).

Segment assets[1]

	Reinsurance			
	Life and health		Property-casualty	
€m	31.12.2022	Prev. year	31.12.2022	Prev. year
A. Intangible assets	**491**	**521**	**2,347**	**2,204**
B. Investments				
I. Land and buildings, including buildings on third-party land	296	274	3,153	3,160
II. Investments in affiliated companies, associates and joint ventures	45	45	4,126	1,951
Thereof: Associates and joint ventures accounted for using the equity method	0	0	3,893	1,714
III. Loans	637	659	792	643
IV. Other securities				
1. Available for sale	19,941	23,269	50,537	55,785
2. At fair value through profit or loss	318	181	1,680	980
	20,259	23,449	52,217	56,765
V. Deposits retained on assumed reinsurance	4,744	5,006	4,709	3,998
VI. Other investments	642	703	2,437	2,963
	26,623	**30,137**	**67,433**	**69,480**
C. Insurance-related investments	**2,624**	**2,748**	**1,034**	**861**
D. Ceded share of technical provisions	**2,506**	**2,607**	**3,190**	**2,651**
E. Non-current assets held for sale	**4**	**0**	**119**	**0**
F. Other segment assets	**21,186**	**20,560**	**21,907**	**16,808**
Total segment assets	**53,435**	**56,572**	**96,030**	**92,004**

Segment equity and liabilities[1]

	Reinsurance			
	Life and health		Property-casualty	
€m	31.12.2022	Prev. year	31.12.2022	Prev. year
A. Subordinated liabilities	**1,057**	**1,168**	**3,678**	**3,874**
B. Gross technical provisions				
I. Unearned premiums	280	295	11,179	10,392
II. Provision for future policy benefits	13,923	13,420	0	0
III. Provision for outstanding claims	11,242	11,054	66,136	59,070
IV. Other technical provisions	196	169	188	318
	25,642	**24,939**	**77,503**	**69,780**
C. Gross technical provisions for unit-linked life insurance contracts	**0**	**0**	**0**	**0**
D. Other provisions	**148**	**186**	**585**	**678**
E. Liabilities related to non-current assets held for sale	**0**	**0**	**1**	**0**
F. Other segment liabilities	**13,890**	**15,658**	**8,752**	**8,247**
Total segment liabilities	**40,737**	**41,952**	**90,519**	**82,579**

1 You can download this information as an Excel file; please refer to the Financial Supplement under www.munichre.com/results-reports.

	ERGO						Total	
	Life and Health Germany		Property-casualty Germany		International			
	31.12.2022	Prev. year	31.12.2022	Prev. year	31.12.2022	Prev. year	31.12.2022	Prev. year
	141	**161**	**1,374**	**1,320**	**184**	**172**	**4,537**	**4,379**
	3,569	3,247	203	209	118	138	7,340	7,029
	509	396	120	110	1,105	1,133	5,904	3,635
	427	338	59	47	1,071	1,116	5,449	3,215
	45,135	47,166	1,367	1,383	617	538	48,547	50,389
	51,572	61,315	5,468	5,742	12,869	16,356	140,388	162,468
	1,639	1,553	181	52	138	184	3,956	2,950
	53,211	62,868	5,650	5,795	13,007	16,540	144,345	165,418
	8	15	32	8	0	0	9,494	9,027
	929	960	57	68	104	109	4,168	4,803
	103,361	**114,653**	**7,428**	**7,573**	**14,951**	**18,458**	**219,797**	**240,300**
	5,239	**6,045**	**0**	**0**	**2,231**	**2,629**	**11,128**	**12,283**
	16	**15**	**187**	**262**	**599**	**564**	**6,498**	**6,099**
	0	**78**	**0**	**1**	**325**	**473**	**448**	**552**
	8,107	**7,224**	**2,195**	**1,844**	**2,767**	**2,358**	**56,163**	**48,792**
	116,864	**128,176**	**11,185**	**11,000**	**21,057**	**24,653**	**298,570**	**312,405**

	ERGO						Total	
	Life and Health Germany		Property-casualty Germany		International			
	31.12.2022	Prev. year	31.12.2022	Prev. year	31.12.2022	Prev. year	31.12.2022	Prev. year
	0	**0**	**0**	**0**	**13**	**13**	**4,748**	**5,055**
	317	266	644	563	2,089	1,957	14,510	13,474
	92,032	91,203	332	362	9,376	9,601	115,663	114,586
	3,160	2,947	5,776	5,636	3,123	2,963	89,438	81,671
	11,014	20,248	131	118	35	562	11,563	21,414
	106,523	**114,664**	**6,883**	**6,678**	**14,623**	**15,083**	**231,173**	**231,145**
	5,555	**6,375**	**0**	**0**	**2,225**	**2,623**	**7,780**	**8,998**
	826	**1,922**	**534**	**1,014**	**568**	**1,158**	**2,661**	**4,958**
	0	**8**	**0**	**0**	**213**	**286**	**214**	**294**
	3,387	**3,154**	**1,777**	**1,053**	**2,986**	**2,898**	**30,792**	**31,009**
	116,292	**126,123**	**9,193**	**8,745**	**20,627**	**22,061**	**277,368**	**281,459**
					Equity		**21,202**	**30,945**
					Total equity and liabilities		**298,570**	**312,405**

Segment income statement[1]

	Reinsurance			
	Life and health		Property-casualty	
€m	2022	Prev. year	2022	Prev. year
Gross premiums written	**13,676**	**12,561**	**34,399**	**28,793**
1. Net earned premiums	12,434	11,464	32,530	26,071
2. Income from technical interest	706	639	1,004	889
3. Net expenses for claims and benefits	–10,534	–10,239	–21,665	–17,933
4. Net operating expenses	–2,011	–1,873	–9,658	–8,054
5. Technical result (1–4)	**595**	**–9**	**2,211**	**972**
6. Investment result	719	860	801	2,562
7. Insurance-related investment result	145	75	130	94
8. Other operating result	116	58	–434	–388
9. Deduction of income from technical interest	–706	–639	–1,004	–889
10. Non-technical result (6–9)	**274**	**353**	**–507**	**1,380**
11. Operating result	869	344	1,704	2,352
12. Other non-operating result	–14	–10	–20	–7
13. Currency result	79	43	362	119
14. Net finance costs	–26	–36	–127	–135
15. Taxes on income	–171	–16	–64	–326
16. Consolidated result	737	325	1,856	2,003

1 You can download this information as an Excel file; please refer to the Financial Supplement under www.munichre.com/results-reports.

Hurricane Ian caused losses of around €1.6bn in the property-casualty reinsurance segment in 2022.

In life and health reinsurance, we posted claims expenditure of €344m (797m) attributable to COVID-19. In the property-casualty reinsurance segment, we generated income from the net release of claims reserves for COVID-19 totalling €142m, although IBNR remained high. By contrast, in 2021 we still had to cope with claims expenditure of €212m, mainly on account of the cancellation or postponement of major events. There were only negligible effects of the pandemic at ERGO.

In property-casualty reinsurance, Munich Re posted claims expenditure of around €475m related to the war in Ukraine in 2022. By contrast, the war did not have any significant impact on the technical result in the life and health reinsurance segment and at ERGO.

There was a negative impact of around €850m on the investment result in 2022 due to write-downs of Russian and Ukrainian bonds, of which €495m was attributable to reinsurance and €355m to ERGO.

Other segment disclosures

	Reinsurance			
	Life and health		Property-casualty	
€m	2022	Prev. year	2022	Prev. year
Interest income	1,015	850	1,130	848
Interest expenses	–26	–42	–49	–69
Depreciation and amortisation[1]	–61	–60	–158	–160
Other operating income	491	376	425	352
Other operating expenses	–374	–319	–859	–740
Income from associates and joint ventures accounted for using the equity method	0	55	81	114

1 The previous year's figures have been adjusted.

	ERGO						Total	
	Life and Health Germany		Property-casualty Germany		International			
	2022	Prev. year	2022	Prev. year	2022	Prev. year	2022	Prev. year
	9,703	**9,203**	**4,198**	**3,919**	**5,157**	**5,092**	**67,133**	**59,567**
	9,642	9,173	3,996	3,764	4,860	4,730	63,462	55,202
	1,893	3,732	42	51	-211	472	3,435	5,783
	-9,379	-11,283	-2,433	-2,390	-2,946	-3,537	-46,957	-45,383
	-1,627	-1,273	-1,210	-1,122	-1,401	-1,352	-15,907	-13,674
	530	**349**	**394**	**302**	**301**	**313**	**4,032**	**1,927**
	3,037	3,201	109	209	237	324	4,903	7,156
	-880	661	0	0	-390	290	-994	1,119
	-322	-276	-156	-107	-128	-189	-924	-902
	-1,893	-3,732	-42	-51	211	-472	-3,435	-5,783
	-59	**-147**	**-89**	**51**	**-70**	**-47**	**-450**	**1,590**
	471	202	306	354	231	266	3,582	3,517
	-44	-46	-9	-21	6	-6	-81	-91
	257	77	-17	14	-4	10	676	262
	16	-9	-7	-4	-35	-20	-179	-205
	-214	-59	-87	-109	-43	-43	-580	-552
	485	164	185	234	155	207	3,419	2,932

	ERGO						Total	
	Life and Health Germany		Property-casualty Germany		International			
	2022	Prev. year	2022	Prev. year	2022	Prev. year	2022	Prev. year
	2,412	2,515	106	81	290	289	4,953	4,584
	-37	-31	-10	-6	-6	-10	-128	-158
	-134	-121	-88	-76	-65	-55	-505	-472
	167	233	104	146	79	97	1,265	1,203
	-489	-509	-260	-253	-207	-285	-2,190	-2,106
	15	20	2	1	-46	30	52	219

Notes on determining the combined ratio[1]

		Reinsurance				ERGO
		Property-casualty		Property-casualty Germany		International[2]
€m	2022	Prev. year	2022	Prev. year	2022	Prev. year
Net earned premiums	32,530	26,071	3,996	3,764	3,600	3,467
Net expenses for claims and benefits	-21,665	-17,933	-2,433	-2,390	-2,270	-2,181
Net operating expenses	-9,658	-8,054	-1,210	-1,122	-1,125	-1,056
Loss-ratio calculation adjustments	17	13	22	33	1	18
Fire brigade tax and other expenses	32	23	20	18	26	24
Expenses for premium refunds	1	0	29	30	1	-1
Other underwriting income	-15	-9	-3	-3	-11	-11
Change in other technical provisions and other underwriting expenses	-1	-1	-24	-12	-15	6
Adjusted net expenses for claims and benefits	**-21,647**	**-17,920**	**-2,410**	**-2,357**	**-2,269**	**-2,163**
Loss ratio %	66.5	68.7	60.3	62.6	63.0	62.4
Combined ratio %	96.2	99.6	90.6	92.4	94.3	92.9

1 Information on the combined ratio is provided in the combined management report in the section entitled "Tools of corporate management and strategic financial objectives".
2 Property-casualty business and short-term health business (excluding health insurance conducted like life insurance).

Notes on determining the return on equity (RoE) for the year 2022

		Reinsurance		ERGO		Total
€m	31.12.2022	31.12.2021[1]	31.12.2022	31.12.2021[1]	31.12.2022	31.12.2021
Segment assets	149,464	148,576	149,106	163,828	298,570	312,405
Segment liabilities	131,256	124,530	146,112	156,929	277,368	281,459
Adjustments used in the calculation of equity						
Unrealised gains and losses, currency translation reserve, remeasurement gains/losses from cash flow hedges	-2,043	4,759	-3,162	1,883	-5,205	6,642
Adjustment item for material asset transfers between reinsurance and ERGO	976	1,020	-976	-1,020	0	0
Adjusted equity	**19,275**	**18,267**	**7,132**	**6,036**	**26,407**	**24,303**
	2022		2022		2022	
Average adjusted equity	18,771		6,584		25,355	
Consolidated result	2,593		826		3,419	
Return on equity (RoE) %	**13.8**		**12.5**		**13.5**	

1 Since Q1 2022, receivables and liabilities in connection with intra-Group loans have been presented in an unconsolidated form and thus aligned with the presentation of income and expenses in connection with intra-Group loans. The previous year's figures in the segment balance sheet have been adjusted accordingly, which resulted in the RoE for the previous year decreasing from 13.5% to 13.4% in reinsurance.

Notes on determining the return on equity (RoE) for the year 2021

	Reinsurance		ERGO		Total	
€m	31.12.2021[1]	31.12.2020	31.12.2021[1]	31.12.2020	31.12.2021	31.12.2020
Segment assets	148,576	133,892	163,828	164,055	312,405	297,946
Segment liabilities	124,530	112,138	156,929	155,815	281,459	267,952
Adjustments used in the calculation of equity						
Unrealised gains and losses, currency translation reserve, remeasurement gains/losses from cash flow hedges	4,759	4,994	1,883	2,689	6,642	7,683
Adjustment item for material asset transfers between reinsurance and ERGO	1,020	410	–1,020	–410	0	0
Adjusted equity	**18,267**	**16,350**	**6,036**	**5,961**	**24,303**	**22,311**
	2021		2021		2021	
Average adjusted equity	17,308		5,999		23,307	
Consolidated result	2,328		605		2,932	
Return on equity (RoE) %	**13.4**		**10.1**		**12.6**	

1 Since Q1 2022, receivables and liabilities in connection with intra-Group loans have been presented in an unconsolidated form and thus aligned with the presentation of income and expenses in connection with intra-Group loans. The figures for 2021 in the segment balance sheet have been adjusted accordingly, which resulted in the RoE for 2021 decreasing from 13.5% to 13.4% in reinsurance.

Non-current assets by country[1]

€m	31.12.2022	Prev. year
Germany	6,826	7,367
USA	4,665	4,377
UK	544	545
France	446	420
Netherlands	438	110
Sweden	322	350
Canada	286	307
Spain	250	280
Poland	236	237
Belgium	173	105
Australia	150	36
Austria	140	161
Italy	138	153
Malta	136	155
Denmark	123	90
Switzerland	94	93
Finland	79	63
Portugal	69	42
New Zealand	53	46
Lithuania	53	52
Others	142	98
Total	**15,363**	**15,087**

1 The non-current assets mainly comprise intangible assets (especially goodwill) and our owner-occupied and investment property, as well as investments in renewable energy.

Investments in non-current assets per segment[1]

€m	2022	Prev. year
Life and health reinsurance	113	359
Property-casualty reinsurance	221	288
ERGO Life and Health Germany	517	348
ERGO Property-casualty Germany	180	148
ERGO International	131	82
Total	**1,163**	**1,226**

1 The non-current assets mainly comprise intangible assets (especially goodwill) and our owner-occupied and investment property, as well as investments in renewable energy.

Gross premiums written[1]

	Total	
€m	2022	Prev. year
Europe		
Germany	14,658	14,112
UK	7,971	6,881
Spain	1,827	1,668
Poland	1,808	1,772
Belgium	1,031	972
Others	5,904	5,015
	33,199	30,420
North America		
USA	18,560	15,834
Canada	2,615	2,419
	21,175	18,253
Asia and Australasia		
Australia	2,362	2,080
China	1,837	1,664
Japan	1,623	1,659
India	1,099	806
Others	1,451	1,230
	8,372	7,439
Africa, Middle East		
South Africa	1,047	775
United Arab Emirates	446	338
Others	937	782
	2,430	1,896
Latin America	1,957	1,560
Total	**67,133**	**59,567**

1 The premiums are generally allocated according to the location of the risks insured.

Notes to the consolidated balance sheet – Assets

1 Goodwill

Changes in goodwill

€m	2022	Prev. year
Gross carrying amount at 31 Dec. previous year	4,655	4,341
Accumulated impairment losses at 31 Dec. previous year	-1,563	-1,559
Carrying amount at 31 Dec. previous year	3,092	2,782
Currency translation differences	118	140
Additions	29	174
Disposals	0	0
Reclassifications	1	0
Impairment losses	0	-4
Carrying amount at 31 Dec. financial year	**3,240**	**3,092**
Accumulated impairment losses at 31 Dec. financial year	-1,563	-1,563
Gross carrying amount at 31 Dec. financial year	4,803	4,655

Impairment tests for cash-generating units to which a significant portion of the goodwill was allocated are based on the assumptions shown below.

Cash-generating units	Global Clients and North America division property-casualty reinsurance	ERGO Property-casualty Germany segment
Allocated goodwill at 31 Dec. 2022 in €m	1,994	927
Basis for calculating the recoverable amount	Value in use	Value in use
Key assumptions regarding the planning calculation (at the time of planning)	In the detailed planning phase (three years) we expected increasing premium income and a stable combined ratio if major losses remained firm. Our general assumption was that there would be moderate upward movement on the equity markets and a stable interest-rate level.	For the detailed planning phase (three years), we expected a moderate rise in premium income with an improved combined ratio. Our general assumption was that there would be moderate upward movement on the equity markets and a stable interest-rate level.
Growth rates after the detailed planning phase	1.0%	0.5%
Discount rates	10.1%	10.5%

The calculation of these values in use is based on distributable target results derived from the current market environment and the latest corporate planning approved by management. Prepared in an interactive process involving the operational units, the responsible controlling units and the Board of Management, the corporate plans are reviewed and updated at least every quarter. The target results were determined based on the assumption that the Ukraine war and current economic situation would not significantly affect the earnings prospects of our business models on a permanent basis. The climate risks inherent in our business model for our insurance business have been taken into account in the distributable target results.

The aforementioned key assumptions regarding premium income development and combined ratios derive from the aggregation of the corporate plans of the individual companies of a cash-generating unit. The key assumptions regarding developments in the equity market and interest-rate level are defined on the basis of the current market environment.

As the detailed planning phase is based on the Group Ambition 2025, it is one detailed planning year shorter than in the previous year. After the detailed planning phase, we estimate the target results achievable long term on the basis of the last adjusted planning year and taking into account growth rates and RoI derived from macroeconomic forecasts.

Cost-of-equity rates derived using the capital asset pricing model (CAPM) were used as discount rates. In this regard, the rising interest rates observed in the past financial year were taken into account. When deriving discount rates based on capital market data, we assume that the climate risks expected by the capital markets are included in their return expectations. Calculations were made after consideration of normalised taxes. In the table, for disclosure purposes, a corresponding discount rate before tax is given in each case. Sensitivity analyses were performed for the discount rates, growth rates and distributable target results. No impairment was identified.

The Board divisions in the property-casualty reinsurance segment are being restructured with effect from 1 January 2023. The simulation calculation for the reallocation of the existing goodwill to these divisions did not result in any effects on the value.

2 Other intangible assets

Development of other intangible assets

	Acquired insurance portfolios		Software			
			Internally developed		Other	
€m	2022	Prev. year	2022	Prev. year	2022	Prev. year
Gross carrying amount at 31 Dec. previous year	1,167	1,296	585	482	1,792	1,740
Accumulated amortisation and impairment losses at 31 Dec. previous year	-887	-1,003	-561	-468	-1,166	-1,150
Carrying amount at 31 Dec. previous year	280	293	24	14	626	590
Currency translation differences	3	16	0	-1	3	6
Additions						
Business combinations	0	0	3	4	8	0
Other	0	0	25	12	181	167
Disposals						
Loss of control	0	0	0	0	-3	-1
Other	0	-2	0	-2	-3	-12
Reclassifications	0	0	24	19	-24	-19
Impairment losses reversed	0	0	0	0	0	0
Amortisation and impairment losses						
Amortisation	-29	-28	-22	-22	-112	-104
Impairment losses	0	0	-12	0	0	-1
Carrying amount at 31 Dec. financial year	**253**	**280**	**41**	**24**	**676**	**626**
Accumulated amortisation and impairment losses at 31 Dec. financial year	-918	-887	-587	-561	-1,259	-1,166
Gross carrying amount at 31 Dec. financial year	1,172	1,167	628	585	1,936	1,792

→	Acquired brand names		Acquired distribution networks/client bases		Acquired licences/ patents	
€m	2022	Prev. year	2022	Prev. year	2022	Prev. year
Gross carrying amount at 31 Dec. previous year	213	208	738	691	344	329
Accumulated amortisation and impairment losses at 31 Dec. previous year	-187	-182	-642	-619	-141	-119
Carrying amount at 31 Dec. previous year	26	25	96	71	203	210
Currency translation differences	2	2	3	3	-1	7
Additions						
Business combinations	15	0	6	51	0	0
Other	1	0	2	0	0	1
Disposals						
Loss of control	0	0	0	0	-8	-15
Other	0	0	-1	0	0	0
Reclassifications	0	0	1	-13	0	13
Impairment losses reversed	0	0	0	0	0	1
Amortisation and impairment losses						
Amortisation	-2	-2	-18	-17	-13	-14
Impairment losses	0	0	0	0	-13	0
Carrying amount at 31 Dec. financial year	**41**	**26**	**88**	**96**	**169**	**203**
Accumulated amortisation and impairment losses at 31 Dec. financial year	-192	-187	-676	-642	-163	-141
Gross carrying amount at 31 Dec. financial year	233	213	763	738	332	344

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€m	Miscellaneous 2022	Miscellaneous Prev. year	Total 2022	Total Prev. year
Gross carrying amount at 31 Dec. previous year	44	36	4,882	4,781
Accumulated amortisation and impairment losses at 31 Dec. previous year	-12	-16	-3,596	-3,558
Carrying amount at 31 Dec. previous year	32	19	1,286	1,223
Currency translation differences	0	0	9	34
Additions				
Business combinations	0	19	31	74
Other	0	0	209	180
Disposals				
Loss of control	0	-4	-11	-20
Other	-1	0	-5	-16
Reclassifications	-1	0	0	0
Impairment losses reversed	0	0	0	1
Amortisation and impairment losses				
Amortisation	-3	-3	-199	-188
Impairment losses	0	0	-25	-1
Carrying amount at 31 Dec. financial year	**28**	**32**	**1,297**	**1,286**
Accumulated amortisation and impairment losses at 31 Dec. financial year	-14	-12	-3,810	-3,596
Gross carrying amount at 31 Dec. financial year	42	44	5,106	4,882

Intangible assets pledged as security and other restrictions on title amounted to €62m (73m). Commitments to acquire intangible assets totalled €38m (70m), the largest share of which was attributable to an IT platform currently being set up in life primary insurance.

3 Land and buildings, including buildings on third-party land

Development of investments in land and buildings, including buildings on third-party land

€m	2022	Prev. year
Gross carrying amount at 31 Dec. previous year	8,555	7,965
Accumulated amortisation and impairment losses at 31 Dec. previous year	-1,527	-1,426
Carrying amount at 31 Dec. previous year	7,029	6,539
Currency translation differences	101	107
Additions		
Subsequent acquisition costs	23	65
Business combinations	0	0
Other	640	543
Disposals		
Loss of control	-1	0
Other	-155	-73
Impairment losses reversed	9	24
Amortisation and impairment losses		
Amortisation	-161	-141
Impairment losses	-18	-6
Reclassifications	-128	-31
Carrying amount at 31 Dec. financial year	**7,340**	**7,029**
Accumulated amortisation and impairment losses at 31 Dec. financial year	-1,623	-1,527
Gross carrying amount at 31 Dec. financial year	8,963	8,555

The fair value of investment property at the end of the reporting period amounted to €13,092m (13,320m). The portfolio managed by the Group is measured by valuers within the Group, and the portfolio managed by third parties is valued by external valuers.

Property is allocated to Level 3 of the fair value hierarchy (see Assets – B Investments – Determining fair values). Determining the sustainability of cash inflows and outflows, taking into account the market conditions at the property location, is material for measurement. The fair value is determined individually per item by discounting the future cash flow as at the measurement date. Depending on the type of property and its individual opportunity/risk profile, discount rates of 1.3% to 3.5% are used for residential buildings and 1.5% to 6.8% for office buildings and commercial property.

Decarbonisation of real estate is part of our climate strategy for our investment portfolio. You can find the target figures for the reduction of carbon emissions under "Investment – Strategy and objectives" in the "Combined non-financial statement" section of the combined management report. In the valuation of real estate, ESG criteria are also taken into account to determine the fair values. This did not materially affect the value of the recognised acquisition cost or production cost. Risks arising from climate change are taken into account in the valuation. Given the changing conditions linked to climate risk analyses, regular assessments of the effects are necessary.

The most recent investigation to quantify physical climate risks – such as the increasing intensity and frequency of acute extreme weather events and longer-term changes to mean values of climate variables – came to the conclusion that, for our portfolio, the impact this has on the values determined is only minimal.

The additions in the reporting year mainly included commercial retail properties in the Netherlands. Disposals mostly related to residential and commercial property in Germany.

Property pledged as security and other restrictions on title amounted to €1,933m (1,855m). Contractual commitments to acquire property totalled €45m (44m).

4 Hierarchy for the fair value measurement of assets

All assets recognised at fair value are allocated to one of the fair value hierarchy levels of IFRS 13, as are those assets which are not recognised at fair value in the balance sheet but for which a fair value has to be disclosed in the Notes. Information on the criteria for allocation to the individual levels of the fair value hierarchy can be found under Assets – B Investments – Determining fair values. Regularly, at each reporting date, we assess whether the allocation of our assets to the levels of the valuation hierarchy is still appropriate. If changes in the basis of valuation have occurred – for instance, if a market is no longer active or the valuation was performed using inputs requiring another allocation – we make the necessary adjustments.

The following table provides an overview of the models used to measure the fair values of our investments when market prices are not available.

Valuation techniques for assets

Bonds	Pricing method	Parameters	Pricing model
Interest-rate risks			
Loans against borrower's note/ registered bonds	Theoretical price	Sector-, rating- or issuer-specific yield curve	Present-value method
Russian Government Bonds in RUB	Theoretical price	issuer-specific yield curves	Present-value method
Cat bond (host)	Theoretical price	Interest-rate curve	Present-value method
Mortgage loans	Theoretical price	Sector-specific yield curve considering the profit margin included in the nominal interest rate	Present-value method

Derivatives	Pricing method	Parameters	Pricing model
Equity and index risks			
OTC stock options	Theoretical price	Listing of underlying shares Effective volatilities Money-market interest-rate curve Dividend yield	Black-Scholes (European) Cox, Ross and Rubinstein (American)
Equity forwards	Theoretical price	Listing of underlying shares Money-market interest-rate curve Dividend yield	Present-value method
Interest-rate risks			
Interest-rate swaps	Theoretical price	Swap and CSA curve[1]	Present-value method
Swaptions/interest-rate guarantee	Theoretical price	At-the-money volatility matrix and skew OIS/swap curve	Bachelier/ Normal Black
Interest-rate currency swaps	Theoretical price	Swap and CSA curve[1] Currency spot rates	Present-value method
Inflation swaps	Theoretical price	Zero-coupon inflation swap rates OIS curve	Present-value method
Bond forwards (forward transactions)	Theoretical price	Listing of underlying OIS curve	Present-value method
Currency risks			
Currency options	Theoretical price	Volatility skew Currency spot rates Money-market interest-rate curve	Garman-Kohlhagen (European)
Currency forwards	Theoretical price	Currency spot rates Currency forward rates/ticks Money-market interest-rate curve	Present-value method
Other transactions			
Insurance derivatives (natural and weather risks)	Theoretical price	Fair values of cat bonds Historical event data Interest-rate curve	Present-value method
Insurance derivatives (variable annuities)	Theoretical price	Biometric rates and lapse rates Volatilities Interest-rate curve Currency spot rates	Present-value method
Credit default swaps	Theoretical price	Credit spreads Recovery rates CSA curve[1]	ISDA CDS Standard Model
Total return swaps on commodities	Theoretical price	Listing of underlying index	Index ratio calculation
Commodity options	Theoretical price	Listing of underlying Effective volatilities Money-market interest-rate curve Cost of carry	Black-Scholes (European) Cox, Ross and Rubinstein (American)

Bonds with embedded derivatives	Pricing method	Parameters	Pricing model
Callable bonds	Theoretical price	Swap curve Issuer-specific spreads Volatility matrix	Hull-White model
CMS floaters	Theoretical price	Swap curve Issuer-specific spreads Volatility matrix and skews	Replication model (Hagan) Stochastic volatility model Hull-White model
CMS floaters with variable cap	Theoretical price	Swap curve Issuer-specific spreads Volatility matrix and skews	Replication model (Hagan) Stochastic volatility model Hull-White model
Inverse CMS floaters	Theoretical price	Swap curve Issuer-specific spreads Volatility matrix and skews	Replication model (Hagan) Stochastic volatility model Hull-White model
CMS steepeners	Theoretical price	Swap curve Issuer-specific spreads Volatility matrix and skews Correlation matrix	Replication model (Hagan) Stochastic volatility model Hull-White model
Convergence bonds	Theoretical price	Swap curve Issuer-specific spreads Volatility matrix and skews Correlation matrix	Replication model (Hagan) Stochastic volatility model
Multi-tranches	Theoretical price	At-the-money volatility matrix and skew Swap curve Sector-, rating- or issuer-specific yield curve	Bachelier/ Normal Black, Present-value method Hull-White model
FIS loans against borrower's note	Theoretical price	At-the-money volatility matrix and skew Swap curve Sector-, rating- or issuer-specific yield curve	Bachelier/ Normal Black, Present-value method
Swaption notes	Theoretical price	At-the-money volatility matrix and skew Swap curve Money-market interest-rate curve Sector-, rating- or issuer-specific yield curve	Bachelier/ Normal Black, Present-value method

Funds	Pricing method	Parameters	Pricing model
Real estate funds	–	–	Net asset value
Alternative investment funds (e.g. private equity, infrastructure, forestry)	–	–	Net asset value

Other	Pricing method	Parameters	Pricing model
Real estate	Theoretical market price	Interest-rate curve Market rents	Present-value method or valuation
Alternative direct investments (e.g. infrastructure, forestry)	Theoretical market price	Interest-rate curve (among others) Electricity price forecast and inflation forecast	Present-value method or valuation
Insurance contracts with non-significant risk transfer	Theoretical market price	Biometric rates and lapse rates Historical event data Interest-rate curve Currency spot rates	Present-value method

1 The OIS curve is used if the quotation currency is the CSA currency.

Insurance derivatives and insurance contracts with non-significant risk transfer are mostly allocated to Level 3 of the fair value hierarchy, as observable market inputs are often not available. The decision is made on a case-by-case basis, taking into account the characteristics of the financial instrument concerned. In this case, observable market inputs are not exclusively available, so that biometric rates, lapse rates and historical event data are used for valuation on the basis of the present-value method.

The derivative components of catastrophe bonds are measured based on the values supplied by brokers for the underlying bonds, which is why the extent to which inputs used were not based on observable market data cannot readily be assessed.

The inputs requiring consideration in measuring variable annuities are derived either directly from market data (in particular volatilities, interest-rate curves and currency spot rates) or from actuarial data (especially biometric and lapse rates). The lapse rates used are modelled dynamically depending on the specific insurance product and current situation of the capital markets. The assumptions with regard to mortality are based on client-specific data or published mortality tables, which are adjusted with a view to the target markets and the actuaries' expectations. The dependency between different capital market inputs is modelled by correlation matrices. Where the valuation of these products is not based on observable inputs, which is usually the case, we allocate them to Level 3 of the fair value hierarchy.

The other investments allocated to Level 3 are mainly external fund units (in particular, private equity, real estate and funds that invest in a variety of assets that are subject to theoretical valuation). Since market quotes are not available for these on a regular basis, net asset values (NAVs) are provided by the asset managers. We thus do not perform our own valuations using inputs that are not based on observable market data. We regularly subject the valuations supplied to plausibility tests on the basis of comparable investments.

We have taken climate and other ESG risks as well as inflation expectations into account implicitly in our determination of fair values using the respective forward-looking valuation inputs, provided that they have an influence on the price in the capital markets in which the products of relevance here are traded.

At 31 December 2022, we allocated around 9% (10%) of the assets listed in the following table to Level 1 of the fair value hierarchy, 69% (71%) to Level 2 and 22% (18%) to Level 3.

Among the associates and joint ventures accounted for using the equity method, there is only one company for which a quoted market price is available. This price amounts to €51m (63m) and is allocated to Level 1 of the fair value hierarchy.

The table after next presents the reconciliation from the opening balances to the closing balances for investments allocated to Level 3 of the fair value hierarchy.

Gains (losses) recognised in the consolidated income statement are shown in the investment result or insurance-related investment result, while gains (losses) recognised in equity are shown in the statement of recognised income and expense under "Unrealised gains and losses on investments, Gains (losses) recognised in equity". Gains (losses) recognised in the consolidated income statement that are attributable to investments recognised at the end of the financial year are shown in the statement of recognised income and expense under "Unrealised gains and losses on investments, Recognised in the consolidated income statement".

We reviewed the level allocation of our financial assets in the 2022 financial year. On account of the Western sanctions against Russia, dealing in rouble-denominated securities of Russian issuers has come to a standstill. There are consequently no liquid quoted prices in an active market. This primarily affects Munich Re holdings in rouble-denominated government bonds issued by the Russian Federation. The fair value has been measured at the reporting date using the present-value method, allowance being made for issuer-specific yield curves. Given the low liquidity of the markets, assumptions are made when determining valuation inputs. We have therefore transferred these securities from Level 2 to Level 3 of the fair value hierarchy (see second-next table).

The review process did not lead to any other significant changes in level allocation.

Allocation of financial instruments (including insurance-related investments) to levels of the fair value hierarchy

				31.12.2022
€m	Level 1	Level 2	Level 3	Total
Financial instruments measured at fair value				
Investments in affiliated companies measured at fair value	0	0	303	303
Investments in associates and joint ventures measured at fair value	0	0	152	152
Other securities available for sale				
Fixed-interest	45	119,782	1,754	121,581
Non-fixed-interest	8,665	3,401	6,740	18,807
Other securities at fair value through profit or loss				
Held for trading, and hedging derivatives[1]	535	1,562	22	2,120
Designated as at fair value through profit or loss	26	1,808	3	1,837
Other investments	0	40	695	735
Insurance-related investments	5,355	3,541	2,234	11,128
Total	**14,626**	**130,135**	**11,903**	**156,662**
Financial instruments not measured at fair value				
Loans	0	31,822	11,768	43,591
Deposits retained on assumed reinsurance	0	0	9,457	9,457
Other receivables[2], miscellaneous financial receivables	1,751	967	20,422	23,140
Cash at banks and deposits with banks, cheques and cash in hand	6,342	2,983	0	9,325
Total	**8,094**	**35,772**	**41,647**	**85,512**

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				Prev. year
€m	Level 1	Level 2	Level 3	Total
Financial instruments measured at fair value				
Investments in affiliated companies measured at fair value	0	0	258	258
Investments in associates and joint ventures measured at fair value	0	0	162	162
Other securities available for sale				
Fixed-interest	0	136,351	1,858	138,209
Non-fixed-interest	15,350	2,208	6,701	24,259
Other securities at fair value through profit or loss				
Held for trading, and hedging derivatives[1]	385	1,436	2	1,823
Designated as at fair value through profit or loss	21	1,116	1	1,139
Other investments	0	36	458	494
Insurance-related investments	6,237	3,916	2,132	12,283
Total	**21,993**	**145,064**	**11,571**	**178,626**
Financial instruments not measured at fair value				
Loans	0	45,927	12,732	58,659
Deposits retained on assumed reinsurance	0	3	8,973	8,975
Other receivables[2], miscellaneous financial receivables	1,334	825	17,326	19,485
Cash at banks and deposits with banks, cheques and cash in hand	5,416	3,360	0	8,775
Total	**6,750**	**50,114**	**39,031**	**95,895**

1 Including hedging derivatives of €1m (12m) accounted for under “Other assets”.
2 We have broken down “Other receivables” into financial and non-financial receivables. The figures from the previous year were adjusted in line with IAS 1.41.

Reconciliation for investments allocated to Level 3

€m	Investments in affiliated companies measured at fair value 2022	Prev. year	Investments in associates and joint ventures measured at fair value 2022	Prev. year
Carrying amount at 31 Dec. previous year	258	212	162	55
Gains and losses	–40	28	–29	83
Gains (losses) recognised in the consolidated income statement	–13	–11	–3	0
Gains (losses) recognised in equity	–27	39	–26	83
Acquisitions	115	60	30	36
Disposals	–31	–28	–11	–12
Transfer to Level 3	0	1	0	0
Transfer out of Level 3	0	–14	0	0
Changes in the fair value of derivatives	0	0	0	0
Carrying amount at 31 Dec. financial year	**303**	**258**	**152**	**162**
Gains (losses) recognised in the consolidated income statement that are attributable to investments shown at the end of the financial year	–13	–13	–3	0

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	Other securities available for sale			
	Fixed-interest		Non-fixed-interest	
€m	2022	Prev. year	2022	Prev. year
Carrying amount at 31 Dec. previous year	1,858	1,693	6,701	4,468
Gains and losses	–325	51	535	1,256
Gains (losses) recognised in the consolidated income statement	–30	11	8	26
Gains (losses) recognised in equity	–295	40	527	1,231
Acquisitions	310	248	2,061	3,056
Disposals	–175	–72	–2,508	–2,079
Transfer to Level 3	87	0	18	0
Transfer out of Level 3	0	–62	–67	0
Changes in the fair value of derivatives	0	0	0	0
Carrying amount at 31 Dec. financial year	**1,754**	**1,858**	**6,740**	**6,701**
Gains (losses) recognised in the consolidated income statement that are attributable to investments shown at the end of the financial year	–74	11	–20	–22

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	Designated as at fair value through profit or loss		Held for trading, and hedging derivatives		Other investments	
€m	2022	Prev. year	2022	Prev. year	2022	Prev. year
Carrying amount at 31 Dec. previous year	1	0	2	4	458	335
Gains and losses	–1	0	14	0	104	80
Gains (losses) recognised in the consolidated income statement	0	0	14	0	77	56
Gains (losses) recognised in equity	–1	0	0	0	28	24
Acquisitions	3	1	7	0	162	64
Disposals	0	0	0	–3	–30	–21
Transfer to Level 3	0	0	0	0	0	0
Transfer out of Level 3	–1	0	0	0	0	0
Changes in the fair value of derivatives	0	0	0	0	0	0
Carrying amount at 31 Dec. financial year	**3**	**1**	**22**	**2**	**695**	**458**
Gains (losses) recognised in the consolidated income statement that are attributable to investments shown at the end of the financial year	0	0	14	0	77	56

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€m	Insurance-related investments 2022	Insurance-related investments Prev. year	Total 2022	Total Prev. year
Carrying amount at 31 Dec. previous year	2,132	1,547	11,571	8,315
Gains and losses	512	479	772	1,977
Gains (losses) recognised in the consolidated income statement	453	461	506	543
Gains (losses) recognised in equity	59	18	266	1,434
Acquisitions	242	329	2,929	3,793
Disposals	-649	-218	-3,404	-2,433
Transfer to Level 3	0	0	105	1
Transfer out of Level 3	0	0	-68	-76
Changes in the fair value of derivatives	-1	-6	-1	-6
Carrying amount at 31 Dec. financial year	**2,234**	**2,132**	**11,903**	**11,571**
Gains (losses) recognised in the consolidated income statement that are attributable to investments shown at the end of the financial year	432	429	412	461

5 Investments in affiliated companies, associates and joint ventures

Reversed impairment losses with respect to associates and joint ventures amounted to €1m (49m) and mainly affect the property-casualty reinsurance segment.

Impairment losses with respect to these companies amounted to €25m (57m), spread across the different segments as follows: property-casualty reinsurance €24m (46m), ERGO Property-casualty Germany €1m (0m) and ERGO International €0m (11m).

In the financial year, shares of losses of associates and joint ventures amounting to €4m (0m) were not recognised in the balance sheet. Overall, losses not recognised in the balance sheet totalled €25m (21m).

Munich Re holds 50% of the shares in MR Beteiligungen 23. GmbH (which in future will be operating under the name of Joint HR MR Private Equity GmbH), Munich, a non-listed joint venture chiefly focused on acquiring, holding and managing Munich Re's private equity investments.

The joint venture's goal is to create a €3.3bn fair-value private equity portfolio for Munich Re and Hannover Re in order to increase the portfolio's diversification, gain better access to the top private equity funds, achieve the increased allocation of fund units, and generate more substantial co-investment opportunities. As each partner will be able to use the other's network, both will gain access to more fund managers (general partners). In addition, it may be possible to jointly generate scale effects in terms of contractual conditions.

The company is classified as a joint venture, as it operates independently and Munich Re merely has a claim to a share of its net asset value. Moreover, Munich Re is not liable regarding the company's obligations towards third parties.

The company is accounted for using the equity method. Based on the equity method, the company's carrying amount was €1,901m at the reporting date.

Aggregated financial information on investments in associates and joint ventures accounted for using the equity method and individually considered immaterial

€m	31.12.2022	Prev. year
Overall result for the year after tax from continued operations	45	62
Result after tax from discontinued operations	0	0
Income and expenses recognised directly in equity	8	9
Total recognised income and expenses	**53**	**71**

Further information about affiliated companies, associates and joint ventures can be found under (48) Contingent liabilities, other financial commitments, (49) Significant restrictions, and in the List of shareholdings as at 31 December 2022 pursuant to Section 313(2) of the German Commercial Code (HGB).

6 Loans

Breakdown of loans

	Carrying amounts	
€m	31.12.2022	Prev. year
Mortgage loans	8,861	7,900
Loans and advance payments on insurance policies	168	183
Other loans	39,518	42,306
Total	**48,547**	**50,389**

Other loans mainly comprise covered bonds and government bonds.

The fair value of the loans is based on recognised valuation techniques in line with the present value principle and taking observable and, in some cases, non-observable market inputs into account (see (4) Hierarchy for the fair value measurement of assets). The fair value totalled €43,591m (58,659m) at the reporting date.

Rating of loans on the basis of amortised cost[1]

€m	31.12.2022	Prev. year
AAA	20,238	22,200
AA	11,769	13,173
A	1,599	1,960
BBB or lower	5,453	4,342
No rating	9,319	8,531
Total	**48,379**	**50,206**

1 Loans and advance payments on insurance policies are not included.

The rating categories are based on those of the leading international rating agencies. We do not give a rating to the mortgage loans provided by our primary insurance companies. We issue mortgage loans only to clients with an excellent credit standing and when the respective land and buildings provide sufficient security for the loan. There is almost no credit risk for loans and advance payments on insurance policies either, due to the type of business and the security it provides.

7 Other securities available for sale

Approximately 28% of the corporate debt securities are covered bonds or government-guaranteed bank issues. The remaining portfolio is composed of securities issued by companies outside the banking sector, with each individual risk making up less than 1%, bonds issued by banks and state central savings banks, and asset-backed securities/mortgage-backed securities. The asset-backed securities/mortgage-backed securities are largely rated A or better.

We realised a net gain of €120m on the disposal of bonds issued in Russia and Ukraine that had previously been written down. The nominal volume of government bonds and other locally issued securities held was in the low three-digit-million euro range at the reporting date.

Assets pledged as security and other restrictions on title amount to €9,071m (9,412m). Of the securities shown, €1,857m (2,671m) had been loaned to third parties. Loaned securities are not derecognised, as the main resultant risks and rewards remain with Munich Re.

Of the –€13,065m (12,967m) in unrealised gains and losses, –€7,069m (5,611m) has been recognised in equity (other reserves), after deduction of provisions for deferred premium refunds, deferred taxes, non-controlling interests, and consolidation and currency translation effects.

The balance of the sharp decline in unrealised gains and increase in unrealised losses, amounting to €26,032m, was chiefly attributable to the fall in fair value of fixed-interest securities. This was mainly due to higher interest rates.

Of the securities shown, €2,213m (2,121m) are green bonds. These represent a large proportion of the green bonds held by the Group; further details can be found under "Sustainability in investment and insurance" in the "Combined non-financial statement" section of the combined management report.

Other securities available for sale also include participating interests pursuant to Section 271(1) of the German Commercial Code (HGB).

Disposal proceeds

€m	2022	Prev. year
Fixed-interest securities	67,911	67,003
Non-fixed-interest securities		
Quoted	18,917	6,389
Unquoted	16,886	16,746
Total	**103,713**	**90,138**

Realised gains and losses

€m	2022	Prev. year
Gains on disposal	4,755	2,876
Fixed-interest securities	1,593	1,424
Non-fixed-interest securities	3,162	1,452
Losses on disposal	–1,957	–628
Fixed-interest securities	–1,659	–478
Non-fixed-interest securities	–298	–150
Total	**2,797**	**2,248**

Rating of fixed-interest securities according to fair values

€m	31.12.2022	Prev. year
AAA	52,653	55,770
AA	25,972	28,929
A	17,502	22,425
BBB	18,479	22,325
Lower	6,647	8,276
No rating	328	485
Total	**121,581**	**138,209**

The rating categories are based on those of the leading international rating agencies.

Breakdown of other securities available for sale

	Carrying amounts		Unrealised gains/losses		Amortised cost	
€m	31.12.2022	Prev. year	31.12.2022	Prev. year	31.12.2022	Prev. year
Fixed-interest securities						
Government bonds						
Germany	7,690	7,315	-731	895	8,422	6,420
Rest of EU	19,827	24,737	-4,042	2,264	23,869	22,473
USA	19,998	21,418	-2,345	1,439	22,343	19,978
Other	25,685	28,730	-2,426	774	28,111	27,956
Corporate debt securities	40,625	45,804	-4,465	1,492	45,090	44,311
Other	7,755	10,207	-1,007	1,214	8,762	8,993
	121,581	**138,209**	**-15,015**	**8,078**	**136,597**	**130,131**
Non-fixed-interest securities						
Shares	9,748	15,031	392	3,036	9,356	11,995
Investment funds						
Equity funds	409	945	27	185	382	760
Bond funds	2,594	2,096	12	54	2,582	2,042
Real estate funds	331	305	28	41	303	264
Other	5,725	5,882	1,491	1,573	4,234	4,309
	18,807	**24,259**	**1,950**	**4,888**	**16,857**	**19,370**
Total	**140,388**	**162,468**	**-13,065**	**12,967**	**153,453**	**149,501**

8 Other securities at fair value through profit or loss and insurance-related investments

Securities measured at fair value through profit or loss comprise securities held for trading amounting to €2,119m (1,811m) as well as securities and loans amounting to €1,837m (1,139m).

The securities held for trading are made up of fixed-interest securities totalling €12m (13m), non-fixed-interest securities totalling €133m (80m) and derivatives amounting to €1,974m (1,718m). Of the securities designated as at fair value through profit or loss, €1,818m (1,118m) is assignable to fixed-interest securities and loans and €19m (21m) to non-fixed interest securities. Some €9m (2m) of the instruments measured at fair value through profit or loss is due within one year.

Rating of fixed-interest securities according to fair values

€m	31.12.2022	Prev. year
AAA	8	7
AA	139	38
A	731	397
BBB	489	310
Lower	231	235
No rating	232	144
Total	**1,830**	**1,131**

The rating categories are based on those of the leading international rating agencies.

The insurance-related investments include investments for unit-linked life insurance contracts of €7,470m (8,582m). Other insurance-related investments amounted to €3,658m (3,701m), of which €2,986m (2,929m) were accounted for at fair value through profit or loss and €221m (244m) were accounted for at fair value outside profit or loss.

Derivative financial instruments are used by Munich Re to manage and hedge against interest-rate, currency, and other market risks. This is done at the Group companies within the framework of the applicable supervisory regulations and additional internal company guidelines. Given the daily collateral-adjustment process, the risk of default is practically non-existent in the case of products traded on the stock exchange and for centrally cleared and secured over-the-counter (OTC) derivatives. Unsecured OTC products, on the other hand, harbour a theoretical risk in the amount of the replacement costs. Therefore, Munich Re selects only top-quality counterparties for such transactions, and exchanges collateral daily on the basis of current fair values.

As at 31 December 2022, Munich Re held collateral for derivatives in the form of cash collateral and securities with a rating of at least AA. The fair value of the securities amounts to €22m (3m), and the cash collateral approximately €908m (334m). The collateral received is subject to a title transfer collateral arrangement, but is not re-sold or pledged. In accordance with the provisions of IAS 32 Financial Instruments: Presentation, derivatives with a positive market value of €366m (179m) are subject to offsetting in the balance sheet.

Disclosure of derivatives by balance sheet item

€m			31.12.2022	Prev. year
Fair value	Qualifying for hedge accounting	Balance sheet item		
Positive	No	Investments, other securities, designated as at fair value through profit or loss	1,974	1,718
	No	Insurance-related investments	3,437	3,457
	Yes	Other assets	1	12
Negative	No Yes	Liabilities, other liabilities	–4,576	–3,457
Total			**836**	**1,729**

Although the derivatives used by Munich Re essentially serve to hedge against risks, only an amount of –€10m (12m) meets the requirements of IAS 39 for hedge accounting.

IAS 39 distinguishes between fair value hedges and cash flow hedges.

Fair value hedges In the case of fair value hedges, the change in the fair value of the hedging instrument and the change in the fair value of the hedged instrument are generally recognised in profit or loss under the item "investment result". Munich Re regularly uses hedging relationships in the form of fair value hedges to selectively and efficiently mitigate interest-rate and other market risks. The main types of transaction employed for hedging are swaps and forwards. No fair value hedges existed at year-end.

Cash flow hedges In short, cash flow hedges play a role in countering fluctuations that may be caused, for example, by variable interest payments. Munich Re uses cash flow hedges chiefly to hedge against interest-rate risks, with interest-rate swaps being the main instruments employed. Changes in the fair value of the hedging instrument are recognised directly in equity for this purpose. Only when the actual cash inflow or outflow takes place – as a result of the hedged circumstance – is the relevant equity item reversed with recognition in profit or loss. The change in fair value assignable to the ineffective portion of the hedging was negligible at the reporting date. At the end of the reporting period, there was an equity item of €19m (11m) from cash flow hedges. The net fair value of the derivatives falling into this category amounted to –€10m (12m) at the end of the reporting period.

Periods to maturity and amount of the hedged cash flows at the end of the reporting period

€m	< 1 year	1–2 years	2–3 years	3–4 years	4–5 years	> 5 years	31.12.2022	Prev. year
Notional amounts of hedged transactions	0	0	0	0	0	90	90	90

Below, we present an overview of the financial assets and liabilities for which master netting agreements or similar contractual agreements exist. The overview contains instruments that satisfy the offsetting criteria pursuant to IAS 32 and are therefore offset in the balance sheet, as well as those instruments that are subject to an enforceable netting agreement, but are not permitted to be offset in the balance sheet. The other receivables and liabilities involve insurance contracts with non-significant risk transfer, for which cash collateral has been held.

Offsetting of financial assets

31.12.2022							
€m	Gross amount	Amounts set off	Net amount presented	Amounts not set off	Financial collaterals	Cash collaterals	Net amount
Derivatives	5,330	366	4,963	1,474	370	993	2,126
Securities lending	1,780	0	1,780	0	1,780	0	0
Repurchase agreements	19	0	19	0	19	0	0
Miscellaneous receivables	11,689	440	11,249	0	0	268	10,981
Total	**18,818**	**806**	**18,012**	**1,474**	**2,170**	**1,261**	**13,107**

Offsetting of financial liabilities

31.12.2022							
€m	Gross amount	Amounts set off	Net amount presented	Amounts not set off	Financial collaterals	Cash collaterals	Net amount
Derivatives	4,943	366	4,576	1,474	256	2,031	816
Securities lending	0	0	0	0	0	0	0
Repurchase agreements	106	0	106	0	106	0	0
Miscellaneous liabilities	7,019	440	6,579	0	77	39	6,463
Total	**12,068**	**806**	**11,262**	**1,474**	**439**	**2,070**	**7,279**

Offsetting of financial assets

Prev. year							
€m	Gross amount	Amounts set off	Net amount presented	Amounts not set off	Financial collaterals	Cash collaterals	Net amount
Derivatives	4,840	179	4,661	1,041	719	981	1,921
Securities lending[1]	2,671	0	2,671	0	2,671	0	0
Repurchase agreements	0	0	0	0	0	0	0
Miscellaneous receivables	12,091	306	11,785	0	0	6	11,778
Total	**19,602**	**486**	**19,117**	**1,041**	**3,389**	**987**	**13,699**

1 The previous year's figures have been updated to include assets held in special funds.

Offsetting of financial liabilities

Prev. year							
€m	Gross amount	Amounts set off	Net amount presented	Amounts not set off	Financial collaterals	Cash collaterals	Net amount
Derivatives	3,637	179	3,457	1,041	326	1,227	864
Securities lending	0	0	0	0	0	0	0
Repurchase agreements	103	0	103	0	103	0	0
Miscellaneous liabilities	8,630	306	8,324	0	72	5	8,248
Total	**12,370**	**486**	**11,885**	**1,041**	**501**	**1,232**	**9,111**

9 Deposits retained on assumed reinsurance

Deposits retained on assumed reinsurance serve as collateral for technical provisions covering business assumed from cedants in reinsurance. The amount of and changes in deposits retained on assumed reinsurance derive from the values for the changes in the related technical provisions. Deposits retained on assumed reinsurance business thus do not have a fixed maturity date, and their return is generally dependent on the run-off of the corresponding provisions.

10 Other investments

Other investments comprised deposits with banks totalling €2,887m (3,363m), investments in renewable energies amounting to €480m (537m), physical gold of €67m (409m), and forestry investments of €735m (494m). Deposits with banks included receivables of €8m (0m) from borrowers under repurchase agreements that have been booked by us as the lender. For these receivables, the borrowers provided collateral of €8m in Munich Re's favour.

Of the amounts held on deposit with banks, €2,886m (3,362m) is due within one year. With these deposits, the fair values largely correspond to the carrying amounts. Assets pledged as security and other restrictions on title amounted to €61m (33m) for deposits with banks.

Development of investments in renewable energies

€m	2022	Prev. year
Gross carrying amount at 31 Dec. previous year	792	941
Accumulated amortisation and impairment losses at 31 Dec. previous year	-255	-336
Carrying amount at 31 Dec. previous year	537	605
Currency translation differences	-10	6
Additions		
Business combinations	0	0
Other	7	48
Disposals		
Loss of control	0	-70
Other	-13	-20
Impairment losses reversed	0	5
Depreciation and impairment losses		
Depreciation	-37	-37
Impairment losses	-3	0
Reclassification	0	0
Carrying amount at 31 Dec. financial year	**480**	**537**
Accumulated amortisation and impairment losses at 31 Dec. financial year	-287	-255
Gross carrying amount at 31 Dec. financial year	767	792

The expenditures recognised in the carrying amount for assets in the course of construction totalled €28m (21m) for renewable energy investments.

The investments in renewable energies included items pledged as security, and other restrictions on title, amounting to €48m (61m).

Development of forestry investments

€m	2022	Prev. year
Carrying amount at 31 Dec. previous year	494	345
Currency translation differences	33	25
Additions		
Business combinations	0	0
Acquisitions	39	92
Disposals		
Loss of control	0	0
Sales	-37	-27
Change in fair value less estimated costs to sell	70	59
Other changes	136	0
Carrying amount at 31 Dec. financial year	**735**	**494**

The other changes resulted from an updated valuation report that led to a change in the distribution of value to forestry and land.

11 Ceded share of technical provisions

Ceded share of technical provisions

€m	31.12.2022	Prev. year
Unearned premiums	507	470
Provision for future policy benefits	2,505	2,637
Provision for outstanding claims[1]	3,486	2,992
Total	**6,498**	**6,099**

1 Includes “Other technical provisions”.

Details of the ceded share of technical provisions are shown under (20) Unearned premiums, (21) Provisions for future policy benefits, (22) Provisions for outstanding claims, and in the “Credit risks” section of the risk report in the combined management report.

12 Other receivables

Breakdown of other receivables

€m	31.12.2022	Prev. year
Amounts receivable on primary insurance business	3,907	3,271
Accounts receivable on reinsurance business	12,448	10,337
Miscellaneous receivables	16,394	15,450
Total	**32,749**	**29,058**

Of the amounts receivable on primary insurance business, €950m (913m) was apportionable to receivables from insurance agents. The miscellaneous receivables included receivables of €11,249m (11,785m) resulting from insurance contracts with non-significant risk transfer, which do not fall within the scope of IFRS 4. Financial assets of €440m (306m) resulting from these contracts are netted with the corresponding liabilities in the balance sheet. For information on the offsetting of miscellaneous receivables, please refer to (8) Other securities at fair value through profit or loss and insurance-related investments.

Assets pledged as security and other restrictions on title amounted to €97m (91m).

The miscellaneous receivables contained cash collateral of €2,880m (1,849m), mainly for derivative transactions.

Given that the majority of other receivables, i.e. a total of €19,862m (16,994m), have a period to maturity of less than one year, the fair values largely correspond to the carrying amounts. The miscellaneous receivables included receivables of €11,249m (11,785m) resulting from insurance contracts with non-significant risk transfer. These usually have longer periods to maturity which correspond to the cover and run-off periods of the underlying risks. Their fair value amounted to €4,834m (4,088m). We allocate these to Level 3 of the fair value hierarchy, as their measurement is primarily based on biometric and lapse rates and historical event data.

As at 31 December 2022, our accounts receivable on ceded reinsurance business were split between the following ratings (based on those of Standard & Poor's):

Rating of accounts receivable

€m	31.12.2022	Prev. year
AAA	0	34
AA	86	57
A	156	68
BBB and lower	12	6
No external rating	278	188

Of all our receivables on underwriting business at the end of the reporting period, €646m (618m) were outstanding for more than 90 days. The average default rate for the last three years was 1.4% (1.5%).

13 Deferred acquisition costs

Deferred acquisition costs

€m	31.12.2022	Prev. year
Gross	11,089	10,545
Ceded share	–664	–608
Net	**10,425**	**9,937**

Development of gross deferred acquisition costs

€m	31.12.2022	Prev. year
Status at 31 Dec. previous year	10,545	9,617
Currency translation differences	3	197
Change in consolidated group/Other	16	–20
New deferred acquisition costs	6,682	5,091
Changes		
Amortisation	–6,142	–4,407
Impairment losses	–15	67
Status at 31 Dec. financial year	**11,089**	**10,545**

The changes shown under amortisation include accrued interest.

The impairment losses resulted from changes in the assumptions underlying the calculations which required an adjustment in the measurement. They were chiefly attributable to the ERGO Life and Health Germany segment, and were mostly driven by changes in interest-rate assumptions.

14 Deferred tax

The deferred tax assets and liabilities recognised in the consolidated balance sheet concern the following balance sheet items:

Deferred tax

€m	31.12.2022 Assets	Liabilities	Prev. year Assets	Liabilities
Assets				
A. Intangible assets	91	115	96	124
B. Investments	6,284	3,670	2,789	4,259
C. Insurance-related investments	5	109	2	36
E. Receivables	215	995	63	167
I. Other assets	986	1,514	664	1,152
Total assets	**7,581**	**6,403**	**3,614**	**5,738**
Equity and liabilities				
C. Net technical provisions	4,631	5,558	4,027	4,580
E. Other provisions	1,236	343	1,261	296
F. Liabilities	907	48	455	43
Total equity and liabilities	**6,774**	**5,949**	**5,743**	**4,919**
Loss carry-forwards and tax credits	**636**	**0**	**503**	**0**
Total before netting	**14,991**	**12,352**	**9,860**	**10,657**
Netting amount	–12,216	–12,216	–9,357	–9,357
Total	**2,775**	**136**	**503**	**1,300**

No deferred taxes were posted for temporary differences of €58m (134m) in connection with investments in subsidiaries and associates, also referred to as outside basis differences. Owing to the fall in fair value of the investments, there was a significant decline in unrealised gains on the fixed-interest securities, which even led to an excess of deferred tax assets. No deferred tax assets were recognised on deductible temporary differences of €411m (124m) due to lack of recoverability.

The available tax loss carry-forwards and tax credits are broken down as follows.

Tax loss carry-forwards and tax credits

€m	31.12.2022 For which deferred tax assets are recognised	For which deferred tax assets are not recognised	Total	Prev. year For which deferred tax assets are recognised	For which deferred tax assets are not recognised	Total
Corporation tax loss carry-forwards						
Expiring in up to three years	26	23	49	43	23	66
Expiring in over three years and up to ten years	187	123	310	162	55	217
Expiring in over ten years	410	65	475	631	40	671
Not expiring	1,621	1,397	3,018	1,180	1,683	2,863
	2,244	**1,608**	**3,852**	**2,016**	**1,801**	**3,817**
Trade tax loss carry-forwards						
Not expiring	180	349	529	62	270	332
	180	**349**	**529**	**62**	**270**	**332**
Loss carry-forwards from capital losses						
Expiring in up to three years	0	0	0	0	0	0
Expiring in over three years and up to ten years	0	0	0	0	0	0
Expiring in over ten years	0	0	0	0	0	0
Not expiring	0	0	0	0	0	0
	0	**0**	**0**	**0**	**0**	**0**
Tax credits						
Expiring in up to three years	41	19	60	0	48	48
Expiring in over three years and up to ten years	60	2	62	0	73	73
Expiring in over ten years	0	0	0	0	0	0
Not expiring	0	0	0	2	0	2
	101	**21**	**122**	**2**	**121**	**123**

15 Other assets

These mainly comprise property, plant and equipment, with owner-occupied property totalling €1,854m (1,943m), and operating and office equipment amounting to €217m (201m). Advance payments on insurance amounted to €260m (266m), derivatives totalled €1m (12m), and miscellaneous deferred items came to €248m (219m).

Development of property, plant and equipment

€m	Owner-occupied property		Operating and office equipment		Total	
	2022	Prev. year	2022	Prev. year	2022	Prev. year
Gross carrying amount at 31 Dec. previous year	3,256	3,328	971	991	4,228	4,318
Accumulated amortisation and impairment losses at 31 Dec. previous year	-1,313	-1,282	-770	-778	-2,083	-2,060
Carrying amount at 31 Dec. previous year	1,943	2,045	201	213	2,145	2,258
Currency translation differences	8	12	1	5	10	16
Additions						
Business combinations	25	0	3	7	28	7
Other	23	25	118	69	141	94
Disposals						
Loss of control	0	0	0	0	0	0
Other	-19	-60	-21	-14	-40	-74
Impairment losses reversed	0	3	0	0	0	3
Depreciation and impairment losses						
Depreciation	-65	-65	-86	-73	-151	-138
Impairment losses	0	-1	0	-5	0	-6
Reclassification	-62	-15	0	0	-61	-16
Carrying amount at 31 Dec. financial year	**1,854**	**1,943**	**217**	**201**	**2,071**	**2,145**
Accumulated amortisation and impairment losses at 31 Dec. financial year	-1,353	-1,313	-817	-770	-2,170	-2,083
Gross carrying amount at 31 Dec. financial year	3,207	3,256	1,034	971	4,241	4,228

The fair value of the land and buildings amounted to €3,674m (3,647m). This was allocated to Level 3 of the fair value hierarchy (see "Assets – B Investments – Determining fair values"). The methodology for determining the fair values is described in (3) Land and buildings, including buildings on third-party land.

The expenditures recognised in the carrying amount for assets in the course of construction totalled €8m (5m) for property and €16m (9m) for operating and office equipment. Commitments to acquire property totalled €21m (4m) and commitments to acquire operating and office equipment €5m (22m).

As at 31 December 2022, rights of use from leases amounted to €348m (420m). These mainly comprised rights to use land and buildings of €329m (396m). Additions to rights of use in the financial year came to €45m (118m). The depreciation expense came to €94m (93m) in the financial year.

For information on the offsetting of derivatives, please refer to (8) Other securities at fair value through profit or loss and insurance-related investments.

16 Non-current assets held for sale

At the end of the reporting period, one of the Company's investment properties was classified as held for sale. No value adjustments were required as a result of the classification. The sale of the property is scheduled to take place in spring 2023.

Our subsidiary American Digital Title Insurance Company, Brighton, Colorado, was classified as held for sale in Q4 2022. No value adjustments were required following the classification. The sale of the company is anticipated in the second half of 2023.

Our Hungarian subsidiary D.A.S. Jogvédelmi Biztosíto Részvénytársaság, Budapest, was classified as held for sale in Q4 2022. The transaction is expected to be completed in Q1 2023. This did not result in any significant value adjustment.

D.A.S. Defensa del Automovilista y de Siniestros – Internacional S.A. de Seguros y Reaseguros, Madrid, was classified as held for sale in April 2022. ERGO Versicherung AG is the shareholder. No value adjustments resulted from the classification. The company was deconsolidated in December 2022.

The associate Europai Utazasi Biztosito Zrt., Budapest, was classified as held for sale in Q1 2021. As the planned sale did not materialise and there is currently no intention to sell the company, it was reclassified at the end of the reporting period.

Four out of five properties classified as held for sale in the first half of 2022 were sold in the course of the year. No value adjustments resulted from the classification. One property was reclassified in Q2 as the buyer had withdrawn and there was no immediate intention to sell. A further property classified as held for sale in 2021 was sold in the first half of 2022. The properties are all allocated to the ERGO Life and Health segment.

One property in Belgium held in the separate fund MEAG European Prime Opportunities, Munich, was sold in Q3 2022. No value adjustments resulted from the classification.

A property portfolio comprising ten investment properties in Munich was classified as held for sale in Q3 2022. No value adjustments resulted from the classification. The sale took place in Q4 2022.

Digital Affect Insurance Company, New York City, and Digital Edge Insurance Company, Dover, Delaware were classified as held for sale in Q1 2022; value adjustments were not necessary. The disposals took place in Q3 2022 and Q4 2022, respectively.

The Romanian insurance companies ERGO ASIGURARI S.A., Bucharest, and ERGO ASIGURARI DE VIATA S.A., Bucharest, were sold in March 2022. The portfolio transfer of cash at bank and liabilities of ERGO Insurance N.V., Brussels, was effected at the beginning of January 2022.

At the end of December 2021, JSC "ERV Travel Insurance", Moscow, was classified as held for sale. The insurance portfolio was sold in Q2 2022 as part of an asset deal; the remaining assets were written off. The write-downs amounted to €5m. We have filed an application for the surrender of the company's insurance licence. The company was deconsolidated at the end of the reporting period.

We reclassified Imofloresmira – Investimentos Imobiliários S.A., Lisbon and no longer classify it as held for sale because it is no longer likely that it will be sold within a year.

In addition, one property held in the separate fund MEAG German Prime Opportunities (GPO), Munich, was sold in Q1 2022.

A group of three Dutch subsidiaries comprising DAS Holding N.V., Amsterdam, DAS Legal Services (formerly DAS Legal Finance B.V.), Amsterdam, and DAS Nederlandse Rechtsbijstand Verzekeringmaatschappij N.V., Amsterdam, was still classified as held for sale at the end of the reporting period. This classification did not result in any material value adjustments. The sale is expected to occur in the course of 2023.

Further information on gains and losses from losing control can be found under "Consolidated group" in the "Consolidation" section.

The other reserves of Group equity include –€4m for disposal groups attributable to unrealised losses on fixed-interest securities.

In our segment reporting, we disclose how the non-current assets held for sale are allocated between the segments. Transactions between the disposal group and the Group's continuing operations continued to be fully eliminated.

Other securities available for sale are allocated to Level 1 and Level 2 of the fair value hierarchy.

Non-current assets and disposal groups held for sale

€m	31.12.2022	Prev. year
Assets		
Land and buildings, including buildings on third-party land	74	42
Other securities available for sale	279	309
Other investments	0	3
Other assets of the disposal group	94	198
Total assets	**448**	**552**
Liabilities		
Gross technical provisions	164	201
Other liabilities of the disposal group	50	94
Total liabilities	**214**	**294**

Notes to the consolidated balance sheet – Equity and liabilities

17 Equity

The total share capital of €587,725,396.48 at 31 December 2022 was divided into 140,098,931 no-par-value registered shares, each fully paid up and carrying one vote. The number of shares in circulation was as follows:

Development of shares in circulation

	2022	Prev. year
Status at 31 Dec. previous year	140,098,931	140,098,931
Reductions		
Acquisition of shares for retirement (share buy-back programme)	–2,455,748	0
Status at 31 Dec. financial year	**137,643,183**	**140,098,931**

On 31 December 2022, a total of 2,455,748 Munich Reinsurance Company shares with a calculated nominal value of around €10.3m were held by Group companies. This represents around 1.8% of the share capital.

In the financial year, Munich Re bought back 2,455,748 shares as part of the 2022/2023 share buy-back programme that was approved by the Board of Management on 25 February 2022, which provided for the acquisition of shares up to a value of €1bn before the 2023 Annual General Meeting.

The acquisition costs of all Munich Re shares in the possession of Group companies at the end of the financial year totalled €620,150,158.75.

A total of €1,541m was distributed to Munich Reinsurance Company's equity holders for the financial year 2021 in the form of a dividend of €11 per dividend-bearing share.

Composition of the authorised capital

€m	31.12.2022
Authorised Capital 2021 (until 27 April 2026)	118
Total	**118**

Composition of the contingent capital

€m	31.12.2022
Contingent Capital 2020 (until 28 April 2025)	117
Total	**117**

Tax effects in the income and expenses recognised directly in equity

	2022			Prev. year		
€m	Before tax	Tax	After tax	Before tax	Tax	After tax
Currency translation	882	0	882	1,110	0	1,110
Unrealised gains and losses on investments	–16,120	3,697	–12,423	–2,705	543	–2,162
Change resulting from equity method measurement	24	0	24	–60	0	–60
Change resulting from cash flow hedges	–4	0	–4	1	0	0
Remeasurements of defined benefit plans	1,105	–345	760	713	–213	500
Other changes	8	0	8	14	0	14
Income and expenses recognised directly in equity	**–14,104**	**3,352**	**–10,752**	**–927**	**330**	**–597**

The taxes of €3,352m (330m) recognised directly in equity comprise an amount of €3,190m (280m) for deferred tax assets, and current taxes on unrealised gains and losses of €162m (50m) on investments.

Information on capital management is provided under "Capital position" in the "Financial position" section of the combined management report.

18 Hierarchy for the fair value measurement of liabilities

All financial liabilities that are recognised at fair value, and such financial instruments that are not recognised at fair value but for which a fair value is disclosed in the Notes, are allocated to one of the fair value hierarchy levels of IFRS 13.

At each reporting date, we assess whether the allocation of these liabilities to the levels of the fair value hierarchy is still appropriate. If changes in the basis of valuation have occurred – for instance, if a market is no longer active or the valuation was performed using inputs requiring another allocation – we make the necessary adjustments.

For information on the valuation models used for measuring derivatives, please see the table and explanations under (4) Hierarchy for the fair value measurement of assets. The measurement of subordinated bonds for which no market prices are available is conducted using the present-value method and taking observable market inputs into account. For the bonds we have issued, we use the market prices provided by price quoters for the corresponding assets. The fair values of our amounts due to banks are determined using the present-value method, in part exclusively using observable market inputs, and partly also taking into account non-observable inputs.

The following table shows the allocation of the financial liabilities to levels of the fair value hierarchy.

Allocation of financial liabilities to levels of the fair value hierarchy

				31.12.2022
€m	Level 1	Level 2	Level 3	Total
Liabilities measured at fair value				
Other liabilities				
Derivatives[1]	423	2,421	1,733	4,576
Total	**423**	**2,421**	**1,733**	**4,576**
Liabilities not measured at fair value				
Subordinated liabilities	3,967	62	0	4,029
Bonds and notes issued	338	0	0	338
Amounts due to banks	0	971	76	1,047
Other liabilities from financial transactions	283	1,743	520	2,546
Deposits retained on ceded business	0	0	1,103	1,103
Other financial liabilities	410	1,037	8,144	9,591
Total	**4,998**	**3,813**	**9,843**	**18,654**

→				Prev. year
€m	Level 1	Level 2	Level 3	Total
Liabilities measured at fair value				
Other liabilities				
Derivatives[1]	56	1,582	1,819	3,457
Total	**56**	**1,582**	**1,819**	**3,457**
Liabilities not measured at fair value				
Subordinated liabilities	5,170	64	0	5,234
Bonds and notes issued	370	0	0	370
Amounts due to banks	0	948	70	1,017
Other liabilities from financial transactions	674	1,203	521	2,398
Deposits retained on ceded business	0	0	1,502	1,502
Other financial liabilities	269	837	7,624	8,730
Total	**6,483**	**3,051**	**9,717**	**19,251**

1 Including hedging derivatives of €11m (0m) accounted for under "Other liabilities".

Only derivatives with a negative fair value are currently recognised at fair value. Of these, we mainly allocate the insurance derivatives to Level 3 of the fair value hierarchy, depending on the observation of specific market inputs.

Considering the sensitivity of the applied non-observable inputs, we refer to the remarks found in (4) Hierarchy for the fair value measurement of assets.

The following table presents the reconciliation from the opening balances to the closing balances for these insurance-linked derivatives:

Reconciliation for liabilities allocated to Level 3

	Other liabilities at fair value through profit or loss	
€m	31.12.2022	Prev. year
Carrying amount at 31 Dec. previous year	1,819	1,630
Gains and losses	431	149
Gains (losses) recognised in the income statement	455	158
Gains (losses) recognised in equity	-24	-9
Acquisitions	666	634
Disposals	-320	-290
Transfer to Level 3	0	0
Transfer out of Level 3	0	0
Change in the fair value of derivatives	-1	-6
Carrying amount at 31 Dec. financial year	**1,733**	**1,819**
Gains (losses) recognised in the consolidated income statement that are attributable to liabilities shown at the end of the financial year	433	132

Gains (losses) recognised in the consolidated income statement are shown in the insurance-related investment result, while gains (losses) recognised in equity are shown in the statement of recognised income and expense in the item "Unrealised gains and losses on investments, Gains (losses) recognised in equity". Gains (losses) recognised in the consolidated income statement that are attributable to liabilities recognised at the end of the financial year are shown in the statement of recognised income and expense under "Unrealised gains and losses on investments, Recognised in the consolidated income statement".

19 Subordinated liabilities

In the financial year, Munich Reinsurance Company issued a subordinated green bond, with the volume issued amounting to US$ 1,250m; further information can be found under "Sustainability in investment and insurance" in the "Combined non-financial statement" section of the combined management report.

In the case of Munich Reinsurance Company bonds, annual outflows of liquidity amounting to the respective interest payments occur until the first possible call dates. In the financial year, these amounted to €155m (202m). Thereafter, the liquidity outflows will vary, depending on the respective interest-rate level. For the registered bonds of ERGO Versicherung Aktiengesellschaft, and for the HSB Group bonds, the annual outflow is variable, depending on the respective interest-rate levels.

Possible bond maturities are determined by the terms of the bond.

The fair value of the subordinated liabilities at the end of the reporting period amounted to €4,029m (5,234m). For the Munich Reinsurance Company bonds, we take the stock market prices as fair values. For the other subordinated liabilities, we determine the fair values using net present-value methods with observable market inputs.

Breakdown of subordinated liabilities

€m	A.M. Best	Fitch	Moody's	S&P	31.12.2022	Prev. year
Munich Reinsurance Company, Munich, 5.875% until 2032, thereafter floating, US$ 1,250m, Bonds 2022/2042	–	–	A2 (hyb)	A	1,171	0
Munich Reinsurance Company, Munich, 1.00% until 2032, thereafter floating, €1,000m, Bonds 2021/2042	–	A	–	A	998	994
Munich Reinsurance Company, Munich, 1.25% until 2031, thereafter floating, €1,250m, Bonds 2020/2041	–	A	–	A	1,245	1,244
Munich Reinsurance Company, Munich, 3.25% until 2029, thereafter floating, €1,250m, Bonds 2018/2049	–	A	A2 (hyb)	–	1,265	1,264
Munich Reinsurance Company, Munich, 6.25% until 2022, thereafter floating, €900m[1], Bonds 2012/2042	–	–	–	–	0	933
Munich Reinsurance Company, Munich, 6.625% until 2022, thereafter floating, £450m[1], Bonds 2012/2042	–	–	–	–	0	557
ERGO Versicherung Aktiengesellschaft, Vienna, secondary market yield on federal government bonds (Austria) +70 BP, €6m, Registered bonds 2001/perpetual	–	–	–	–	6	6
ERGO Versicherung Aktiengesellschaft, Vienna, secondary market yield on federal government bonds (Austria) +70 BP, €7m, Registered bonds 1998/perpetual	–	–	–	–	7	7
HSB Group Inc., Dover, Delaware, LIBOR +91 BP, US$ 67m, Bonds 1997/2027	–	–	–	–	56	51
Total					**4,748**	**5,055**

1 Munich Reinsurance Company fully redeemed the bond in Q2 2022.

20 Unearned premiums

Unearned premiums

€m	31.12.2022	Prev. year
Gross	14,510	13,474
Ceded share	-507	-470
Net	**14,003**	**13,004**

Development of gross unearned premiums

€m	31.12.2022	Prev. year
Status at 31 Dec. previous year	13,474	10,964
Currency translation differences	226	572
Changes in consolidated group/Other	68	-32
Gross premiums written	67,133	59,567
Earned premiums	-66,391	-57,597
Status at 31 Dec. financial year	**14,510**	**13,474**

The increase in gross unearned premiums to €14,510m (13,474m) is attributable to the increase in premiums written to €67,133m (59,567m).

21 Provision for future policy benefits

Provision for future policy benefits

€m	31.12.2022	Prev. year
Gross	115,663	114,586
Ceded share	–2,505	–2,637
Net	**113,158**	**111,949**

Gross provision for future policy benefits according to type of insurance cover

€m	31.12.2022	Prev. year
Life and health	**115,178**	**114,051**
Reinsurance	13,923	13,420
ERGO	101,255	100,631
Term life insurance	2,036	2,113
Other life insurance	19,355	20,294
Annuity insurance	37,557	37,070
Disability insurance	1,341	1,332
Health	40,965	39,821
Property-casualty	**485**	**535**
Reinsurance	0	0
ERGO	485	535
Total	**115,663**	**114,586**

The provision for future policy benefits in life reinsurance largely involves contracts where the mortality or morbidity risk predominates. In reinsurance, annuity contracts have a significantly lower weight than in primary insurance.

Essentially the same actuarial assumptions have been used as in the previous year for measuring the provisions for future policy benefits for business in force.

In the ERGO Life and Health Germany segment, there was an adjustment in the financial year to the assumptions regarding expenses and long-term interest-rate levels that are geared to the long-term regular return on investments. The provision for future policy benefits increased as a result of these adjustments. In reinsurance, as we expect only a temporary and limited increase in mortality, COVID-19 did not have a significant impact on the provision for future policy benefits. In life reinsurance, there were no effects on the mortality assumptions relating to climate change either. In reinsurance, changes in interest rates did not affect our portfolio, as the assumptions are fixed. The benefits payable in life reinsurance are inflation-linked in only a few cases.

Further information on the underwriting risks can be found under “Significant risks” in the “Risk report” section of the combined management report.

Development of gross provision for future policy benefits

€m	2022	Prev. year
Status at 31 Dec. previous year	114,586	112,928
Currency translation differences	–49	502
Changes in consolidated group/Other	541	548
Changes		
Scheduled	615	610
Unscheduled	–31	–2
Status at 31 Dec. financial year	**115,663**	**114,586**

The change shown under “Changes in consolidated group/Other” contains €242m (146m) in savings premiums for capitalisation products and €404m (658m) for reclassifications from the provision for premium refunds. It also includes the provision for future policy benefits of the disposal group amounting to €0m (–13m).

Scheduled changes in the provision for future policy benefits contain the changes deriving from prospective calculation as a result of premium payments, claims and the unwinding of discount in the 2022 financial year.

22 Provision for outstanding claims

Provision for outstanding claims

€m	31.12.2022	Prev. year
Gross	89,438	81,671
Ceded share	–3,504	–2,952
Net	**85,934**	**78,718**

Gross provision by type

€m	31.12.2022	Prev. year
Annuity claims provision	8,755	8,509
Case reserve	31,498	29,377
IBNR reserve	49,185	43,784
Total	**89,438**	**81,671**

The annuity claims provision involves periodic payments for occupational and other disability cases and is usually due long term. A major part of this provision is established in the life and health reinsurance and ERGO Life and Health Germany segments for future annuity payments; a small part refers to provisions for annuities in personal accident, liability and workers’ compensation insurance. The biometric actuarial assumptions are selected using appropriate actuarial principles.

Provisions for annuity claims are calculated as the present value of the expected future payments. The discount rates used are presented under (39) Disclosures on risks from life and health insurance business and (40) Disclosures on risks from property-casualty insurance business.

The case reserve reflects the amount which is expected to be needed to settle claims which are known and have already been reported at the balance sheet date. The major part of this provision is measured at face value. The IBNR reserve is calculated using actuarial methods on the basis of historical claims development data and taking into account foreseeable future trends.

Expected payments from the provisions for outstanding claims (property-casualty only)

		Reinsurance		ERGO
%	31.12.2022	Prev. year	31.12.2022	Prev. year
Up to one year	32.2	32.8	33.0	32.0
Over one year and up to five years	47.1	46.1	36.9	37.4
Over five years and up to ten years	13.4	13.5	14.8	15.0
Over ten years and up to fifteen years	3.5	3.6	5.6	5.5
Over fifteen years	3.9	4.1	9.7	10.1

The expected timing of payments from the provisions for outstanding claims may involve considerable uncertainty.

Development of the claims reserve in the property-casualty segment[1]

			2022			Prev. year
€m	Gross	Ceded share	Net	Gross	Ceded share	Net
Balance at 31 Dec. previous year	67,061	–2,810	64,251	58,848	–2,634	56,214
Currency translation differences	1,446	–52	1,394	2,719	–138	2,581
Changes in consolidated group/Other	31	–15	16	–127	7	–120
Claims expenses						
For the year under review	29,615	–1,427	28,188	23,995	–841	23,154
For previous years	–2,616	75	–2,540	–1,553	154	–1,400
Total claims expenses	26,999	–1,352	25,647	22,441	–687	21,754
Unwinding of discount	36	–1	34	35	–1	34
Less payments						
For the year under review	–6,814	242	–6,571	–5,618	151	–5,468
For previous years	–14,366	695	–13,671	–11,237	493	–10,744
Total payments	–21,180	938	–20,242	–16,855	643	–16,212
Balance at 31 Dec. financial year	**74,392**	**–3,292**	**71,100**	**67,061**	**–2,810**	**64,251**

1 Comprises the segments property-casualty reinsurance, ERGO Property-casualty Germany and the property-casualty section of the ERGO International segment.

The claims expenses for the financial year show payments made for the financial year and expenses for posting the claims reserve in that year. The provisions set up for claims from previous years are regularly updated using best estimates based on exposure and claims information and past claims experience. The respective change is shown under “Claims expenses, For previous years”. The increase in the provision for outstanding claims largely resulted from growth in our insurance business. Where actuarial techniques have not already factored in the current above-average inflation rates, these are covered by our prudent reserving practices. With regard to taking into account the effects resulting from climate change, please refer to “Climate change” in the “Risk report” section of the combined management report.

In the financial year, most sectors experienced relatively low claims-reporting activity from previous years, which had a positive influence on the ultimate-loss projection.

Below, we present the net run-off results in the property-casualty segment. The values in the following run-off triangles cover more than 99% of our Group’s portfolio of property-casualty business.

Claims payments for the individual accident years (per calendar year, net)

€m	Accident year											
Calendar year	≤ 2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total
2012	14,029											
2013	7,260	5,580										
2014	5,104	3,239	5,287									
2015	2,901	1,254	2,857	4,972								
2016	2,780	691	1,475	2,681	5,237							
2017	878	470	679	1,342	2,577	4,904						
2018	1,214	291	388	804	1,696	4,292	5,470					
2019	1,099	169	238	413	821	1,987	4,585	4,725				
2020	909	177	310	500	507	1,439	2,518	5,334	5,128			
2021	560	153	203	437	373	634	1,158	2,437	5,270	5,590		
2022	587	113	175	272	394	658	833	1,482	2,633	6,274	6,406	19,827

Claims reserves for the individual accident years at the respective reporting dates (net)

€m	Accident year											
Date	≤ 2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total
31 Dec. 2012	44,483											
31 Dec. 2013	36,306	8,853										
31 Dec. 2014	29,692	5,858	9,016									
31 Dec. 2015	25,319	4,563	6,214	8,645								
31 Dec. 2016	21,455	3,567	4,722	6,015	9,267							
31 Dec. 2017	20,140	3,023	3,827	4,456	6,531	12,931						
31 Dec. 2018	17,460	2,433	3,165	3,449	4,857	8,654	12,448					
31 Dec. 2019	14,689	2,112	2,742	2,884	3,854	6,543	8,660	14,134				
31 Dec. 2020	12,719	1,556	2,212	2,272	2,993	5,020	6,510	9,341	17,085			
31 Dec. 2021	11,433	1,289	1,713	1,680	2,504	4,097	5,256	7,033	12,138	18,656		
31 Dec. 2022	10,063	1,051	1,401	1,273	2,057	3,086	4,071	5,367	8,942	12,562	21,284	71,157

Ultimate loss for the individual accident years at the respective reporting dates (net)

€m	Accident year											
Date	≤ 2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Total
31 Dec. 2012	58,512											
31 Dec. 2013	57,594	14,433										
31 Dec. 2014	56,085	14,678	14,303									
31 Dec. 2015	54,612	14,636	14,358	13,617								
31 Dec. 2016	53,528	14,332	14,341	13,667	14,504							
31 Dec. 2017	53,092	14,258	14,126	13,450	14,345	17,836						
31 Dec. 2018	51,625	13,958	13,852	13,248	14,367	17,851	17,918					
31 Dec. 2019	49,953	13,807	13,667	13,096	14,184	17,726	18,715	18,859				
31 Dec. 2020	48,893	13,427	13,447	12,984	13,831	17,642	19,083	19,400	22,213			
31 Dec. 2021	48,167	13,314	13,151	12,829	13,715	17,354	18,987	19,529	22,536	24,246		
31 Dec. 2022	47,384	13,189	13,014	12,694	13,661	17,001	18,634	19,346	21,972	24,427	27,690	229,011
Net run-off result	11,128	1,244	1,289	923	842	835	–717	–486	241	–181	n/a	15,119
Change 2021 to 2022	783	126	137	135	54	354	352	184	564	–181	n/a	2,506

The ultimate loss of an accident year comprises all payments made for that accident year up to the reporting date, plus the claims reserve at the reporting date. Given complete information regarding all losses incurred up to the end of the reporting period, the ultimate-loss status for each accident-year period would remain the same. In practice, however, the ultimate-loss status (based on estimates) is exposed to fluctuations that reflect the growth in knowledge about the claims. Changes in the consolidated group, especially new acquisitions or the composition of reportable segments, can also have an influence on the ultimate-loss status.

The run-off triangles are prepared on a currency-adjusted basis. For this purpose, all figures are translated from the respective local currency into the Group currency (euro) based on year-end exchange rates. This ensures that currency translation does not lead to run-off effects.

23 Other technical provisions

Breakdown of other technical provisions

€m	31.12.2022	Prev. year
Provision for premium refunds based on national regulations	9,766	9,946
Provision for deferred premium refunds	1,284	10,827
Thereof resulting from unrealised gains and losses on investments (recognised directly in equity)	-4,394	5,361
Thereof resulting from other remeasurements (recognised in profit or loss)	5,678	5,466
Provision for profit commissions	391	475
Other	122	166
Total (gross)	**11,563**	**21,414**

Of the provision for premium refunds based on national regulations, €83m (80m) is apportionable to property-casualty insurance. The provision for deferred premium refunds is established solely for life and health insurance.

Development of provision for premium refunds based on national regulations

€m	2022	Prev. year
Status at 31 Dec. previous year	9,946	9,311
Changes in consolidated group	0	1
Allocation/Withdrawal	-180	635
Status at 31 Dec. financial year	**9,766**	**9,946**

Development of provision for deferred premium refunds

€m	2022	Prev. year
Status at 31 Dec. previous year	10,827	12,376
Changes in consolidated group	0	26
Change resulting from unrealised gains and losses on investments (recognised directly in equity)	-9,755	-1,637
Change resulting from other remeasurements (recognised in profit or loss)	212	61
Status at 31 Dec. financial year	**1,284**	**10,827**

The above change resulting from unrealised gains and losses on investments reflects the proportional allocation to expected future policyholders' bonuses of the change in fair values that occurred in the past year. The decrease in the provision for deferred premium refunds relates predominantly to ERGO and was attributable to the decline in the market value of the investments underlying the insurance contracts. This was responsible for lower policyholder bonus expectations at the end of the reporting period.

To determine the portion of the valuation differences allocable to the provision for deferred premium refunds, rates of between 50% and 92.5% after tax were used.

24 Gross technical provisions for unit-linked life insurance

Development of gross provisions

€m	2022	Prev. year
Balance at 31 Dec. previous year	8,998	7,955
Changes in consolidated group/Other	-110	-49
Savings premiums	540	631
Unrealised gains/losses on fund assets	-1,177	973
Withdrawal for expenses and risk	-36	-31
Withdrawal for benefits	-436	-481
Balance at 31 Dec. financial year	**7,780**	**8,998**

These provisions are measured retrospectively. The withdrawal for underwriting risks from the premiums and provision for future policy benefits is made on the basis of prudent assumptions regarding expected mortality and morbidity. Here, as with the provision for future policy benefits for non-unit-linked life insurance, we base the underlying calculation on best estimates, with appropriate provisions for adverse deviation.

The provisions are directly covered by the investments for unit-linked life insurance contracts. Small differences in relation to these investments arise as a result of including unearned revenue liability in these provisions.

25 Other provisions

Breakdown of other provisions

€m	31.12.2022	Prev. year
Provisions for post-employment benefits	1,482	3,617
Other provisions	1,178	1,341
Total	**2,661**	**4,958**

Provisions for post-employment benefits and similar obligations

Munich Re companies generally give pension commitments to their employees in the form of defined contribution plans or defined benefit plans. Special regional economic, legal and tax features are taken into account. The type and amount of the pension obligations are determined by the conditions of the respective pension plan. The pension commitments comprise obligations towards active members or retired members with vested benefits, and current pension payments. Defined benefit plans are funded internally through provisions for post-employment benefits, and externally through funds and insurance contracts concluded to cover the benefit obligations.

Expenses for defined contribution plans totalled €98m (74m) in the financial year, and expenses for contributions to state plans amounted to €120m (116m).

The present value of obligations under defined benefit pension plans amounted to €4,609m (6,873m), and the plan assets to be deducted totalled €3,759m (3,735m). Defined benefit plans comprise the following main plans:

Munich Reinsurance Company's pension obligations account for €1,155m (1,756m) of the present value of obligations under defined benefit pension plans and €1,396m (2,015m) of plan assets. The obligations include disability and old-age pensions, and pensions for surviving dependants. The amount of the pensions generally depends on salary and length of service. The defined benefits granted up to 31 December 2007 are financed through a fund. New members on or after 1 January 2008 receive pension commitments in the form of defined contribution plans financed by means of intra-Group insurance contracts securing the obligations under pension schemes. The fund and insurance contracts have been grouped in a contractual trust agreement (CTA).

ERGO Group's pension obligations account for €2,229m (3,499m) of the present value of obligations under defined benefit pension plans and €1,271m (292m) of plan assets, with both figures being impacted by IFRS 5 reclassification. The obligations include disability and old-age pensions, and pensions for surviving dependants. The amount of the pensions generally depends on salary and length of service. The obligations are generally funded through pension provisions, although for ERGO significant portions have been funded through a pension fund since 1 April 2022. New members receive pension commitments in the form of defined contribution plans financed by means of intra-Group insurance contracts securing the obligations under pension schemes. There are also medical-care benefit obligations.

The pension obligations of Munich Reinsurance America, Inc. account for €601m (743m) of the present value of obligations under defined benefit plans, and €453m (595m) of plan assets. The obligations include pensions for employees and surviving dependants. The amount of the pensions generally depends on includable compensation and length of service. The plan is financed through a fund and pension provisions. The plan was closed to new members effective 1 January 2006 and to all remaining members effective 31 December 2011. With effect from 1 January 2012, all members now receive pension commitments in the form of defined contribution plans. There are also retiree medical-care benefit obligations.

Development of the present value of the defined benefit obligations

€m	2022	Prev. year
Status at 31 Dec. previous year	6,873	7,742
Currency translation differences	43	116
Changes in consolidated group	3	0
Current service cost	151	170
Past service cost	7	8
Gains and losses from plan settlements	0	0
Contributions by plan participants	3	3
Interest expense	78	44
Payments	–180	–162
Payments from plan settlements	0	–1
Transfer of obligations	2	0
Actuarial gains/losses: Change in demographic assumptions	6	–4
Actuarial gains/losses: Change in financial assumptions	–2,489	–770
Actuarial gains/losses: Experience adjustments	19	–19
Other	–6	1
Reclassification IFRS 5	100	–255
Status at 31 Dec. financial year	**4,609**	**6,873**

The present value of medical-care benefit obligations amounted to €208m (325m) at the end of the reporting period.

The present value of the obligations under defined benefit plans breaks down as follows:

Breakdown of the present value of defined benefit obligations

%	31.12.2022	Prev. year
Active members	43	48
Deferred members	13	15
Pensioners	44	37
Total	**100**	**100**

Pension obligations are measured using assumptions about future developments. The consolidated companies used the following actuarial assumptions (weighted-average values):

Actuarial assumptions

%	2022	Prev. year
Discount rate	3.8	1.1
Future increases in entitlement/salary	1.8	1.8
Future pension increases	1.4	1.4
Medical cost trend rate	3.5	3.4

In the eurozone, the actuarial interest rate was 3.5% (0.75%) as at 31 December 2022. The strong increase in the actuarial interest rate largely reflects general interest-rate developments. The actuarial gains from changes in financial assumptions amounting to €2,074m (687m) primarily arose from the increase in the actuarial interest rate.

Munich Re uses generally recognised biometric actuarial assumptions, adjusted as a rule to take account of company-specific circumstances. The average remaining life expectancy of a 65-year-old plan participant is 23.9 years for women and 23.0 years for men.

Development of the fair value of plan assets for defined benefit plans

€m	2022	Prev. year
Balance at 31 Dec. previous year	3,735	4,067
Currency translation differences	26	97
Changes in consolidated group	0	0
Interest income	57	32
Return excluding interest income	–1,217	–32
Contributions by the employer	1,151	67
Contributions by plan participants	1	1
Payments	–91	–249
Payments from plan settlements	–1	0
Transfer of assets	0	0
Other	–1	–1
Reclassification IFRS 5	99	–247
Balance at 31 Dec. financial year	**3,759**	**3,735**

Breakdown of the fair value of plan assets for defined benefit plans

%	31.12.2022	Prev. year
Quoted market price in an active market		
Fixed-interest securities	29	40
Non-fixed-interest securities	17	24
Equities	2	3
Investment funds	15	21
Other	0	0
Other	0	0
No quoted market price in an active market		
Cash or cash equivalents	0	1
Real estate	1	1
Fixed-interest securities	0	0
Non-fixed-interest securities	3	3
Equities	0	0
Investment funds	3	3
Other	0	0
Insurance contracts	49	30
Other	1	1

As in the previous year, the plan assets do not include any own shares.

For the 2023 financial year, capital transfers of €68m (67m) to plan assets are expected.

Development of the reimbursement rights for defined benefit plans

€m	2022	Prev. year
Balance at 31 Dec. previous year	382	404
Changes in consolidated group	0	0
Interest income	3	1
Return excluding interest income	–105	–33
Contributions by the employer	20	19
Contributions by plan participants	0	0
Payments	–9	–9
Transfer of assets	0	0
Other	0	0
Balance at 31 Dec. financial year	**291**	**382**

The reimbursement rights derive from insurance concluded to cover the benefit obligations.

There was an effect of €29m (16m) resulting from the asset ceiling on overfunded defined benefit plans.

Funded status of defined benefit plans

€m	31.12.2022	Prev. year
Obligations funded through provisions		
Present value of defined benefit obligations	1,236	3,318
Other	0	0
Reclassification IFRS 5	0	0
Net balance sheet liability	1,236	3,318
Obligations funded through plan assets		
Present value of defined benefit obligations	3,273	3,809
Plan assets	–3,660	–3,982
Assets from the defined benefit plan	604	463
Effect of asset ceiling	29	16
Other	0	1
Reclassification IFRS 5	1	–9
Net balance sheet liability	246	298
Obligations independent of funded obligations		
Present value of defined benefit obligations	4,509	7,128
Plan assets	–3,660	–3,982
Assets from the defined benefit plan	604	463
Effect of asset ceiling	29	16
Other	0	1
Reclassification IFRS 5	1	–9
Net balance sheet liability	**1,482**	**3,617**

The plan assets have the exclusive purpose of fulfilling the defined benefit obligations to which they are allocated and making provision for future outflows. This is required by law in several countries, whilst in other countries plan assets are provided on a voluntary basis.

The relationship between the fair value of the plan assets and the present value of the defined benefit obligations is referred to as the funded status. If the present value of defined benefit obligations exceeds the fair value of the plan assets, this excess of liabilities over assets is financed by means of provisions for post-employment benefits.

If the fair value of the plan assets exceeds the present value of the defined benefit obligations, an asset arises out of the defined benefit plan. As each plan is analysed individually, this may give rise to both a provision for post-employment benefits and an asset from the defined benefit plan.

Market fluctuations may give rise to changes in the fair value of the plan assets over time. Adjustments to the actuarial assumptions (e.g. life expectancy, actuarial interest rate) or deviations in actual risk experience from the risk experience assumed may result in changes in the present value of the defined benefit obligations. Both factors may therefore lead to fluctuations in the funded status. To avoid these fluctuations wherever possible, care is taken, when choosing investments, that fluctuations in the fair value of the plan assets and in the present value of defined benefit obligations offset each other as far as possible whenever changes in certain influencing variables occur (asset-liability matching).

Development of the provision for defined benefit plans

€m	2022	Prev. year
Balance at 31 Dec. previous year	3,617	4,121
Currency translation differences	12	25
Changes in consolidated group	2	0
Expenses	175	195
Payments	-89	87
Payments from plan settlements	1	-1
Capital transfer to plan assets	-1,152	-69
Transfer of assets	2	0
Transfer to other receivables	144	28
Actuarial gains/losses recognised in equity	-1,128	-727
Other	-103	-32
Reclassification IFRS 5	1	-9
Balance at 31 Dec. financial year	**1,482**	**3,617**

Breakdown of expenses booked in the financial year

€m	2022	Prev. year
Net interest cost	19	12
Service cost	161	181
Other	-5	2
Total	**175**	**195**

The expenses are distributed between the functional areas and shown mainly under “Operating expenses” and “Expenses for claims and benefits” in the consolidated income statement.

The actual losses on plan assets amounted to €1,160m (0m), and the actual losses on reimbursements to €102m (32m). These effects are largely attributable to higher interest rates.

Contractual period to maturity of pension obligations

€m	31.12.2022	Prev. year
Up to one year	195	185
Over one year and up to five years	884	812
Over five years and up to ten years	1,250	1,143
Over ten years and up to twenty years	2,655	2,536
Over twenty years	4,860	4,882
Total	**9,845**	**9,559**

The weighted average contractual period to maturity of our pension obligations is 15 (19) years.

An increase or decrease in the following essential actuarial assumptions has an impact on the present value of defined benefit obligations:

Sensitivity analysis

€m	31.12.2022	Prev. year
Increase in actuarial discount rate by 50 BP	-321	-635
Decrease in actuarial discount rate by 50 BP	363	730
Increase in salary/entitlement trends by 10 BP	12	23
Decrease in salary/entitlement trends by 10 BP	-9	-21
Increase in pension trends by 10 BP	33	70
Decrease in pension trends by 10 BP	-30	-68
Increase in medical cost trend rate by 100 BP	27	55
Decrease in medical cost trend rate by 100 BP	-23	-46
Increase in mortality rate by 10%	-105	-217
Decrease in mortality rate by 10%	115	233

The calculations for the actuarial assumptions classified as essential were carried out individually in order to display their effects separately.

Miscellaneous provisions

Miscellaneous provisions

€m	Prev. year	Additions	Withdrawals	Reversal	Other changes	31.12.2022
Restructuring	202	34	–48	–28	7	167
Commissions	212	2,359	–2,318	0	1	254
Multi-year variable compensation	77	41	–9	–23	–3	83
Early retirement benefits/semi-retirement	140	18	–26	0	–9	123
Salary obligations and other remuneration for desk and field staff	87	71	–79	–2	–1	76
Anniversary benefits	106	2	–23	0	0	85
Miscellaneous	516	234	–316	–41	–4	389
Total	**1,341**	**2,759**	**–2,819**	**–94**	**–9**	**1,178**

The provisions for restructuring mainly included €32m (47m) for the comprehensive restructuring of the ERGO sales organisations, and €129m (151m) for the “ERGO Strategy Programme”. The provision for multi-year variable remuneration includes components for multi-year performance and for the incentive plans. The “Miscellaneous” provisions comprise a large number of different items. The provisions for restructuring, early-retirement benefits/semi-retirement, anniversary benefits, multi-year performance and incentive plans are mainly long term, whereas the provisions for commissions, salary obligations, other remuneration for desk and field staff, and miscellaneous are essentially short term.

26 Bonds and notes issued

Breakdown of bonds and notes issued

€m	A.M. Best	Fitch	Moody’s	S&P	31.12.2022	Prev. year
Munich Re America Corporation, Wilmington, 7.45%, US$ 321m[1], Senior Notes 1996/2026	a	A+	A2	A–	300	293
Total					**300**	**293**

1 The issuer executed partial redemptions in 2022, with their nominal volume totalling US$ 13m.

Outflows of liquidity occur annually in the amount of the interest payments until the notes mature. These totalled US$ 24m (25m) in the financial year. The fair value at the reporting date amounted to €338m (370m).

27 Deposits retained on ceded business

Deposits retained on ceded business are collateral for technical provisions covering business ceded to reinsurers and retrocessionaires. As a rule, the changes in deposits retained on ceded business derive from the changes in the relevant technical provisions covering ceded business. Deposits retained on ceded business thus do not have a fixed maturity date, their release generally being dependent on run-off of the corresponding provisions.

28 Other liabilities

Breakdown of other liabilities

€m	31.12.2022	Prev. year
Amounts payable on primary insurance business	2,803	2,630
Accounts payable on reinsurance business	6,152	4,879
Amounts due to banks	1,047	1,016
Lease liabilities	356	433
Miscellaneous liabilities	17,323	17,111
Total	**27,681**	**26,069**

The amounts payable on primary insurance business mainly contain liabilities towards policyholders resulting from accumulated participation in surplus, premium deposits and primary insurance contracts with non-significant risk transfer.

For more information on the interest paid for liabilities from leases in the 2022 financial year, please refer to (36) Other operating result. See (29) Liabilities from financing activities for information on cash outflows for leases in 2022.

Of the amounts due to banks, €11m (13m) is attributable to bank borrowing by Group companies acquired by Munich Re under its infrastructure investment strategy. The fair value of the debts owed to credit institutions at the end of the reporting period amounted to €1,047m (1,017m).

The miscellaneous liabilities contain liabilities of €6,579m (8,324m) resulting from reinsurers' insurance contracts with non-significant risk transfer, derivative financial instruments with a negative fair value of €1,848m (1,173m), and negative fair values totalling €2,728m (2,284m) for insurance-linked derivatives and hedging derivatives of variable annuities. The miscellaneous liabilities also include €22m (23m) for social security and €4m (27m) for interest and rent.

Of the liabilities resulting from the reinsurers' insurance contracts with non-significant risk transfer, €440m (306m) is shown on a net basis in the balance sheet; a total of €366m (179m) was recognised for derivatives with a negative market value.

The following table provides information on the contractual future cash outflows of the items shown under "Other liabilities". The amounts payable on primary insurance business are directly linked to the underlying insurance business, and therefore not taken into account here (see (39) Disclosures on risks from life and health insurance business).

Maturity analysis of future cash flows from other liabilities

€m	Non-derivative liabilities		Derivative liabilities	
	31.12.2022	Prev. year	31.12.2022	Prev. year
Up to one year	18,347	14,910	1,272	798
Over one year and up to two years	221	390	231	32
Over two years and up to three years	628	1,927	219	19
Over three years and up to four years	191	103	212	28
Over four years and up to five years	326	1,225	214	28
Over five years and up to ten years	208	1,239	1,244	658
Over ten years	335	354	1,653	1,636
Total	**20,257**	**20,146**	**5,045**	**3,198**

Given that the majority of other liabilities have a period to maturity of less than one year, the fair values largely correspond to the carrying amounts. The miscellaneous liabilities include liabilities of €6,579m (8,324m) resulting from the reinsurers' insurance contracts with non-significant risk transfer. These usually have longer periods to maturity to match the cover and run-off periods of the underlying risks. Their fair value amounted to €224m (575m). We allocate these to Level 3 of the fair value hierarchy, as their measurement is primarily based on biometric and lapse rates and historical event data.

For information on the offsetting of financial liabilities, please refer to (8) Other securities at fair value through profit or loss and insurance-related investments.

29 Liabilities from financing activities

The table shows the cash and non-cash changes in liabilities arising from financing activities between the beginning of the financial year and the balance sheet date. The cash changes are included in the consolidated cash flow statement as item III. Cash flows from financing activities.

Change in the liabilities from financing activities

	Short-term borrowings		Long-term borrowings		Lease liabilities		Liabilities from financing activities	
€m	2022	Prev. year	2022	Prev. year	2022	Prev. year	2022	Prev. year
Balance at 31 December previous year	1,016	1,022	5,348	5,320	433	402	6,797	6,743
Cash changes	-3	-2	-457	-211	-88	-90	-548	-303
Non-cash changes								
Currency changes	35	38	16	57	5	14	56	109
Changes in the fair value	0	0	0	0	0	0	0	0
Changes in consolidated group/Other	0	-41	140	182	7	107	146	249
Balance at 31 December financial year	**1,047**	**1,016**	**5,048**	**5,348**	**356**	**433**	**6,452**	**6,797**

Long-term borrowings include subordinated liabilities and bonds and notes issued.

Notes to the consolidated income statement

30 Premiums

Premiums

€m	2022	Prev. year
Total gross premiums	68,134	60,521
Gross premiums written	67,133	59,567
Change in gross unearned premiums	–742	–1,970
Gross earned premiums	**66,391**	**57,597**
Ceded premiums written	–2,942	–2,450
Change in unearned premiums – Ceded share	13	55
Earned premiums ceded	**–2,929**	**–2,396**
Net earned premiums	**63,462**	**55,202**

The total gross premiums include not only the gross premiums written but also savings premiums from unit-linked life insurance and capitalisation products.

Premiums from long-term insurance business, especially in life primary insurance, are recognised in full as earned premiums and income when they become due. Under gross premiums written, only those parts of the premium from unit-linked life business are included that are used to cover the risks and associated costs.

Of the gross premiums written from short-term insurance business, the portions attributable to periods after the end of the reporting period are posted as unearned premiums; cf. (20) Unearned premiums. Over the duration of the contracts, unearned premiums are released in accordance with the reduction in risk.

Revenue within the meaning of IFRS 15, Revenue from Contracts with Customers, essentially derives from technical engineering and inspection services, investment management services, and services in connection with the generation of electricity from renewable energy sources and with the provision of insurance-related software. The income from these services is largely recognised for the period in question. The volume of this revenue under IFRS 15 is around 1% of gross premiums written.

31 Income from technical interest

The income from technical interest is the amount earned by assumed insurance business from the mainly risk-free investment of assets covering the technical provisions. The deposits retained on ceded business are also taken into account as a basis for the technical interest. Thus the portion of investment income corresponding to the deposit interest expense is included as a component in the calculation of the technical interest and reallocated to the technical result.

Quantitative information on technical interest can be found in the segment income statement.

In terms of the assets required to cover the technical provisions, the composition of the technical interest varies from segment to segment, depending on the type of insurance business conducted and the related statutory regulations.

In the life and health reinsurance segment, the income from technical interest in life reinsurance business corresponds to the risk-free interest on our technical provisions. For deposited provisions, income from technical interest corresponds to the agreed interest rate. In health reinsurance business, the interest on long-term reinsurance contracts corresponds to the contractually agreed allocations of interest. For short-term reinsurance business, the income from technical interest is calculated on the basis of the risk-free interest on technical provisions at the relevant national interest rate.

In property-casualty reinsurance, we allow for the fact that provisions established in prior years were invested at higher interest rates than the current level of market interest rates. The income from technical interest therefore corresponds to the risk-free interest on our discounted technical provisions at the respective historical interest rate, taking into account the relevant period of insurance and currency. Short-term interest rates are applied to the difference between the discounted provisions and balance sheet provisions.

In the ERGO Life and Health Germany segment, the income from technical interest for life primary insurance companies comprises the gains and losses from unit-linked life insurance, plus the guaranteed interest rate and profit sharing on the basis of the non-technical result sources. For health primary insurance companies, the income from technical interest corresponds to the allocation of interest to the ageing reserve (actuarial interest) and the allocation to the provision for premium refunds. The latter is based on the allocation of interest to the provision for non-performance-related premium refunds, on the investment result exceeding the actuarial interest rate, and on policyholders' participation in the other non-technical result components.

In the ERGO Property-casualty Germany segment, the income from technical interest is calculated analogously to the procedure in the property-casualty reinsurance segment.

In the ERGO International segment, the income from technical interest for life primary insurance companies corresponds to the risk-free interest on the provision for future policy benefits at the relevant national interest rate, the gains and losses from unit-linked life insurance, and profit sharing where there are types of contract providing for this. The income from technical interest for property-casualty primary insurance companies is calculated analogously to the procedure in the property-casualty reinsurance segment.

The income from technical interest for health primary insurance business is based on the interest on other technical provisions at the relevant national risk-free interest rate and, where applicable, on the interest allocated to the provision for future policy benefits.

32 Expenses for claims and benefits

Expenses for claims and benefits

€m	2022	Prev. year
Gross		
Claims and benefits paid	-43,219	-37,629
Change in technical provisions		
Provision for future policy benefits	846	-1,448
Provision for outstanding claims	-6,023	-5,977
Provision for premium refunds	-980	-1,807
Other technical result	-29	-95
Gross expenses for claims and benefits	**-49,405**	**-46,957**
Ceded share		
Claims and benefits paid	1,512	1,075
Change in technical provisions		
Provision for future policy benefits	455	523
Provision for outstanding claims	486	17
Provision for premium refunds	1	-1
Other technical result	-7	-41
Expenses for claims and benefits – Ceded share	**2,448**	**1,574**
Net		
Claims and benefits paid	-41,707	-36,554
Change in technical provisions		
Provision for future policy benefits	1,301	-925
Provision for outstanding claims	-5,536	-5,960
Provision for premium refunds	-979	-1,808
Other technical result	-36	-136
Net expenses for claims and benefits	**-46,957**	**-45,383**

In (property-casualty) reinsurance, the year was impacted by natural catastrophe losses from Hurricane Ian amounting to around €1.6bn and from heavy rainfall in eastern Australia totalling €482m. Munich Re also posted losses of €475m related to the war in Ukraine in property-casualty reinsurance in 2022. In the life and health reinsurance segment, COVID-19 losses fell year on year to €344m (797m). While continuing to adhere to our conservative reserving approach, we released claims reserves for COVID-19 from previous years, which led to a positive result of €142m in property-casualty reinsurance. For ERGO, the impact of COVID-19 in the 2022 financial year was immaterial.

The change in the provision for future policy benefits (net) contains –€1,177m (973m) in unrealised gains/losses from unit-linked life insurance owing to impairment losses on the underlying assets. The change in the provision for outstanding claims includes a change of €4,082m (3,441m) in the IBNR provisions (gross), a change of €1,827m (2,441m) in the case reserve (gross), and a change of €115m (88m) in the annuity claims provision (gross). Expenses for claims and benefits include expenses for policyholders' bonuses. Of this, €485m (1,110m) is for the allocation to the provision for premium refunds on the basis of national regulations, €213m (88m) for the change in the provision for deferred premium refunds recognised in the income statement, and €55m (260m) for direct crediting. The other technical result for life primary insurance mainly includes interest on policyholders' accumulated credit.

Expenses for profit commission in reinsurance are shown under "Operating expenses", not under "Expenses for claims and benefits".

33 Operating expenses

Operating expenses

€m	2022	Prev. year
Gross		
Acquisition costs, profit commission and reinsurance commission paid	-13,787	-11,937
Administrative expenses	-3,399	-3,003
Change in deferred acquisition costs and contingent commissions, amortisation and impairment losses on acquired insurance portfolios	601	828
Gross operating expenses	**-16,585**	**-14,111**
Ceded share		
Acquisition costs, profit commission and reinsurance commission paid	839	526
Change in deferred acquisition costs and contingent commissions	-161	-90
Operating expenses – Ceded share	**678**	**437**
Net operating expenses	**-15,907**	**-13,674**

Gross operating expenses increased to €16,585m (14,111m); net operating expenses increased to €15,907m (13,674m). The combined ratio, which is calculated as the percentage ratio of the sum of net expenses for claims and benefits plus net operating expenses to net earned premiums, came to 96.2% (99.6%) in the property-casualty reinsurance segment, 90.6% (92.4%) in the ERGO Property-casualty Germany segment, and 94.3% (92.9%) in the ERGO International segment.

34 Investment result

Investment result by type of investment (before deduction of income from technical interest)

€m	2022	Prev. year
Land and buildings, including buildings on third-party land	**847**	**575**
Investments in affiliated companies	**-28**	**-27**
Investments in associates and joint ventures	**72**	**221**
Loans	**2,001**	**2,077**
Other securities available for sale		
Fixed-interest	1,939	3,384
Non-fixed-interest	2,117	1,942
Other securities at fair value through profit or loss		
Held for trading		
Fixed-interest	0	0
Non-fixed-interest	-20	7
Derivatives	-1,620	-687
Designated at fair value through profit or loss		
Fixed-interest	-158	14
Non-fixed-interest	3	29
Deposits retained on assumed reinsurance, and other investments	**447**	**276**
Expenses for the management of investments, other expenses	**-698**	**-656**
Total	**4,903**	**7,156**

The result for land and buildings includes rental income of €601m (557m). The expenses for the management of investments include running costs and expenses for repair and maintenance of property totalling €78m (75m). We earned interest income of €1,487m (1,598m) on loans. Other securities available for sale produced regular income of €3,841m (3,446m), while derivatives generated €66m (107m). Interest expenses on non-derivative investments amounted to €19m (19m), administrative expenses to €448m (417m), and other expenses to €173m (164m). The negative net balance of derivatives was chiefly attributable to interest-rate derivatives held for hedging purposes.

The €518m gain from the contribution of MR Beteiligungen 1. GmbH, Munich, to MR Beteiligungen 23. GmbH (which in future will be operating under the name of Joint HR MR Private Equity GmbH), Munich, resulted in particular from the reclassification of unrealised gains and losses that had previously been recognised outside profit or loss in “Other reserves”. The latter were realised as a result of the contribution and the associated disposal of private equity investments, and reclassified to “Other non-fixed-interest securities available for sale” in the investment result.

Write-downs of non-derivative investments

€m	2022	Prev. year
Land and buildings, including buildings on third-party land	-182	-148
Investments in affiliated companies	-13	-14
Investments in associates and joint ventures	-25	-57
Loans	-177	-41
Other securities available for sale	-2,596	-383
Other securities at fair value through profit or loss	-293	-28
Other investments	-46	-39
Total	**-3,334**	**-711**

Other securities available for sale had to be written down chiefly on account of impairment losses of €1,849m on equities attributable to developments on the equity markets. In addition, the investment result was impacted by impairment losses on Russian and Ukrainian bonds and loans, leading to write-downs of other securities available for sale totalling €717m and write-downs of loans amounting to €132m.

35 Insurance-related investment result

Insurance-related investment result

€m	2022	Prev. year
Result from investments for unit-linked life insurance contracts	-1,140	989
Result from other insurance-related investments	146	130
Total	**-994**	**1,119**

36 Other operating result

Other operating result

€m	2022	Prev. year
Other operating income	1,265	1,203
Thereof:		
Interest and similar income	346	258
Write-ups of other operating assets	24	40
Other operating expenses	-2,190	-2,106
Thereof:		
Interest and similar charges	-116	-147
Write-downs of other operating assets	-47	-66

Other operating income mainly comprises income of €678m (625m) from services rendered, interest income of €104m (58m), income of €80m (158m) from the release/reduction of provisions grouped under “Miscellaneous” and provisions for bad and doubtful debts, and income of €43m (64m) from owner-occupied property, some of which is also leased out.

Other operating expenses include expenses of €601m (537m) for services rendered and interest charges of €108m (133m), thereof €7m (8m) from leases. In addition, they mainly include other write-downs of €39m (58m), as well as other tax of €158m (132m) and expenses of €15m (30m) for owner-occupied property, some of which is also leased out.

The other operating result also includes a large share of the result from the reinsurers’ insurance contracts with non-significant risk transfer totalling €234m (169m), which almost fully derived from the life and health reinsurance segment.

37 Other non-operating result, currency result and net finance costs

Other non-operating result, currency result and net finance costs

€m	2022	Prev. year
Other non-operating result	-81	-91
Currency result	676	262
Net finance costs	-179	-205

The other non-operating result is unrelated to the conclusion, administration or settlement of insurance contracts or the administration of investments. It essentially comprises the other non-technical result of −€6m (−16m), write-downs of €51m (32m) on other intangible assets, and restructuring expenses of €25m (57m).

Net finance costs include all interest income, interest expenses and other expenses directly attributable to strategic debt. Debt has a strategic character for us if it does not have an original, direct link with our underwriting business.

Net finance costs by financing instrument

€m	2022	Prev. year
Subordinated bonds of Munich Reinsurance Company, Munich	-150	-180
Senior notes of Munich Re America Corporation, Wilmington	-25	-21
Subordinated bonds of HSB Group Inc., Dover, Delaware	-3	-2
Other	0	-1
Total	**-179**	**-205**

38 Taxes on income

This item shows the corporation tax and municipal trade earnings tax paid by the German consolidated companies (including solidarity surcharge) and the comparable taxes on earnings paid by the foreign consolidated companies in the Group. The determination of taxes on income includes the calculation of deferred taxes.

Main components of tax expenses/income

€m	2022	Prev. year
Current tax for financial year	-1,145	-1,428
Current tax for other periods	319	-64
Deferred tax resulting from the occurrence or reversal of temporary differences	201	1,050
Deferred tax resulting from the occurrence or utilisation of loss carry-forwards	-31	-286
Valuation allowances for deferred taxes/loss carry-forwards	65	183
Effects of changes in tax rates on deferred tax	11	-7
Taxes on income	**-580**	**-552**

The following table shows the reconciliation between the expected taxes on income and the tax on income actually shown. The expected tax expenses are calculated by multiplying the consolidated result before taxes on income (after "other tax") by the Group tax rate. The applicable Group tax rate amounts to 33%. This takes into account corporation tax including solidarity surcharge, and trade tax (GewSt). The municipal trade-tax multipliers range from 240% to 490%.

Reconciliation to effective tax expenses/income

€m	2022	Prev. year
Result before taxes on income (after "other tax")	3,999	3,485
Group tax rate in %	33	33
Derived taxes on income	-1,320	-1,150
Tax effect of:		
Tax rate differences	232	253
Tax-free income	354	422
Non-deductible expenses	-254	-184
Valuation allowances for deferred taxes/loss carry-forwards	65	183
Change in tax rates and tax legislation	11	-7
Tax for prior years	409	20
Trade tax adjustments	24	2
Other	-101	-91
Taxes on income shown	**-580**	**-552**

The effective tax burden is the ratio between the "Taxes on income" shown and the "Result before taxes on income (after "other tax")". In the 2022 financial year, the tax burden was 14.5% (previous year: 15.9%).

Disclosures on risks from insurance contracts and financial instruments

Munich Re's reporting is based on various legal regulations governing risks it is exposed to as a result of its business operations:

In the Notes to the financial statements, risks from insurance contracts must be reported in accordance with IFRS 4 and risks from financial instruments in accordance with IFRS 7. Further disclosures on risks are required in the risk report in the combined management report on the basis of Section 315 (2) no. 1 of the German Commercial Code (HGB) and German Accounting Standard no. 20 (DRS 20) for management reports.

Since risk reporting concerns not only accounting but also the activities of integrated risk management (IRM) at Munich Re, information on risks is provided in the risk report, in the disclosures on risks from insurance contracts and financial instruments, and in the disclosures on technical provisions and financial instruments in the Notes to the financial statements. Where necessary, we refer to the relevant information in the risk report and information on the respective items.

The disclosures in the risk report largely adopt a purely economic view. The report provides an account of the organisation of risk management and Munich Re's risk strategy, briefly outlines the main risks we are exposed to, and describes the economic risk capital calculated by means of our internal risk model. The report also contains information on specific risk complexes.

The provision – stipulated by the requirements of IFRS 4 – of quantitative data on the effects of changes in the assumptions underlying the measurement of insurance contracts and/or in the market environment is also covered by information about economic risk capital stated in the risk report.

In the Notes to the financial statements, we describe in detail uncertainties involved in measuring insurance contracts. For risks from financial instruments, IFRS 7 stipulates that the disclosures must comprise information on the remaining terms and the rating.

39 Disclosures on risks from life and health insurance business

Significant risks from life and health insurance business comprise underwriting risks, market risks and liquidity risks. These risks are described in detail in the risk report in the combined management report.

Of particular importance for the **underwriting risks** are biometric risks and lapse risks. Biometric risks mainly relate to mortality, disability, morbidity and longevity. The biometric assumptions we use for measuring insurance contracts in our portfolios are regularly reviewed on the basis of updated portfolio information. Especially in primary insurance, this includes considering country-specific reviews by supervisory authorities. We also take account of market standards when checking the adequacy of biometric actuarial assumptions and the trend assumptions included in them. In reinsurance, a lapse risk also derives from the indirect transfer of lapse risks from cedants. As a rule, both this risk and the financial risk from extraordinary termination of reinsurance contracts are largely ruled out through appropriate contract design. The lapse risk in primary insurance is allowed for by means of appropriate liquidity planning and adequate calculation of the surrender value.

Our main **market risk** exposure with regard to our technical provisions is interest-rate risk. A distinction must be made between risks of changes in interest rates on the one hand and interest-rate guarantee risks on the other. Risks of changes in interest rates would result from the discounting of the provision for future policy benefits and of parts of the provision for outstanding claims. In accordance with accounting valuation rules, the discount rate is fixed at contract commencement and will generally not be adjusted during the term of the contract. To this extent, the accounting valuation of these technical provisions does not depend directly on the level of the market interest rates. Economically, however, an interest-rate risk derives in principle from the need to earn a return on the investments covering the provision that is commensurate with the discount rate used in measuring the provision.

In reinsurance, we use the following discount rates for the provision for future policy benefits and the provision for outstanding claims:

Discount rates used for provisions – Reinsurance (gross)

€m	31.12.2022	Prev. year
Without discount rate	5,531	5,055
Discount rate ≤ 2.0%	1,814	1,535
2.0% < discount rate ≤ 3.0%	2,113	3,710
3.0% < discount rate ≤ 4.0%	5,380	3,886
4.0% < discount rate ≤ 5.0%	3,164	2,933
5.0% < discount rate ≤ 6.0%	1,644	1,554
6.0% < discount rate ≤ 7.0%	89	94
7.0% < discount rate ≤ 8.0%	485	479
Discount rate > 8.0%	250	250
Covered by deposits retained on assumed reinsurance	4,687	4,967
Total	**25,157**	**24,464**

If provisions are covered by deposits retained on assumed reinsurance, the interest is directly secured by an inflow of investment income generally guaranteed by the cedants. Consequently, for provisions for which at least the discount rate is guaranteed by the cedants, there is no interest-rate risk.

In life primary insurance, an implicit or explicit interest-rate guarantee is granted for the majority of contracts over their whole duration, based on a fixed interest rate applying at the time the contract is concluded. This exposes the insurance to an interest-guarantee risk. The discount rate used to calculate the provision for future policy benefits is identical with the guaranteed interest rate for the majority of contracts in our portfolios. An appropriate minimum return needs to be earned in the long term from the investment result (possibly also with assistance from the technical result) for the contractually guaranteed benefits. Given that the investments, as a rule, have a shorter duration than the insurance commitments, there is a reinvestment risk. As regards premiums yet to be received, the investment of these amounts involves a certain amount of risk. The higher interest rates in 2022 have a risk-reducing effect, as the higher investment and reinvestment interest rates mean improved earnings prospects. Our life primary insurers take the capital market conditions into account in their asset-liability management. They address the attendant risks by pursuing an investment strategy that is geared to the long term and also comprises derivative financial instruments.

The prolonged phase of low interest rates was recently followed by a significant recovery on the interest-rate market. We factor in the effects on our long-term investment strategy and derivative financial instruments in the context of our asset-liability management.

In long-term health primary insurance, a discount rate is also used for calculating the provision for future policy benefits. However, this rate can generally be altered by way of premium adjustment. For short-term business, there is no direct interest-rate risk.

At ERGO, the discount rates relevant for the portfolio in calculating the provision for future policy benefits and the provision for outstanding claims are as follows:

Discount rates used for provisions – ERGO (gross)

		Life		Health		Total
€m	31.12.2022	Prev. year	31.12.2022	Prev. year	31.12.2022	Prev. year
Without discount rate	4,458	4,244	1,826	1,653	6,285	5,897
Discount rate ≤ 2.0%	8,299	7,772	7,303	5,430	15,602	13,202
2.0% < discount rate ≤ 3.0%	20,956	21,154	16,033	15,706	36,989	36,859
3.0% < discount rate ≤ 4.0%	28,288	29,214	14,807	15,330	43,096	44,544
4.0% < discount rate ≤ 5.0%	718	776	1,725	2,255	2,443	3,032
Discount rate > 5.0%	0	0	0	0	0	0
Total	**62,720**	**63,160**	**41,695**	**40,374**	**104,415**	**103,534**

Besides this, in German health primary insurance, discount rates of 2–3.5% are applied for calculating the provision for premium loadings and the provision for future premium reductions, which are both part of the provision for premium refunds and total €5,990m (5,967m). These discount rates can be altered in the event of a premium adjustment.

Other market risks are of particular importance to unit-linked life insurance policies, the lump-sum option in the case of deferred annuity policies and derivatives embedded in variable annuities.

For the unit-linked life insurance contracts in our portfolio, the investments are held for the benefit of life insurance policyholders who bear the investment risk, meaning that there is no direct market risk. Appropriate product design ensures that the necessary premium portions for payment of a guaranteed minimum benefit on occurrence of death are based on the current fund assets.

The lump-sum option in the case of deferred annuity policies gives policyholders the option of having their annuity paid out in a single payment at a fixed date. As a result, there is a potential risk of an unexpectedly large number of policyholders exercising their option at an interest-rate level markedly higher than the discount rate used for the annuity calculation. But there is no direct interest-rate sensitivity or market sensitivity, since the exercise of the option by the policyholder is determined to a crucial extent by individual factors and relates to the insurance components.

Some primary insurance and reinsurance contracts contain derivative components. These are measured separately from the underlying contract and their changes in value are recognised in the insurance-related investment result. The valuation of these embedded derivatives is sensitive to share prices, exchange rates, commodity prices and interest rates, but these sensitivities are nearly fully compensated for by the fact that such derivatives are for the most part directly matched by financial derivatives for hedging purposes.

For Munich Re, there could be a **liquidity risk** if the cash outflow for insurance claims payments and the costs related to the business were to exceed the cash inflow from premiums and investments. For our mainly long-term business, we therefore analyse the expected future balance from cash inflows due to premium payments and outflows for payment of insurance claims and benefits plus costs.

At the balance sheet date, this results in the expected future technical payment balances (including variable annuities) shown in the following table according to duration bands. As only the technical payment flows are considered, inflows from investment income and investments that become free are not included in the quantifications.

Expected future technical cash flow (gross)[1]

€m	31.12.2022	Prev. year
Up to one year	-1,683	-2,587
Over one year and up to five years	-9,723	-9,037
Over five years and up to ten years	-17,688	-15,543
Over ten years and up to 20 years	-38,251	-32,302
Over 20 years	-95,212	-87,765

1 Premiums less benefits guaranteed at the balance sheet date and costs (excluding unit-linked products).

With these numerical estimates, it should be borne in mind that this forward-looking data may involve considerable uncertainty.

40 Disclosures on risks from property-casualty insurance business

Of particular importance for property-casualty insurance contracts is the estimation risk with regard to the amount of the expected claims expenditure for future claims from current insurance contracts (premium risk) and for claims already incurred (reserve risk). There is an interest-rate risk for parts of the portfolio. Liquidity risk also has to be taken into account.

The degree of exposure to **premium risks** differs according to class of business and also between primary insurance and reinsurance. On the basis of the loss ratios and combined ratios of past years shown in the following table, conclusions can be drawn about the historical volatilities in the different classes of business and about possible interdependencies. The differences in volatility are due equally to fluctuations in claims expenditure and fluctuations in the respective market-price level for the covers granted.

Premiums, loss ratios and combined ratios by class of business

	2022	2021	2020	2019	2018
Gross premiums written in €m					
Reinsurance					
Liability	6,552	5,337	4,473	3,703	3,384
Accident	417	359	306	416	372
Motor	6,595	6,135	5,268	5,291	5,367
Marine, aviation, space	2,476	2,094	1,899	1,617	1,388
Fire	7,707	6,871	5,962	5,064	4,761
Engineering	2,313	1,855	1,565	1,453	1,315
Credit and surety	1,149	946	849	787	657
Other classes of business	7,190	5,197	4,292	3,760	3,192
ERGO	7,867	7,285	6,747	6,771	6,694
Loss ratio in %					
Reinsurance					
Liability	76.5	78.4	87.6	64.8	71.3
Accident	68.2	65.3	76.8	68.0	10.4
Motor	69.6	66.7	67.8	67.6	71.4
Marine, aviation, space	84.4	54.4	55.4	80.6	40.8
Fire	69.0	67.0	63.3	73.6	69.9
Engineering	37.4	41.1	44.5	40.6	48.5
Credit and surety	29.6	32.0	69.1	20.7	46.0
Other classes of business	60.2	86.0	105.8	71.6	69.2
ERGO	58.7	59.1	59.4	58.6	58.7
Combined ratio in %					
Reinsurance					
Liability	106.1	109.8	119.3	100.5	105.7
Accident	97.7	105.2	112.8	106.9	51.0
Motor	101.5	100.9	98.4	100.3	103.3
Marine, aviation, space	113.2	84.7	86.1	115.0	75.1
Fire	93.7	91.8	87.8	99.1	98.5
Engineering	78.8	82.2	88.6	90.1	95.1
Credit and surety	62.0	66.0	106.6	63.7	89.0
Other classes of business	89.3	115.7	138.5	106.0	107.4
ERGO	92.8	92.4	93.0	93.3	95.2

In the pricing of risks assumed in the accident, fire and marine lines of business, and also in sections of engineering reinsurance and ERGO, there is a high degree of sensitivity regarding the underlying assumptions about natural catastrophes. The following table therefore shows the combined ratios for property-casualty reinsurance, including and excluding natural catastrophe losses.

Combined ratio in reinsurance for the last ten years

%	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Including natural catastrophes	96.2	99.6	105.6	100.2	99.4	114.1	95.7	89.7	92.7	92.1
Excluding natural catastrophes	88.8	87.6	101.6	90.2	92.6	92.1	90.2	88.8	89.4	87.4

Large losses involving expenditure that exceeds a certain limit are of particular relevance for the volatility of property-casualty business in reinsurance. The analysis below shows that the volatility of the individual years in this loss category is mainly attributable to the respective intensity of natural catastrophe losses. As a rule, the other accumulation risks exhibit a distinctly less volatile pattern.

Large losses in reinsurance by calendar year (net)

€m	2022	2021	2020	2019	2018
Large losses	–4,173	–4,304	–4,689	–3,124	–2,152
Thereof losses from natural catastrophes	–2,430	–3,139	–906	–2,053	–1,256
Thereof other accumulation losses	–1,742	–1,165	–3,784	–1,071	–896

Further information on risks from large and accumulation losses can be found in the combined management report in the section on business performance, and in the risk report.

The provision for outstanding claims is subject to a **reserve risk**, i.e. the risk that actual claims settlement may be less than or exceed the amount reserved.

A particular sensitivity to reserve risks exists in the case of contracts with long run-off periods. This characteristic applies especially to casualty insurance, where liabilities may manifest themselves after a considerable latency period. Particularly with regard to asbestos insurance liabilities, we cover losses from policies taken out decades ago that manifest themselves after a latency period of as long as 30–50 years. In response, we have posted provisions for claims under long-cancelled general liability policies which provided coverage according to the legal environment applicable at that time.

Provisions for asbestos and environmental claims[1]

	31.12.2022		Prev. year	
€m	Gross	Net	Gross	Net
Asbestos	1,104	952	1,163	1,003
Environ-mental	415	339	421	344

1 The previous year's figures have been adjusted to eliminate currency translation effects.

The development of our claims reserves and the corresponding run-off results are shown under (22) Provision for outstanding claims.

Economically, an **interest-rate risk** derives from the need to earn a return on the investments covering the provision that is commensurate with the discount rate used in measuring the provision. In balance sheet terms, the interest-rate risk affects only those parts of the technical provisions that are discounted and for which an inflow of investment income from deposits retained is not secured from cedants in at least the same amount. For discounting technical provisions, we use the interest rates shown in the table below.

Discounted technical provisions by discount rate (gross)

	Reinsurance		ERGO		Total	
€m	31.12.2022	Prev. year	31.12.2022	Prev. year	31.12.2022	Prev. year
Discount rate ≤ 2.0%	45	44	711	485	756	529
2.0% < discount rate ≤ 3.0%	215	154	230	249	446	404
3.0% < discount rate ≤ 4.0%	36	44	311	355	347	399
4.0% < discount rate ≤ 5.0%	786	761	20	0	807	761
Discount rate > 5.0%	0	0	0	0	0	0
Total	**1,083**	**1,003**	**1,273**	**1,089**	**2,356**	**2,093**

The major part of the discounted provisions in reinsurance is for US workers' compensation business, for which the discount rates are governed by supervisory law and are determined prospectively per accident year. The discounting of the provisions in primary insurance is also largely governed by supervisory law.

For Munich Re, **liquidity risks** could arise if the cash outflow for insurance claims payments and the costs related to the business were to exceed the cash inflow from premiums and investments. The following table shows that in the past calendar years the liquidity situation in underwriting has always been positive. Besides this, we also have extensive, sufficiently liquid investments available to fulfil our liquidity obligations.

Payment flows and liquid funds in the individual calendar years (gross)

€m	2022	2021	2020	2019	2018
Premiums received	42,263	36,068	31,361	28,857	27,130
Claims payments for financial year	-7,010	-5,727	-5,321	-5,091	-5,901
Claims payments for previous years	-14,403	-11,250	-12,007	-9,846	-8,873
Costs	-12,641	-11,031	-9,668	-9,511	-9,234
Balance	**8,209**	**8,060**	**4,366**	**4,408**	**3,122**

Other information

41 Parent

The Group parent is Münchener Rückversicherungs-Gesellschaft Aktiengesellschaft in München (Munich Reinsurance Company Joint-Stock Company in Munich), Königinstrasse 107, 80802 München.

Its registered seat is Munich, Germany (Commercial register number: HRB 42039, Registrar of Companies: Local Court [Amtsgericht] in Munich).

In addition to its function as a reinsurer, the parent also fulfils the function of holding company for the Group.

42 Related parties

Information on the remuneration of Board members and transactions with these persons can be found at www.munichre.com/board-of-management and under (45) Remuneration of the Board of Management and Supervisory Board.

Transactions between Munich Reinsurance Company and subsidiaries that are to be deemed related parties have been eliminated in consolidation and are not disclosed in the Notes. Business relations with unconsolidated subsidiaries are of subordinate importance as a whole; this also applies to business relations with associates and joint ventures.

Munich Re's company pension obligations are implemented by several external entities; these entities are deemed related parties under IAS 24. Munich Reinsurance Company has established a contractual trust agreement in the form of a two-way trust for its unfunded company pension obligations. In this regard, Münchener Rückversicherungs-Gesellschaft Pensionstreuhänder e. V. is deemed a related party under IAS 24. Contributions to it are used for defined contribution plans and defined benefit plans. The Munich Re pension scheme is also considered a related party in accordance with IAS 24. Contributions to the pension scheme are recognised as expenses for defined contribution plans. For further information on Munich Re's pension commitments, see (25) Other provisions.

For transactions of related parties with Munich Reinsurance Company shares, please refer to (17) Equity.

43 Personnel expenses

The following personnel expenses are included in the operating expenses, in the expenses for claims and benefits (for claims adjustment) and in the investment result:

Breakdown of personnel expenses

€m	2022	Prev. year
Wages and salaries	-3,383	-2,947
Social security contributions and employee assistance	-523	-490
Expenses for employees' pensions	-259	-276
Total	**-4,165**	**-3,713**

44 Incentive plans

Mid-term incentive plans

In the financial years from 2009 to 2019, Munich Reinsurance Company set up mid-term incentive plans, each with a term of three years. Senior management in Munich are eligible for participation in these cash-settled remuneration plans. The participants receive performance share units (PSUs). In the fourth year after plan commencement, participants are entitled to a bonus payment dependent on the achievement of value-based performance targets and the increase in total shareholder return (TSR).

The value-based performance targets are set in the form of an average target to be achieved over the following three years of the plan and are allocated according to responsibilities.

The basis for the full and partial allocation of the PSUs is the first plan year.

The final number of PSUs is calculated by multiplying the number of PSUs at plan commencement by the percentage achievement of the performance target at plan termination. The number of PSUs may fluctuate between 0 and 1.5 times the initially allocated number. Payment is capped if the TSR doubles. The maximum amount payable is limited to 300%.

The mid-term incentive plan at the end of the reporting period is measured indirectly at the fair value of the liabilities. The fair value takes account of the value-based performance target and total shareholder return (TSR) during the performance period. To this end, the TSR index value observable in the market is updated with the current dividend yield of Munich Re shares at the termination date and discounted with appropriate market interest rates.

In the 2022 financial year, liabilities from the mid-term incentive plans decreased by €5m (13m). The beneficiaries' entitlements amounted to €0m (5m) at the end of the reporting period.

Munich Re's Mid-Term Incentive Plan 2019

	Incentive Plan 2019
Plan commencement	1.1.2019
Plan end	31.12.2021
Fair value 2022 for one right	0.00 €
Number of rights (for 100% achievement of objectives) on 1 January 2019	0
Additions	26,651
Number of rights (for 100% achievement of objectives) on 31 December 2019	26,651
Number of rights (for 100% achievement of objectives) on 1 January 2020	26,651
Forfeited	494
Number of rights (for 100% achievement of objectives) on 31 December 2020	26,157
Number of rights (for 100% achievement of objectives) on 1 January 2021	26,157
Additions	20
Number of rights (for 100% achievement of objectives) on 31 December 2021	26,177
Number of rights (for 100% achievement of objectives) on 1 January 2022	26,177
Exercised	26,177
Number of rights (for 100% achievement of objectives) on 31 December 2022	0

Long-term incentive plans

Since 1 January 2020, the companies pertaining to the reinsurance field of business have set up long-term incentive plans, which are based on uniform principles worldwide. All long-term incentive plans offered before 1 January 2020 have since been replaced or expired on 31 December 2021. The standardised remuneration scheme behind the long-term incentive plans largely corresponds with that of the multi-year bonus of the members of the Board of Management, which is described in the remuneration report available at www.munichre.com/board-of-management. From 1 January 2023, the policy in place since 1 January 2022 concerning the multi-year bonus for members of the Board of Management will be expanded to include senior management.

45 Remuneration of the Board of Management and Supervisory Board

Remuneration of the Board of Management pursuant to IAS 24

€m	31.12.2022	Prev. year
Short-term benefits (Basic remuneration, remuneration in kind, annual bonus, one-off-payment instead of pension contribution)	20.7	19.9
Post-employment benefits (Pension contribution and service costs)	4.6	4.9
Other long-term benefits (Multi-year bonus)	11.9	8.0
Sum	**37.2**	**32.8**

The members of Munich Reinsurance Company's Board of Management thus received remuneration (short-term employee benefits and other long-term employee benefits) totalling €32.6m (28.0m); this includes compensation in the amount of €2.5m (2.4m) paid to a member of the Board by an affiliated company for services performed there. In the reporting year, total post-employment benefits amounted to €4.6m (4.9m). The total remuneration of Munich Reinsurance Company's Supervisory Board amounted to €3.2m (2.9m), the entirety of which comprised short-term employee benefits; included in this figure is €0.1m (0.1m) for membership of supervisory boards at other Group companies.

Payments to retired members of the Board of Management or their surviving dependants totalled €10.1m (11.8m).

Former members of the Board of Management did not accrue any further pension entitlements with an impact on personnel expenses. After deducting plan assets for existing pension commitments held by a separate entity (under a contractual trust agreement), there were no surplus pension provisions or provisions for comparable benefits for retired members of the Board of Management or their surviving dependants. The amount of the liability is €124.1m (155.0m).

For former members of the Supervisory Board or their surviving dependants, no pension obligations arose from Supervisory Board membership.

The members of the Supervisory Board and Board of Management did not receive any cash advances or loans in the year under review. For their service as employees of the Group, Supervisory Board members received remuneration in the amount of €1.4m (1.2m). Some Board members hold insurance policies with companies belonging to Munich Re, and have small MEAG fund holdings. There were no other significant transactions between Board members and Munich Re.

All other disclosures on the structure of the remuneration system and the remuneration report of the Board of Management and Supervisory Board are available at www.munichre.com/board-of-management and www.munichre.com/supervisory-board. Information on the share ownership of the members of the Board of Management can be found in the remuneration report and at www.munichre.com/board-of-management/shares-held.

46 Number of staff

The number of staff at year-end totalled 18,625 (18,409) in Germany and 22,764 (20,872) in other countries.

The figures include the number of staff at our consolidated subsidiaries.

Breakdown of number of staff

	31.12.2022	Prev. year
Reinsurance	15,211	13,771
ERGO	26,178	25,510
Total	**41,389**	**39,281**

47 Auditor's fees

For services rendered to the parent and consolidated subsidiaries by the Group auditor (Ernst & Young GmbH Wirtschaftsprüfungsgesellschaft), the following fees – in line with IDW RS HFA 36 – were recognised as an expense in the financial year:

Breakdown of auditor's fees

€k	2022
Audit services	–13,774
Other assurance and appraisal services	–1,431
Tax consultancy services	0
Other services	–1,200
Total	**–16,405**

The auditor's fees mainly relate to the statutory audits of the consolidated financial statements and the annual financial statements of Munich Reinsurance Company; to various audits of our subsidiaries' annual financial statements, including statutory extensions of the audit assignment (in particular, the audit of the solvency balance sheet); and to audit services agreed with the Audit Committee regarding the introduction of IFRS 9 and IFRS 17. In addition, the following were carried out: reviews of interim financial statements and project-related IT audits, and contractual reviews of service providers' internal control systems.

Other assurance and appraisal services concern statutory, contractual or voluntary audit and consulting services, including services rendered to the statutory protection fund for life insurance and authorities outside Germany, and the confirmation of environmental KPIs. Additional services included the audit of the combined non-financial statement, the issuance of a comfort letter, and the audit of the Green Bond Allocation Report.

Other services essentially related to quality assurance support in connection with the introduction of regulatory requirements based on solutions and concepts we developed.

48 Contingent liabilities, other financial commitments

Munich Re enters into contingent liabilities in connection with its normal business operations. At the end of the reporting period, the obligations from guarantees were immaterial. The obligations from legal disputes totalled €4m (22m). Other contingent liabilities amounted to €0m (43m).

Estimates and judgements are necessary for contingent liabilities where the likely impact cannot be clearly determined. This is the case, for example, with respect to contingent liabilities in legal disputes. Like the evaluation process for other provisions, the assessment is made by experts in the affected units on the basis of the best estimate. Contingent liabilities are disclosed unless the experts estimate that the possibility of an outflow of resources is remote.

ERGO companies have assumed unlimited liability for the sale of insurance products by insurance intermediaries acting exclusively on their behalf. In this respect, there is a risk of a claim being made by customers. In case of a claim, there is generally a possibility of recourse against the insurance intermediary or the latter's fidelity guarantee insurance carrier.

The application of fiscal regulations may yet be unresolved at the time of calculation of tax refund claims and tax liabilities. The calculation of tax items is based on the regulations most likely to be applied in each case. Regardless of this, the tax authorities may take a different view, which may give rise to additional tax liabilities.

In accordance with the German Insurance Supervision Act (VAG), all German life and health insurers of our Group are obliged to be members of a protection fund. For life insurers, the protection fund can levy special contributions of up to one per mille of total net technical provisions, in addition to a regular contribution of 0.2 per mille of total net technical provisions. For the health insurers, there is no pre-financing, but the fund may levy special contributions of up to two per mille of net technical provisions to fulfil its functions. This could give rise to a potential payment obligation of €169m (161m) at Group level. The functions and powers of the statutory protection fund for life insurance rest with Protektor Lebensversicherungs-AG, and those of the statutory protection fund for health insurance with Medicator AG.

Munich Re is a member of the German Nuclear Reactor Insurance Association (DKVG) and the Pharma Reinsurance Community. If another member of these pools is not able to meet their payment obligations, we may be held liable for a proportional share of their obligations. However, we consider the risk of such a liability arising to be remote.

Besides this, Munich Re has entered into various other financial obligations amounting to €1,259m (973m) for work and service contracts and €2,699m (2,650m) for investment obligations, of which €31m (0m) is from our investments in joint ventures. There were loan commitments amounting to €2,008m (2,159m) at the end of the reporting period. Many of these loan commitments, totalling €1,363m (1,231m), can be drawn down within one year; the other €406m (279m) between one and two years. These figures represent undiscounted nominal amounts. There are other financial commitments amounting to €13m (13m).

Munich Re has no other financial commitments of significance for the assessment of its financial position. No contingent liabilities have been entered into for the benefit of Board members.

49 Significant restrictions

Regulatory, legal or contractual restrictions and protective rights of non-controlling interests may restrict the Group's ability to access or use assets, and settle liabilities.

The carrying amounts of Group assets with restrictions on title can be found in the Notes to the consolidated balance sheet – Assets. The restrictions primarily result from contractual agreements, including pledged securities deposits to collateralise payment obligations from insurance business, the collateralisation of derivative transactions with securities and cash collateral or of bank liabilities with non-financial assets.

Individual national regulations require that assets held to cover insurance liabilities be managed separately. Generally there are special supervisory regulations governing access to these assets and their use.

In addition, we are subject to supervisory requirements that may restrict dividend payments or other capital distributions, loans and advance payments within the Group.

Due to supervisory requirements concerning equity, our subsidiaries Munich American Reassurance Company and Munich Reinsurance America Inc. can currently only pay dividends or transfer capital to the parent company with the approval of the competent US regulatory authority.

50 Leases

On the one hand, Munich Re is a lessee. Please see (15) Other assets and (28) Other liabilities for information on rights of use and lease liabilities.

Short-term leases with terms shorter than 12 months (and no purchase option) and leases for which the underlying asset is of low value are not recognised. Instead they are recognised through profit or loss as an expense of €2m (1m).

On the other hand, Munich Re is also a lessor. Operating leases mainly involve leased property.

Future minimum lease payments under operating leases

€m	31.12.2022	Prev. year[1]
Up to one year	360	340
Over one year and up to five years	1,100	998
Over five years	1,245	1,225
Total	**2,706**	**2,563**

1 The previous year's figures have been adjusted.

There were several finance leases for property at the end of the reporting period, which are listed in the following table:

Due dates

	31.12.2022			Prev. year		
€m	Gross investment	Interest element	Net investment	Gross investment	Interest element	Net investment
Minimum lease payments up to one year	1	0	0	1	0	0
Minimum lease payments of over one year and up to five years	2	1	1	2	1	1
Minimum lease payments of over five years	69	55	13	69	55	14
Total minimum lease payments	**71**	**56**	**15**	**72**	**56**	**15**
Unguaranteed residual values	41	29	12	41	30	11
Total	**113**	**86**	**27**	**113**	**87**	**27**

51 Events after the balance sheet date

On 18 January 2023, via its subsidiary Thaisri Insurance Public Co. Ltd. (Thaisri), Bangkok, Munich Re acquired 75.28% of the voting shares in Nam Seng Insurance Public Co. Ltd. (NSI), Bangkok, and thus obtained control over NSI. The purchase price for the shareholding was €61m and was fully paid in cash from own funds.

NSI is a property-casualty insurer in Thailand. ERGO's international growth strategy puts a focus on the highly attractive property-casualty markets in Southeast Asia. As the product portfolios of Thaisri and NSI complement each other to a significant degree, there is material cross-selling potential between both companies. This transaction puts Thaisri in the position to further expand its market presence and continue to improve its competitive position on the Thai market.

The transaction resulted in provisional goodwill of €22m. Non-controlling interests in NSI were provisionally valued at €13m at the acquisition date.

The provisional fair values of the assets and liabilities of NSI at the acquisition date were as follows: investments of €87m; cash at banks, cheques and cash in hand of €13m; receivables and other asset items of €52m; equity of €51m; and provisions and liabilities of €99m. The fair value of the receivables acquired as part of the transaction largely corresponds to the carrying amount. There were no significant bad debts at the acquisition date. No significant contingent liabilities existed at the acquisition date.

As acquisition took place in January 2023, all figures presented are estimates.

On 20 February 2023, Munich Reinsurance Company acquired 50% of the shares in Saxon Land B.V., Amsterdam, a real estate company that owns the Fen Court offices in London. The purchase price for the shares was in the mid-triple-digit million euro range. By acquiring the shares, Munich Reinsurance Company and Assecurazioni Generali S.p.A., Trieste, obtained joint control of the company.

In connection with the share buy-back programme initiated by the Board of Management of Munich Reinsurance Company in February 2022, between the reporting date and the end of February 2023 we repurchased an additional 549,319 own shares valued at €178m.

In February, Turkey and Syria were hit by severe earthquakes. As there is still a very high degree of uncertainty at this stage, precise claims forecasts are not possible at present. In consideration of the great uncertainty, Munich Re currently expects claims expenditure in the mid-triple-digit million euro range.

In January and February 2023, two major weather events (including Cyclone Gabrielle) affected New Zealand. On the basis of the information currently available, Munich Re anticipates claims expenditure in the low triple-digit-million euro range for these events.

52 Earnings per share

There were no diluting effects to be disclosed for the calculation of earnings per share either in the financial year or in the previous year. Earnings per share can potentially be diluted in future through the issue of shares or subscription rights from amounts authorised for increasing the share capital and from contingent capital.

Earnings per share

		2022	Prev. year
Consolidated result attributable to Munich Reinsurance Company equity holders	€m	3,432	2,933
Weighted average number of outstanding shares		139,364,438	140,098,931
Earnings per share	€	24.63	20.93

The number of outstanding shares decreased by 2,455,748 (0) over the course of the 2022 financial year owing to the share buy-back programme.

53 Proposal for appropriation of profit

Munich Reinsurance Company's net retained profits for 2022 according to its financial statements prepared on the basis of German GAAP accounting amounted to €1,595,694,758.80. The Board of Management will propose to shareholders at the Annual General Meeting that these net retained profits be used for payment of a dividend of €11.60 per dividend-bearing share, with the remaining amount being carried forward.

List of shareholdings as at 31 December 2022 pursuant to Section 313(2) of the German Commercial Code (HGB)

The following disclosures relate to our aggregated directly and indirectly held shareholdings (pursuant to Section 16(2) and (4) of the German Stock Corporation Act – AktG) in entities included in consolidation pursuant to Section 315e of the German Commercial Code, and in participating interests as defined in Section 271(1) of the German Commercial Code.

Company and registered seat	% share of capital
Consolidated subsidiaries	
13th & F Associates Limited Partnership, Washington, D.C.[1]	100.0000
40 Courcelles SAS, Paris	100.0000
320 Park Avenue Associates LLC, Dover, Delaware	100.0000
330 Madison Associates LLC, Dover, Delaware	100.0000
330 Madison Holdings LLC, Dover, Delaware	100.0000
1440 New York Ave. Associates LP, Dover, Delaware[1]	100.0000
Adelfa Servicios a Instalaciones Fotovoltaicas S.L., Santa Cruz de Tenerife	100.0000
AGRA Gesellschaft für landwirtschaftliche Entwicklung und Beteiligung GmbH, Berlin	100.0000
ALICE GmbH, Düsseldorf	100.0000
ALLYSCA Assistance GmbH, Munich	100.0000
American Alternative Insurance Corporation, Wilmington, Delaware	100.0000
American Digital Title Insurance Company, Brighton, Colorado	100.0000
American Family Home Insurance Company, Jacksonville, Florida	100.0000
American Modern Home Insurance Company, Amelia, Ohio	100.0000
American Modern Home Service Company, Amelia, Ohio	100.0000
American Modern Insurance Company of Florida Inc., Jacksonville, Florida	100.0000
American Modern Insurance Group Inc., Amelia, Ohio	100.0000
American Modern Lloyds Insurance Company, Dallas, Texas	100.0000
American Modern Property & Casualty Insurance Company, Amelia, Ohio	100.0000
American Modern Select Insurance Company, Amelia, Ohio	100.0000
American Southern Home Insurance Company, Jacksonville, Florida	100.0000
American Western Home Insurance Company, Oklahoma City, Oklahoma	100.0000
ATU Landbau GmbH & Co. KG, Munich	94.9000
Bagmoor Holdings Limited, London	100.0000
Bagmoor Wind Limited, London	100.0000
Bell & Clements (London) Ltd., London	100.0000
Bell & Clements (USA) Inc., Wilmington, Delaware	100.0000
Bell & Clements Inc., Herndon, Virginia	100.0000
Bell & Clements Ltd., London	100.0000
Blewett & Associates Inc., London, Ontario	75.0000
Bridgeway Insurance Company, Dover, Delaware	100.0000
CBIG – Canadian Benefits Investment & Insurance Group Inc., Vancouver, British Columbia	75.0000
CBIG Investments Inc., Vancouver, British Columbia	100.0000
Ceres Demetra GmbH, Munich	100.0000

Company and registered seat	% share of capital
Chinook Silva LLC, Wilmington, Delaware	100.0000
Consumer Loan Underlying Bond (CLUB) Certificate Issuer Trust I Series 2018-17, Wilmington, Delaware	95.0000
Consumer Loan Underlying Bond (CLUB) Certificate Issuer Trust I Series 2018-24, Wilmington, Delaware	95.0000
Consumer Loan Underlying Bond (CLUB) Certificate Issuer Trust I Series 2018-31, Wilmington, Delaware	95.0000
Consumer Loan Underlying Bond (CLUB) Certificate Issuer Trust I Series 2019-05, Wilmington, Delaware	95.0000
Consumer Loan Underlying Bond (CLUB) Certificate Issuer Trust I Series 2019-10, Wilmington, Delaware	95.0000
Consumer Loan Underlying Bond (CLUB) Certificate Issuer Trust I Series 2019-40, Wilmington, Delaware	95.0000
Consumer Loan Underlying Bond (CLUB) Certificate Issuer Trust I Series 2019-47, Wilmington, Delaware	95.0000
Corion Pty Ltd, Sydney	100.0000
Cornwall Power (Polmaugan) Limited, London	100.0000
Countryside Renewables (Forest Heath) Limited, London	100.0000
D.A.S. Jogvédelmi Biztosíto Részvénytársaság, Budapest	100.0000
D.A.S. Rechtsschutz Aktiengesellschaft, Vienna	100.0000
D.A.S. Société anonyme belge d'assurances de Protection Juridique, Brussels	100.0000
D.A.S. Towarzystwo Ubezpieczen Ochrony Prawnej S.A., Warsaw	100.0000
Dansk Demetra ApS, Frederiksberg C	100.0000
DAS Holding N.V., Amsterdam	51.0000
DAS Law Limited, Bristol	100.0000
DAS Legal Expenses Insurance Co., Ltd., Seoul	100.0000
DAS Legal Expenses Insurance Company Limited, Bristol	100.0000
DAS Legal Services B.V., Amsterdam	100.0000
DAS Nederlandse Rechtsbijstand Verzekeringmaatschappij N.V., Amsterdam	100.0000
DAS Services Limited, Bristol	100.0000
DAS UK Holdings Limited, Bristol	100.0000
Digital Advantage Insurance Company, Warwick, Rhode Island	100.0000
DKV Belgium S.A., Brussels	100.0000
DKV Deutsche Krankenversicherung Aktiengesellschaft, Cologne	100.0000
DKV Pflegedienste & Residenzen GmbH, Cologne	100.0000
DKV Seguros y Reaseguros S.A. Española, Saragossa	100.0000
DMI Disability Management Institute Inc., Vancouver, British Columbia	100.0000
DWS Concept SICAV (Subfonds Institutional Fixed Income, Inhaber-Anteile I4D), Luxembourg	100.0000
DWS Concept SICAV (Subfonds Institutional Fixed Income, Inhaber-Anteile I6D o.N.), Luxembourg	100.0000
DWS Concept SICAV (Subfonds Institutional Fixed Income, Inhaber-Anteile I7D o.N.), Luxembourg	100.0000

Company and registered seat	% share of capital
DWS Concept SICAV (Subfonds Institutional Fixed Income, Inhaber-Anteile I8D o.N.), Luxembourg	100.0000
E&S Claims Management Inc., Herndon, Virginia	100.0000
EIG Co., Wilmington, Delaware	100.0000
ERGO Austria International AG, Vienna	100.0000
ERGO Beratung und Vertrieb AG, Düsseldorf	100.0000
ERGO Danismanlik A.S., Istanbul	100.0000
ERGO Deutschland AG, Düsseldorf	100.0000
ERGO Digital Ventures AG, Düsseldorf	100.0000
ERGO Direkt AG, Fürth	100.0000
ERGO DIREKT Versicherung AG, Fürth	100.0000
ERGO Elfte Beteiligungsgesellschaft mbH, Düsseldorf	100.0000
ERGO Fund I LP, Dover, Delaware[1]	100.0000
ERGO Generales Seguros y Reaseguros S.A., Madrid	100.0000
ERGO Group AG, Düsseldorf	100.0000
ERGO Grundstücksverwaltung GbR, Düsseldorf[1]	100.0000
ERGO Insurance Company Single Member S.A., Athens	100.0000
ERGO Insurance N.V., Brussels	100.0000
ERGO Insurance Pte. Ltd., Singapore	100.0000
ERGO Insurance SE, Tallinn	100.0000
ERGO International Aktiengesellschaft, Düsseldorf	100.0000
ERGO International Services GmbH, Düsseldorf	100.0000
ERGO Invest SIA, Riga	100.0000
ERGO Krankenversicherung AG, Fürth	100.0000
ERGO Lebensversicherung Aktiengesellschaft, Hamburg	100.0000
ERGO Life Insurance SE, Vilnius	100.0000
ERGO Life S.A., Grevenmacher	100.0000
ERGO Neunte Beteiligungsgesellschaft mbH, Düsseldorf	100.0000
ERGO Pensionsfonds Aktiengesellschaft, Düsseldorf	100.0000
ERGO Pensionskasse AG, Düsseldorf	100.0000
ERGO Private Capital Dritte GmbH & Co. KG, Düsseldorf	100.0000
ERGO Private Capital ERGO Leben GmbH, Düsseldorf	100.0000
ERGO Private Capital Gesundheit GmbH, Düsseldorf	100.0000
ERGO Private Capital Komposit GmbH & Co. KG, Düsseldorf	100.0000
ERGO Private Capital Pensionskasse GmbH, Düsseldorf	100.0000
ERGO Private Capital Victoria Leben GmbH, Düsseldorf	100.0000
ERGO Private Capital Vierte GmbH & Co. KG, Düsseldorf	100.0000
ERGO Private Capital Vorsorge GmbH, Düsseldorf	100.0000
ERGO Private Capital Zweite GmbH & Co. KG, Düsseldorf	100.0000
ERGO Reiseversicherung AG, Munich	100.0000
ERGO Sechzehnte Beteiligungs-AG, Munich	100.0000
ERGO Technology & Services Management AG, Düsseldorf	100.0000
ERGO Technology & Services S.A., Gdańsk	100.0000
ERGO Versicherung Aktiengesellschaft, Düsseldorf	100.0000
ERGO Versicherung Aktiengesellschaft, Vienna	100.0000
ERGO Vida Seguros y Reaseguros S.A., Saragossa	100.0000
ERGO Vorsorge Lebensversicherung AG, Düsseldorf	100.0000
ERV Evropská pojišťovna, a.s., Prague	100.0000
Euro-Center Holding SE, Prague	83.3333
Europaeiske Rejseforsikring A/S, Copenhagen	100.0000
Faunus Silva LLC, Wilmington, Delaware	100.0000
Flexitel Telefonservice GmbH, Berlin	100.0000
Forst Ebnath AG, Ebnath	100.0000
FOTOUNO S.r.l., Brixen	100.0000
FOTOWATIO ITALIA GALATINA S.r.l., Brixen	100.0000
FREE MOUNTAIN SYSTEMS S.L., Madrid	100.0000
FS Louisiana I LLC, Wilmington, Delaware	100.0000
FS Louisiana II LLC, Wilmington, Delaware	100.0000
FS San Augustine LLC, Wilmington, Delaware	100.0000

Company and registered seat	% share of capital
Fundo Invest Exclusivo referenciado di Munich Re Brasil, São Paulo[4]	99.7900
FW Żary Sp.z.o.o., Warsaw	100.0000
Gaucheret S.A., Ixelles	100.0000
GHGH Holdings Inc., Vancouver, British Columbia	100.0000
Global Standards LLC, Dover, Delaware	100.0000
Globality S.A., Munsbach	100.0000
Great Lakes Insurance SE, Munich	100.0000
Great Lakes Insurance UK Limited, London	100.0000
GroupHEALTH Global Benefit Systems Inc., Vancouver, British Columbia	100.0000
GroupHealth Northern Partners Inc., Vancouver, British Columbia	100.0000
GroupSimple Solutions Inc., Vancouver, British Columbia	100.0000
GroupSource GP Inc., Vancouver, British Columbia	100.0000
GroupSource Limited Partnership, Calgary, Alberta[1]	100.0000
Groves, John & Westrup Limited, Liverpool	100.0000
Habiriscos – Investimentos Imobiliários, S.A., Lisbon	100.0000
Hartford Steam Boiler (M) SDN BHD, Kuala Lumpur	100.0000
Hartford Steam Boiler (Singapore) Pte. Ltd., Singapore	100.0000
Hartford Steam Boiler International GmbH, Rheine	100.0000
Hartford Steam Boiler Ireland Limited, Dublin	100.0000
HMV GFKL Beteiligungs GmbH, Düsseldorf	100.0000
Houten Property B.V., Amsterdam	100.0000
HSB Brasil Servicos de Engenharia e Inspecao Ltda, São Paulo	100.0000
HSB Engineering Finance Corporation, Dover, Delaware	100.0000
HSB Engineering Insurance Limited, Manchester	100.0000
HSB Engineering Insurance Services Limited, London	100.0000
HSB Fund I LP, Dover, Delaware[1]	100.0000
HSB Group Inc., Dover, Delaware	100.0000
HSB International (India) Private Limited, Vadodara	100.0000
HSB Japan K.K., Tokyo	100.0000
HSB Secure Services Inc., Hartford, Connecticut	100.0000
HSB Solomon Associates Canada Ltd., Saint John, New Brunswick	100.0000
HSB Solomon Associates LLC, Dover, Delaware	100.0000
HSB Specialty Insurance Company, Hartford, Connecticut	100.0000
HSB Technical Consulting & Service (Shanghai) Co. Ltd., Shanghai	100.0000
Ibero Property Portugal – Investimentos Imobiliários S.A., Lisbon	100.0000
Ibero Property Trust S.A., Madrid	100.0000
IDEENKAPITAL Financial Engineering GmbH i. L., Düsseldorf	100.0000
IDEENKAPITAL Financial Service GmbH i. L., Düsseldorf	100.0000
IDEENKAPITAL GmbH, Düsseldorf	100.0000
IDEENKAPITAL Media Finance GmbH i. L., Düsseldorf	100.0000
IDEENKAPITAL Metropolen Europa GmbH & Co. KG, Düsseldorf	72.3477
iii-Fonds VICTORIA Lebensversicherung, Munich[4]	100.0000
IK Einkauf Objekt Eins GmbH & Co. KG, Düsseldorf	100.0000
IK Einkauf Objektmanagement GmbH, Düsseldorf	100.0000
IK Einkaufsmärkte Deutschland GmbH & Co. KG, Düsseldorf	52.0867
IK Premium Fonds GmbH & Co. KG, Düsseldorf	100.0000
IKFE Properties I AG, Zurich	64.8373
Imofloresmira – Investimentos Imobiliários S.A., Lisbon	100.0000
ITERGO Informationstechnologie GmbH, Düsseldorf	100.0000
ITERGO Service GmbH, Düsseldorf	100.0000

Company and registered seat	% share of capital
K & P Pflegezentrum Uelzen IMMAC Renditefonds GmbH & Co. KG, Düsseldorf	85.5944
KA Köln.Assekuranz Agentur GmbH, Cologne	100.0000
KS SPV 23 Limited, London	100.0000
LEGIAL AG, Munich	100.0000
Lietuva Demetra GmbH, Munich	100.0000
Lloyds Modern Corporation, Dallas, Texas	100.0000
Longial GmbH, Düsseldorf	100.0000
Lynt Farm Solar Limited, London	100.0000
MAGAZ FOTOVOLTAICA S.L.U., Alcobendas	100.0000
Manion Wilkins & Associates Ltd., Toronto, Ontario	64.7406
Marina Sp.z.o.o., Sopot	100.0000
MD Insurance Services Limited, Birkenhead	100.0000
MD Remedial Contractors Limited, Birkenhead	100.0000
MD Warranty Inspection Services Limited, Birkenhead	100.0000
MD Warranty Support Services Limited, Birkenhead	100.0000
MEAG Ambition, Munich[4]	100.0000
MEAG Anglo Celtic Fund, Munich[4]	100.0000
MEAG ATLAS, Munich[4]	100.0000
MEAG Benedict, Munich[4]	100.0000
MEAG Cash Management GmbH, Munich	100.0000
MEAG EDK Quantum, Munich[4]	100.0000
MEAG EDL CurryGov, Munich[4]	100.0000
MEAG EDS AGIL, Munich[4]	100.0000
MEAG ESUS 1, Munich[4]	100.0000
MEAG EUR Global 1, Munich[4]	100.0000
MEAG Euro 1, Munich[4]	100.0000
MEAG Euro 2, Munich[4]	100.0000
MEAG EURO-FONDS, Munich[4]	100.0000
MEAG European Prime Opportunities, Munich[4]	56.7903
MEAG Eurostar, Munich[4]	100.0000
MEAG EURO-Yield, Munich[4]	100.0000
MEAG FlexConcept – Basis, Luxembourg[4]	100.0000
MEAG FlexConcept – Eurobond, Luxembourg[4]	100.0000
MEAG FlexConcept – Wachstum, Luxembourg[4]	100.0000
MEAG GBP Global STAR, Munich[4]	100.0000
MEAG German Prime Opportunities (GPO), Munich[4]	100.0000
MEAG HBG 1, Munich[4]	100.0000
MEAG HM Sach Rent 1, Munich[4]	100.0000
MEAG HMR 1, Munich[4]	100.0000
MEAG HMR 2, Munich[4]	100.0000
MEAG Hyperion Fund, Munich[4]	100.0000
MEAG IREN, Munich[4]	100.0000
MEAG Kapital 2, Munich[4]	100.0000
MEAG Kapital 5, Munich[4]	100.0000
MEAG Kubus 1, Munich[4]	100.0000
MEAG Lambda EUR EM Local, Grünwald[4]	100.0000
MEAG Lambda EUR, Grünwald[4]	100.0000
MEAG Lambda GBP, Grünwald[4]	100.0000
MEAG Lambda USD, Grünwald[4]	100.0000
MEAG Multi Life, Munich[4]	100.0000
MEAG Multi Sach 1, Munich[4]	100.0000
MEAG MUNICH ERGO AssetManagement GmbH, Munich	100.0000
MEAG MUNICH ERGO Kapitalanlagegesellschaft mbH, Munich	100.0000
MEAG Munich Re Placement, Grünwald[4]	100.0000
MEAG New York Corporation, Dover, Delaware	100.0000
MEAG PEGASUS, Munich[4]	100.0000
MEAG Pension Invest, Munich[4]	100.0000
MEAG Pensionskasse Nord, Munich[4]	100.0000
MEAG Pensionskasse West, Munich[4]	100.0000
MEAG PREMIUM, Munich[4]	100.0000
MEAG Prof III Beteiligungsgesellschaft mbH, Munich	100.0000

Company and registered seat	% share of capital
MEAG Property Fund I, Munich[4]	100.0000
MEAG Property Fund III, Munich[4]	100.0000
MEAG RenditePlus, Munich[4]	100.0000
MEAG REVO, Munich[4]	100.0000
MEAG US Fonds, Munich[4]	100.0000
MEAG Venus, Munich[4]	100.0000
MEAG Vidas Rent 3, Munich[4]	100.0000
MEAG VISION, Munich[4]	100.0000
MEAG VLA, Munich[4]	100.0000
MedNet Holding GmbH, Munich	100.0000
MedVirginia Inc., Dover, Delaware	100.0000
Merkur Grundstücks- und Beteiligungs-GmbH, Düsseldorf	100.0000
Meshify Inc., Dover, Delaware	100.0000
Midland-Guardian Co., Amelia, Ohio	100.0000
Midwest Enterprises Inc., Tallahassee, Florida	100.0000
MR Bazos LP, Dover, Delaware[1]	100.0000
MR Beteiligungen 2. EUR AG & Co. KG, Grünwald[2]	100.0000
MR Beteiligungen 2. GmbH, Munich[3]	100.0000
MR Beteiligungen 3. EUR AG & Co. KG, Grünwald[2]	100.0000
MR Beteiligungen 18. GmbH & Co. 2. Real Estate KG, Grünwald[2]	100.0000
MR Beteiligungen 18. GmbH & Co. 3. Real Estate KG, Grünwald[2]	100.0000
MR Beteiligungen 18. GmbH & Co. 4. Real Estate KG, Grünwald[2]	100.0000
MR Beteiligungen 18. GmbH & Co. Immobilien KG, Grünwald[2]	100.0000
MR Beteiligungen 18. GmbH & Co. Real Estate KG, Grünwald[2]	100.0000
MR Beteiligungen 19. GmbH, Munich	100.0000
MR Beteiligungen EUR AG & Co. KG, Grünwald[2]	100.0000
MR Beteiligungen GBP AG & Co. KG, Grünwald[2]	100.0000
MR Beteiligungen UK AG & Co. KG, Grünwald[2]	100.0000
MR Beteiligungen USD AG & Co. KG, Grünwald[2]	100.0000
MR Debt Finance GmbH, Grünwald	100.0000
MR Electra LP, Dover, Delaware[1]	100.0000
MR ERGO Beteiligungen GmbH, Grünwald	100.0000
MR Falcon LP, Dover, Delaware[1]	100.0000
MR Gotham LP, Dover, Delaware[1]	100.0000
MR Hunu LP, Dover, Delaware[1]	100.0000
MR Infrastructure Inc., Dover, Delaware	100.0000
MR Infrastructure Investment GmbH, Munich[3]	100.0000
MR Investment Inc., Dover, Delaware	100.0000
MR Jordan LP, Dover, Delaware[1]	100.0000
MR McQueen LP, Dover, Delaware[1]	100.0000
MR Olivia LP, Dover, Delaware[1]	100.0000
MR RENT UK Investment Limited, London	100.0000
MRSG UK Services Limited, London	100.0000
Munich American Reassurance Company, Norcross, Georgia	100.0000
Munich Health Daman Holding Ltd., Abu Dhabi	51.0000
Munich Holdings Ltd., Toronto, Ontario	100.0000
Munich Holdings of Australasia Pty Ltd, Sydney	100.0000
Munich Life Holding Corporation, Dover, Delaware	100.0000
Munich Life Management Corporation Limited, Toronto, Ontario	100.0000
Munich Management Pte. Ltd., Singapore	100.0000
Munich Re America Corporation, Dover, Delaware	100.0000
Munich Re America Services Inc., Wilmington, Delaware	100.0000
Munich Re Automation Solutions Limited, Dublin	100.0000
Munich Re Capital Limited, London	100.0000
Munich Re CVC Investment Corp., Dover, Delaware	100.0000
Munich Re Digital Partners Limited, London	100.0000

Company and registered seat	% share of capital
Munich Re Digital Partners US Holding Corporation, Dover, Delaware	100.0000
Munich Re do Brasil Resseguradora SA, São Paulo	100.0000
Munich Re Energy Transition Finance Inc., Dover, Delaware	100.0000
Munich Re Fund I LP, Dover, Delaware[1]	100.0000
Munich Re Fund II LP, Dover, Delaware[1]	100.0000
Munich Re Innovation Systems Inc., Toronto, Ontario	100.0000
Munich Re Life Insurance Company of Vermont, Burlington, Vermont	100.0000
Munich Re New Ventures Inc., Toronto, Ontario	100.0000
Munich Re of Bermuda Ltd., Hamilton, Bermuda	100.0000
Munich Re of Malta Holding Limited, Ta' Xbiex	100.0000
Munich Re of Malta p.l.c., Ta' Xbiex	100.0000
Munich Re PCC Limited, Ta' Xbiex	100.0000
Munich Re Specialty Group Insurance Services Inc., Boston, Massachusetts	100.0000
Munich Re Specialty Group Ltd., London	100.0000
Munich Re Specialty Group N.A. Inc., Wilmington, Delaware	100.0000
Munich Re Specialty Insurance (UK) Limited, Manchester	100.0000
Munich Re Syndicate Labuan Limited, Labuan	100.0000
Munich Re Syndicate Limited, London	100.0000
Munich Re Syndicate Singapore Ltd., Singapore	100.0000
Munich Re Trading LLC, Dover, Delaware	100.0000
Munich Re UK Services Limited, London	100.0000
Munich Re US Life Corporation, Norcross, Georgia	100.0000
Munich Re Ventures Inc., Dover, Delaware	100.0000
Munich Re Ventures LLC, Dover, Delaware	100.0000
Munich Re Weather & Commodity Risk Holding Inc., Dover, Delaware	100.0000
Munich Reinsurance America Inc., Wilmington, Delaware	100.0000
Munich Reinsurance Company of Africa Ltd, Johannesburg	100.0000
Munich Reinsurance Company of Australasia Limited, Sydney	100.0000
Munich Reinsurance Company of Canada, Toronto, Ontario	100.0000
Munich-American Holding Corporation, Wilmington, Delaware	100.0000
MunichFinancialGroup GmbH, Munich	100.0000
Munichre Service Limited, Hong Kong	100.0000
New Reinsurance Company Ltd., Zurich	100.0000
nexible Versicherung AG, Nuremberg	100.0000
OIK Mediclin, Wiesbaden[4]	70.7073
Otway Silva Pty Limited, Melbourne	100.0000
Pan Estates LLC, Wilmington, Delaware	100.0000
PARACHUTE DIGITAL SOLUTIONS HOLDINGS INC., Toronto, Ontario	100.0000
Parachute Digital Solutions Inc., Wilmington, Delaware	100.0000
Parachute Solutions Numériques Inc., Toronto, Ontario	100.0000
Pegasos Holding GmbH, Munich	100.0000
Picus Silva Inc., Wilmington, Delaware	100.0000
Poincaré N.V., Brussels	100.0000
Ponga Silva Limited, Rotorua	100.0000
Prosper Pass-Thru Trust I Series 2018-1, Wilmington, Delaware	95.0000
Prosper Pass-Thru Trust I Series 2018-2, Wilmington, Delaware	95.0000
Prosper Pass-Thru Trust I Series 2019-01, Wilmington, Delaware	95.0000
Prosper Pass-Thru Trust I Series 2019-02, Wilmington, Delaware	95.0000

Company and registered seat	% share of capital
Prosper Pass-Thru Trust I Series 2019-03, Wilmington, Delaware	95.0000
Prosper Pass-Thru Trust I Series 2019-04, Wilmington, Delaware	95.0000
Prosper Pass-Thru Trust I Series 2019-05, Wilmington, Delaware	95.0000
Prosper Pass-Thru Trust I Series 2019-06, Wilmington, Delaware	95.0000
Prosper Pass-Thru Trust I Series 2020-01, Wilmington, Delaware	95.0000
Prosper Pass-Thru Trust I Series 2020-02, Wilmington, Delaware	95.0000
Prosper Pass-Thru Trust I Series 2021-01, Wilmington, Delaware	95.0000
Prosper Pass-Thru Trust I Series 2021-02, Wilmington, Delaware	95.0000
Prosper Pass-Thru Trust I Series 2021-03, Wilmington, Delaware	95.0000
Prosper Pass-Thru Trust I Series 2021-04, Wilmington, Delaware	95.0000
Prosper Pass-Thru Trust I Series 2021-05, Wilmington, Delaware	95.0000
Prosper Pass-Thru Trust I Series 2022-01, Wilmington, Delaware	95.0000
Prosper Pass-Thru Trust I Series 2022-02, Wilmington, Delaware	95.0000
Prosper Pass-Thru Trust I Series 2022-03, Wilmington, Delaware	95.0000
Prosper Pass-Thru Trust I Series 2022-04, Wilmington, Delaware	95.0000
Prosper Pass-Thru Trust I Series 2022-05, Wilmington, Delaware	95.0000
Prosper Pass-Thru Trust I Series 2022-06, Wilmington, Delaware	95.0000
Prosper Pass-Thru Trust I Series 2022-07, Wilmington, Delaware	95.0000
Prosper Pass-Thru Trust I Series 2022-08, Wilmington, Delaware	95.0000
Prosper Pass-Thru Trust I Series 2022-09, Wilmington, Delaware	95.0000
PS Louisiana I LLC, Wilmington, Delaware	100.0000
PS Louisiana II LLC, Wilmington, Delaware	100.0000
Raccoon Silva LLC, Camden, Delaware	100.0000
Relayr GmbH, Pullach i. Isartal	100.0000
Relayr Inc., Dover, Delaware	100.0000
Relayr Limited, Watford	100.0000
Relayr Sp. Z o.o., Katowice	100.0000
Renaissance Hotel Realbesitz GmbH, Vienna	60.0000
Roanoke Insurance Group Canada Inc., Toronto, Ontario	100.0000
Roanoke Insurance Group Inc., Schaumburg, Illinois	100.0000
Roanoke International Brokers (MENA) Limited, Dubai	100.0000
Roanoke International Brokers Limited, London	100.0000
Scout Moor Group Limited, London	100.0000
Scout Moor Holdings (No. 1) Limited, London	100.0000
Scout Moor Holdings (No. 2) Limited, London	100.0000
Scout Moor Wind Farm Limited, London	100.0000
Silvanus Vermögensverwaltungsgesellschaft mbH, Munich[3]	100.0000
Solarpark Fusion 3 GmbH, Düsseldorf	100.0000
Solomon Associates Limited, Farnborough	100.0000
Sopockie Towarzystwo Ubezpieczen Ergo Hestia Spolka Akcyjna, Sopot	100.0000
Sopockie Towarzystwo Ubezpieczen na Zycie Ergo Hestia Spolka Akcyjna, Sopot	100.0000
Specialty Insurance Services Corporation, Amelia, Ohio	100.0000

Company and registered seat	% share of capital
Strawinskyhuis B.V., Amsterdam	100.0000
Sun Energy & Partners S.r.l., Brixen	100.0000
Tellus Demetra LLC, Wilmington, Delaware	100.0000
Temple Insurance Company, Toronto, Ontario	100.0000
Thaisri Insurance Public Co. Ltd., Bangkok	75.0000
The Atlas Insurance Agency Inc., Amelia, Ohio	100.0000
The Boiler Inspection and Insurance Company of Canada, Toronto, Ontario	100.0000
The Hartford Steam Boiler Inspection and Insurance Company of Connecticut, Hartford, Connecticut	100.0000
The Hartford Steam Boiler Inspection and Insurance Company, Hartford, Connecticut	100.0000
The Midland Company, Amelia, Ohio	100.0000
The Polytechnic Club Inc., Hartford, Connecticut	100.0000
The Princeton Excess and Surplus Lines Insurance Company, Wilmington, Delaware	100.0000
THEC 2019 Zrt. "v.a.", Budapest	100.0000
Tir Mostyn and Foel Goch Limited, London	100.0000
UAB Agra Aurata, Vilnius	100.0000
UAB Agra Corporation, Vilnius	100.0000
UAB Agra Optima, Vilnius	100.0000
UAB Agrofondas, Vilnius	100.0000
UAB Agrolaukai, Vilnius	100.0000
UAB Agrora, Vilnius	100.0000
UAB Agrovalda, Vilnius	100.0000
UAB Agrovesta, Vilnius	100.0000
UAB G.Q.F., Vilnius	100.0000
UAB Lila Holdingas, Vilnius	100.0000
UAB Sietuve, Vilnius	100.0000
UAB Terra Culta, Vilnius	100.0000
UAB Ukelis, Vilnius	100.0000
UAB Vasaros Brizas, Vilnius	100.0000
UAB VL Investment Vilnius 1, Vilnius	100.0000
UAB VL Investment Vilnius 2, Vilnius	100.0000
UAB VL Investment Vilnius 3, Vilnius	100.0000
UAB VL Investment Vilnius 4, Vilnius	100.0000
UAB VL Investment Vilnius 5, Vilnius	100.0000
UAB VL Investment Vilnius 6, Vilnius	100.0000
UAB VL Investment Vilnius 7, Vilnius	100.0000
UAB VL Investment Vilnius 8, Vilnius	100.0000
UAB VL Investment Vilnius 9, Vilnius	100.0000
UAB VL Investment Vilnius 10, Vilnius	100.0000
UAB VL Investment Vilnius, Vilnius	100.0000
UK Wind Holdings Ltd., London	100.0000
Unión Médica La Fuencisla S.A., Compañía de Seguros, Saragossa	100.0000
VHDK Beteiligungsgesellschaft mbH, Düsseldorf	100.0000
VICTORIA Italy Property GmbH, Düsseldorf	100.0000
Victoria Lebensversicherung Aktiengesellschaft, Düsseldorf	100.0000
Victoria US Property Investment GmbH, Düsseldorf	100.0000
VICTORIA Vierte Beteiligungsgesellschaft mbH, Düsseldorf	100.0000
Victoria Vierter Bauabschnitt GmbH & Co. KG, Düsseldorf	100.0000
Vorsorge Service GmbH, Düsseldorf	100.0000
welivit GmbH, Düsseldorf	100.0000
welivit Solarfonds GmbH & Co. KG, Düsseldorf	100.0000
welivit Solarfonds S.a.s. di welivit Solar Italia S.r.l., Bolzano	100.0000
WFB Stockholm Management AB, Stockholm	100.0000
Wind Farm Jenasen AB, Hässleholm	100.0000
Wind Farms Götaland Svealand AB, Hässleholm	100.0000
Windpark MR-N GmbH, Bremen[3]	100.0000

Company and registered seat	% share of capital
wse Solarpark Spanien 1 GmbH & Co. KG, Düsseldorf	75.1243
Unconsolidated subsidiaries	
Aleama 150015 S.L., Valencia	100.0000
ANOVA GmbH, Rostock	100.0000
apinity GmbH, Munich	100.0000
Arridabra 130013 S.L., Valencia	100.0000
ARTES Assekuranzservice GmbH, Düsseldorf	100.0000
Badozoc 1001 S.L., Valencia	100.0000
Baqueda 7007 S.L., Valencia	100.0000
Benefit Innovations Inc., Vancouver, British Columbia	100.0000
Benelogix Benefits Inc., Vancouver, British Columbia[4]	50.0000
Bobasbe 6006 S.L., Valencia	100.0000
Botedazo 8008 S.L., Valencia	100.0000
Callopio 5005 S.L., Valencia	100.0000
Camcichu 9009 S.L., Valencia	100.0000
Caracuel Solar Catorce S.L., Valencia	100.0000
Caracuel Solar Cinco S.L., Valencia	100.0000
Caracuel Solar Cuatro S.L., Valencia	100.0000
Caracuel Solar Dieciocho S.L., Valencia	100.0000
Caracuel Solar Dieciseis S.L., Valencia	100.0000
Caracuel Solar Diecisiete S.L., Valencia	100.0000
Caracuel Solar Diez S.L., Valencia	100.0000
Caracuel Solar Doce S.L., Valencia	100.0000
Caracuel Solar Dos S.L., Valencia	100.0000
Caracuel Solar Nueve S.L., Valencia	100.0000
Caracuel Solar Ocho S.L., Valencia	100.0000
Caracuel Solar Once S.L., Valencia	100.0000
Caracuel Solar Quince S.L., Valencia	100.0000
Caracuel Solar Seis S.L., Valencia	100.0000
Caracuel Solar Siete S.L., Valencia	100.0000
Caracuel Solar Trece S.L., Valencia	100.0000
Caracuel Solar Tres S.L., Valencia	100.0000
Caracuel Solar Uno S.L., Valencia	100.0000
Care4Business Versicherungsdienst GmbH, Vienna	100.0000
Centrum Pomocy Osobom Poszkodowanym Sp.z.o.o., Gdańsk	100.0000
cIQ – Risk Quantification GmbH, Munich	100.0000
Cominia Aktuarielle Services GmbH, Hamburg	100.0000
Comino Beteiligungen GmbH, Grünwald	100.0000
Copper Leaf Research, Eaton Rapids, Michigan	100.0000
Cotatrillo 100010 S.L., Valencia	100.0000
DEAX Õigusbüroo OÜ, Tallinn	100.0000
DKV Erste Beteiligungsgesellschaft mbH i. L., Cologne	100.0000
DKV Servicios S.A., Saragossa	100.0000
DKV-Residenz am Tibusplatz gGmbH, Münster	100.0000
DKV-Residenz in der Contrescarpe GmbH, Bremen	100.0000
DYRISK GmbH, Munich	100.0000
ERGO (China) Management Company Limited, Beijing	100.0000
ERGO Fund Golden Aging, Brussels[4]	100.0000
ERGO Gourmet GmbH, Düsseldorf	100.0000
ERGO Infrastructure Investment Gesundheit GmbH, Düsseldorf	100.0000
ERGO Infrastructure Investment Komposit GmbH, Düsseldorf	100.0000
ERGO Mobility Solutions GmbH, Düsseldorf	100.0000
ERGO Private Capital ERGO Direkt GmbH & Co. KG, Düsseldorf	100.0000
ERGO Private Capital ERGO Kranken GmbH, Düsseldorf	100.0000
ERGO Private Capital GmbH, Düsseldorf	100.0000
ERGO Rechtsschutz Leistungs-GmbH, Munich	100.0000
ERGO Technology & Services Private Limited, Mumbai	100.0000
ERGO Travel Insurance Services Ltd., London	100.0000
ERGO UK SPECIALTY LIMITED, London	100.0000

Company and registered seat	% share of capital
ERGO Versicherungs- und Finanzierungs-Vermittlung GmbH, Hamburg	100.0000
ERGO Vorsorgemanagement GmbH, Vienna	100.0000
ERGO Zehnte Beteiligungsgesellschaft mbH, Düsseldorf	100.0000
ERGO Zwölfte Beteiligungsgesellschaft mbH, Munich	100.0000
ERGO-FESCO Broker Company Limited, Beijing	66.0000
Etics ITP, s.r.o., Prague	100.0000
Etoblete 160016 S.L., Valencia	100.0000
EUROCENTER S.A., Palma de Mallorca	100.0000
Euro-Center (Cyprus) Ltd., Larnaca	100.0000
Euro-Center (Thailand) Co., Ltd., Bangkok	100.0000
Euro-Center Cape Town (Pty) Ltd, Cape Town	100.0000
Euro-Center ERGO Consulting Ltd., Beijing	100.0000
Euro-Center Holding North Asia (HK) Pte. Ltd., Hong Kong	100.0000
Euro-Center Ltda., São Paulo	100.0000
Euro-Center Prague, s.r.o., Prague	100.0000
Euro-Center Sydney Pty Ltd., Sydney	100.0000
Euro-Center USA, Inc., Plantation, Florida	100.0000
EURO-CENTER YEREL YARDIM HIZMETLERI Ltd. Şti., Istanbul	100.0000
European Assistance Holding GmbH i. L., Munich	100.0000
Eurosos Assistance S.A., Athens	75.0000
Evaluación Médica TUW S.L., Barcelona	100.0000
Gamaponti 140014 S.L., Valencia	100.0000
GBG Vogelsanger Straße GmbH, Cologne	94.7826
Gebäude Service Gesellschaft Überseering 35 mbH, Hamburg	100.0000
goDentis – Gesellschaft für Innovation in der Zahnheilkunde mbH, Cologne	100.0000
Guanzu 2002 S.L., Valencia	100.0000
Hamburger Hof Management GmbH, Hamburg	100.0000
Hansekuranz Kontor GmbH, Münster	80.0042
Hartford Steam Boiler Colombia Ltda, Bogotá	100.0000
Hartford Steam Boiler UK Limited, Manchester	100.0000
Hestia Loss Control Sp.z.o.o., Sopot	100.0000
HSB Associates Inc., New York City, New York	100.0000
HSB Offset Print EaaS GmbH & Co. KG, Munich	100.0000
HSB Offset Print Subscription LLC, Dover, Delaware	100.0000
HSB Sheet Metal EaaS GmbH & Co. KG, Munich	100.0000
HSB Ventures Inc., Dover, Delaware	100.0000
Ideenkapital erste Investoren Service GmbH i. L., Düsseldorf	100.0000
Ideenkapital Fonds Treuhand GmbH, Düsseldorf	100.0000
IDEENKAPITAL Investment GmbH, Düsseldorf	100.0000
Ideenkapital Media Treuhand GmbH i. L., Düsseldorf	100.0000
IDEENKAPITAL Metropolen Europa Verwaltungsgesellschaft mbH, Düsseldorf	100.0000
IDEENKAPITAL PRORENDITA EINS Treuhandgesellschaft mbH, Düsseldorf	100.0000
IFS Europe Holding GmbH, Munich	100.0000
IFS US Holding LLC, Dover, Delaware	100.0000
IK Einkauf Objektverwaltungsgesellschaft mbH, Düsseldorf	100.0000
IK Einkaufsmärkte Deutschland Verwaltungsgesellschaft mbH, Düsseldorf	100.0000
IK FE Fonds Management GmbH, Düsseldorf	100.0000
IK Komp GmbH, Düsseldorf	100.0000
IK Objekt Bensheim GmbH, Düsseldorf	100.0000
IK Pflegezentrum Uelzen Verwaltungs-GmbH, Düsseldorf	100.0000
IK Property Treuhand GmbH, Düsseldorf	100.0000
IoT Financing Services LLC, Dover, Delaware	100.0000
Jogszerviz Kft, Budapest	100.0000

Company and registered seat	% share of capital
JRP (London) Limited, London	100.0000
JRP Insurance Management Limited, London	100.0000
JRP Underwriting Ltd., London	100.0000
Junos Verwaltungs GmbH, Munich	100.0000
KQV Solarpark Franken 1 GmbH & Co. KG, Düsseldorf	100.0000
LABC New Homes Warranty Surveyors Limited, Birkenhead	100.0000
Larus Vermögensverwaltungsgesellschaft mbH, Munich	100.0000
m:editerran Power S.a.s. di welivit Solar Italia S.r.l., Bolzano	100.0000
Marbury Agency Inc., Amelia, Ohio	100.0000
MD Affinity Schemes Limited, Birkenhead	100.0000
MD Technical Surveyors Limited, Birkenhead	100.0000
MDIS (International) Limited, Birkenhead	100.0000
MEAG ERGO Pension I, Munich[4]	100.0000
MEAG EuroCorpRent, Munich[4]	85.3363
MEAG European Infrastructure One GP S.à r.l., Munsbach	100.0000
MEAG European Infrastructure One SCSp SICAV-RAIF, Munsbach[4]	100.0000
MEAG FlexConcept – EuroGrowth, Luxembourg[4]	100.0000
MEAG GlobalAktien, Munich[4]	82.4014
MEAG Hong Kong Limited, Hong Kong	100.0000
MEAG Institutional Fund GP S.à r.l., Luxembourg	100.0000
MEAG Insurance Fund – Tied Assets, Geneva[4]	100.0000
MEAG Luxembourg S.à r.l., Luxembourg	100.0000
MEAG Pension Rent, Munich[4]	99.9999
MEAG Pension Safe, Munich[4]	100.0000
MEAG SFEF GP S.à r.l., Munsbach	100.0000
MEAG Sustainable Forestry Equity Fund SCSp SICAV-RAIF, Munsbach[4]	100.0000
MEAG Vermögensanlage Komfort, Munich[4]	44.5216
MEAG Vermögensanlage Return (A+I Tranche), Munich[4]	59.2709
Mediastream Consulting GmbH i. L., Grünwald	100.0000
Mediastream Film GmbH i. L., Grünwald	100.0000
Mediastream Zweite Film GmbH i. L., Grünwald	100.0000
MedNet Bahrain W.L.L., Manama	100.0000
MedNet Egypt LLC, Cairo	100.0000
MedNet Europa GmbH, Munich	100.0000
MedNet Global Healthcare Solutions LLC, Abu Dhabi	100.0000
MedNet Greece S.A., Athens	78.7157
MedNet Jordan Co. W.L.L., Amman	100.0000
MedNet Saudi Arabia LLC, Jeddah	100.0000
MedNet SPC, Muscat	100.0000
MedNet UAE FZ LLC, Dubai	100.0000
MFI Munich Finance and Investment Holding Limited, Ta' Xbiex	100.0000
MFI Munich Finance and Investment Limited, Ta' Xbiex	100.0000
miCura Pflegedienste Bremen GmbH, Bremen	100.0000
miCura Pflegedienste Düsseldorf GmbH, Düsseldorf	100.0000
miCura Pflegedienste GmbH, Cologne	100.0000
miCura Pflegedienste Hamburg GmbH, Hamburg	100.0000
miCura Pflegedienste Krefeld GmbH, Krefeld	100.0000
miCura Pflegedienste München / Dachau GmbH, Dachau	51.0000
miCura Pflegedienste München Ost GmbH, Munich	65.0000
miCura Pflegedienste Münster GmbH, Münster	100.0000
miCura Pflegedienste Nürnberg GmbH, Nuremberg	51.0000
MPL Claims Management Ltd., London	52.0000
MR Beteiligungen 2. UK AG & Co. KG, Grünwald	100.0000
MR Beteiligungen 3. GmbH, Munich	100.0000
MR Beteiligungen 15. GmbH, Munich	100.0000

Company and registered seat	% share of capital
MR Beteiligungen 17. GmbH, Munich	100.0000
MR Beteiligungen 18. GmbH, Grünwald	100.0000
MR Beteiligungen 20. GmbH, Munich	100.0000
MR Beteiligungen 21. GmbH, Munich	100.0000
MR Beteiligungen 22. GmbH, Munich	100.0000
MR Beteiligungen AG, Grünwald	100.0000
MR Equity Investment GmbH, Munich	100.0000
MR Financial Group GmbH, Munich	100.0000
MR Group Investment US Inc., Dover, Delaware	100.0000
MR HealthTech Ltd., Nicosia	100.0000
MR Residential Holding LLC, Wilmington, Delaware	100.0000
MR Risk Services 2. GmbH, Munich	100.0000
MR Risk Services 3. GmbH, Munich	100.0000
MR Risk Services 4. GmbH, Munich	100.0000
MR Solar GmbH & Co. KG, Düsseldorf	100.0000
MR Solar S.a.s. di welivit Solar Italia S.r.l., Bolzano	100.0000
MR US Multifamily Investment LLC, Dover, Delaware	100.0000
MTC Mobility Technology Center GmbH, Garching	74.0000
Münchener de Argentina Servicios Técnicos S.R.L., Buenos Aires	90.0000
Münchener de Mexico S.A., Mexico City	100.0000
Münchener de Venezuela C.A. Intermediaria de Reaseguros, Caracas	100.0000
Münchener Finanz Gruppe AG Beteiligungen, Munich	100.0000
Munich American Reassurance Company PAC Inc., Norcross, Georgia[4]	0.0000
Munich Canada Systems Corporation, Toronto, Ontario	100.0000
Munich Re America Brokers Inc., Dover, Delaware	100.0000
Munich Re America Management Ltd., London	100.0000
Munich Re Automation Solutions GmbH, Munich	100.0000
Munich Re Automation Solutions Inc., Wilmington, Delaware	100.0000
Munich Re Automation Solutions K.K., Tokyo	100.0000
Munich Re Automation Solutions Pte. Ltd., Singapore	100.0000
Munich Re Automation Solutions Pty Ltd, Sydney	100.0000
Munich Re Capital Markets GmbH, Munich	100.0000
Munich Re Capital No.2 Limited, London	100.0000
Munich Re Healthtech Societe Anonyme, Athens	100.0000
Munich Re India Services Private Limited, Mumbai	100.0000
Munich Re Innovation GmbH, Munich	100.0000
Munich Re Investment Partners GmbH, Munich	100.0000
Munich Re Markets GmbH, Munich	100.0000
Munich Re Risk Solutions Ireland Limited, Dublin	100.0000
Munich Re Service GmbH, Munich	100.0000
Munich Re Serviços Ltda., São Paulo	100.0000
Munich Re Underwriting Agents (DIFC) Ltd., Dubai	100.0000
Munich-Canada Management Corporation Ltd., Toronto, Ontario	100.0000
MunichFinancialGroup AG Holding, Munich	100.0000
MunichFinancialServices AG Holding, Munich	100.0000
Naretoblera 170017 S.L., Valencia	100.0000
Nerruze 120012 S.L., Valencia	100.0000
nexible GmbH, Düsseldorf	100.0000
nexsurance GmbH, Düsseldorf	100.0000
NMU (Specialty) Limited, London	100.0000
Open German Fiber GmbH & Co. KG, Berlin	99.9700
Orrazipo 110011 S.L., Valencia	100.0000
P.A.N. Verwaltungs GmbH, Grünwald	100.0000
PLATINIA Verwaltungs-GmbH i. L., Munich	100.0000
PORT Schiffsverwaltungsgesellschaft mbH i. L., Bramstedt	100.0000
Premier Guarantee Surveyors Limited, Birkenhead	100.0000
PRORENDITA DREI Verwaltungsgesellschaft mbH i. L., Düsseldorf	100.0000
PRORENDITA FÜNF Verwaltungsgesellschaft mbH, Düsseldorf	100.0000
PRORENDITA VIER Verwaltungsgesellschaft mbH i. L., Düsseldorf	100.0000
PRORENDITA ZWEI Verwaltungsgesellschaft mbH i. L., Düsseldorf	100.0000
Reaseguradora de las Américas S.A., Havana	100.0000
Right4U GmbH, Vienna	100.0000
Rung Sup Somboon Co., Ltd., Bangkok[4]	49.0000
SAINT LEON ENERGIE S.A.R.L., Sarreguemines	100.0000
Schloss Hohenkammer GmbH, Hohenkammer	100.0000
Schrömbgens & Stephan GmbH Versicherungsmakler, Düsseldorf	100.0000
Smart Thinking Consulting (Beijing) Co. Ltd., Beijing	100.0000
Solarfonds Göttelborn 2 GmbH & Co. KG, Düsseldorf[4]	34.4234
Sopockie Towarzystwo Doradcze Sp.z.o.o., Sopot	100.0000
Stichting Aandelen Beheer D.A.S. Holding, Amsterdam	100.0000
Sustainable Finance Risk Consulting GmbH, Munich	100.0000
TALARIA ONE DESIGNATED ACTIVITY COMPANY, Dublin[4]	0.0000
TAS Touristik Assekuranz-Service GmbH, Frankfurt am Main	100.0000
The Premier Guarantee Limited, Birkenhead	100.0000
Thipara GmbH, Hamburg	80.1000
Tillobesta 180018 S.L., Valencia	100.0000
Tree Trust GmbH, Munich	100.0000
VICTORIA Immobilien-Fonds GmbH, Düsseldorf	100.0000
VICTORIA US Property Zwei GmbH i. L., Munich	100.0000
Victoria Vierter Bauabschnitt Management GmbH, Düsseldorf	100.0000
Viwis GmbH, Munich	100.0000
VV-Consulting Gesellschaft für Risikoanalyse, Vorsorgeberatung und Versicherungsvermittlung GmbH, Vienna	100.0000
Wattanasin Co., Ltd., Bangkok	100.0000
welivit New Energy GmbH, Düsseldorf	100.0000
welivit Solar España GmbH, Düsseldorf	100.0000
welivit Solar Italia s.r.l., Bolzano	100.0000
WNE Solarfonds Süddeutschland 2 GmbH & Co. KG, Düsseldorf	100.0000
Wohnungsgesellschaft Brela mbH, Hamburg	100.0000
Zacobu 110011 S.L., Valencia	100.0000
Zacuba 6006 S.L., Valencia	100.0000
Zacubacon 150015 S.L., Valencia	100.0000
Zafacesbe 120012 S.L., Valencia	100.0000
Zapacubi 8008 S.L., Valencia	100.0000
Zarzucolumbu 100010 S.L., Valencia	100.0000
Zetaza 4004 S.L., Valencia	100.0000
Zicobucar 140014 S.L., Valencia	100.0000
Zucaelo 130013 S.L., Valencia	100.0000
Zucampobi 3003 S.L., Valencia	100.0000
Zucarrobiso 2002 S.L., Valencia	100.0000
Zucobaco 7007 S.L., Valencia	100.0000
Zulazor 3003 S.L., Valencia	100.0000
Zumbicobi 5005 S.L., Valencia	100.0000
Zumcasba 1001 S.L., Valencia	100.0000
Zuncabu 4004 S.L., Valencia	100.0000
Zuncolubo 9009 S.L., Valencia	100.0000
Associated and joint ventures accounted for using the equity method	
1818 Acquisition LLC, Wilmington, Delaware	20.7300
2014 Sol I LLC, Wilmington, Delaware	50.0000
Arcapark SAS, Paris La Défense Cedex[8]	15.1000
Astoria Power Partners Holding LLC, Dover, Delaware	20.0000

Company and registered seat	% share of capital
Bazos CIV LP, Wilmington, Delaware[7]	100.0000
Consorcio Internacional de Aseguradores de Crédito S.A., Madrid[5]	15.0353
D.A.S. Difesa Automobilistica Sinistri, S.p.A. di Assicurazione, Verona	49.9920
EGM Wind SAS, Paris	40.0000
ERGO China Life Insurance Co., Ltd., Jinan, Shandong Province	50.0000
Europai Utazasi Biztosito Zrt., Budapest	26.0000
Europäische Reiseversicherungs-Aktiengesellschaft, Vienna	25.0100
Global Aerospace Underwriting Managers Ltd., London[7]	51.0000
HDFC ERGO General Insurance Company Ltd., Mumbai	48.9919
Infra Foch Topco SAS, Puteaux[5]	10.8567
Invesco MEAG US Immobilien Fonds IV, Luxembourg	37.1670
KarstadtQuelle Finanz Service GmbH i. L., Düsseldorf	50.0000
King Price Financial Services (Pty) Ltd, Pretoria[5]	14.7751
Marchwood Power Limited, Southampton	50.0000
Maverick 67 Class B Holdco LLC, Wilmington, Delaware	62.5000
Maverick 67 Holdco LLC, Wilmington, Delaware	50.0000
MEAG EuropeOfficeSelect EOS SCSp SICAV-RAIF, Munsbach	50.0000
MEAG INSTITUTIONAL FUND S.C.S. SICAV-RAIF – MEAG Infrastructure Debt Fund II, Luxembourg[5]	15.6138
MEDICLIN Aktiengesellschaft, Offenburg	35.0042
MR Beteiligungen 23. GmbH, Munich[12]	50.0000
Next Insurance Inc., Wilmington, Delaware	33.0812
Poolbeg Investments Limited, London	37.5000
RP Vilbeler Fondsgesellschaft mbH i. L., Frankfurt am Main	40.0000
Sana Kliniken AG, Munich	22.5281
SNIC Insurance B.S.C. (c), Manama	22.5000
SR Texas Wind Holdings 1 LLC, Wilmington, Delaware	49.0000
STEAG Fernwärme GmbH, Essen	49.0000
Storebrand Helseforsikring AS, Oslo	50.0000
Super Home Inc., Dover, Delaware[5]	15.7193
Suramericana S.A., Medellín[5]	18.8672
Taishan Property & Casualty Insurance Co. Ltd., Jinan, Shandong Province	24.8983
Vier Gas Investments S.à r.l., Luxembourg	43.7516
Wind Fund I AS, Oslo	33.3333
Associates and joint ventures accounted for at fair value	
Assistance Partner GmbH & Co. KG, Munich	21.6600
Augury Inc., Wilmington, Delaware[5]	7.3940
carexpert Kfz-Sachverständigen GmbH, Walluf	25.0000
CDAT Software Inc., Vancouver, British Columbia	40.0000
CertX AG, Marly	35.0000
Cyber Sepio Systems Limited, Tel Aviv[5]	10.7500
Dayforward Inc., Wilmington, Delaware[5]	8.2750
Fernkälte Geschäftsstadt Nord GbR, Hamburg[1]	36.4600
Finsure Investments (Private) Limited, Harare	24.5000
FlexFactory GmbH, Stuttgart	50.0000
Future Family Inc., Wilmington, Delaware[5]	13.9900
GIG City Nord GmbH, Hamburg	25.0000
GroupStrength Benefits Direct Inc., Vancouver, British Columbia	50.0000
High Definition Vehicle Insurance Inc., Dover, Delaware[5]	9.0504
Inshur Holding Corp., Wilmington, Delaware[5]	14.8701
LCM Logistic Center Management GmbH, Hamburg	50.0000
MEAG EuropeOfficeSelect EOS GP S.à r.l., Munsbach	50.0000
Open German Fiber Management GmbH, Berlin	50.0000
Orbit Fab Inc., Dover, Delaware[5]	5.3400

Company and registered seat	% share of capital
PERILS AG, Zurich[5]	10.0000
Span.IO Inc., Dover, Delaware[5]	8.5076
Spruce Holdings Inc., Wilmington, Delaware[5]	11.7500
Teko – Technisches Kontor für Versicherungen GmbH, Düsseldorf	30.0000
Tianjin Yihe Information Technology Co. Ltd., Tianjin	24.9000
Trident Global Assistance Inc., Etobicoke, Ontario	49.0000
versdiagnose GmbH, Hanover	49.0000
Volksbanken-Versicherungsdienst GmbH, Vienna	25.2319
VV Immobilien Verwaltungs und Beteiligungs GmbH i. L., Munich	30.0000
Companies included on a pro-rata basis (joint operation pursuant to IFRS 11)	
"Pensionsfonds" des Versorgungswerks MetallRente bei der Allianz Pensionsfonds AG, Stuttgart	17.5000
Shareholdings exceeding 5% of the voting rights in large companies as defined in Section 271(1) of the German Commercial Code (HGB)	
Extremus Versicherungs-Aktiengesellschaft, Cologne (equity: €63,466k; result for year: −€754k)	16.0000
Protektor Lebensversicherungs-AG, Berlin (equity: €7,854k; result for year: €2k)	10.7631
Other shareholdings as defined in Section 271(1) of the German Commercial Code (HGB)	
320 Park Avenue Holdings LLC, Wilmington, Delaware[6] (equity: €178,137k; result for year: €0k)	25.0000
Acko Technology & Services Private Limited, Bangalore (equity: €39,059k; result for year: −€58,305k)	5.0000
Admiral Group Plc, Cardiff (equity: €535,137k; result for year: €1,210,213k)	1.7490
Air Doctor Ltd., Beit Nekofa (equity: €4,221k; result for year: −€4,613k)	2.7200
Amplify Life Insurance Company, Dover, Delaware (equity: €11,393k; result for year: −€385k)	9.5200
At-bay Inc., Wilmington, Delaware (equity: €231,129k; result for year: −€14,377k)	3.7600
Autobahn Tank & Rast Gruppe GmbH & Co. KG, Bonn (equity: €0k; result for year: −€136,222k)	9.9980
Autobahn Tank & Rast Management GmbH, Bonn (equity: €43k; result for year: €2k)	10.0020
Azos Holdings, George Town, Grand Cayman[10] (equity: €–; result for year: €–)	6.3500
Babylon Holdings Limited, St. Helier (equity: €154,857k; result for year: −€355,401k)	0.2900
BitSight Technologies Inc., Wilmington, Delaware (equity: €368,178k; result for year: −€19,067k)	0.3400
Bought by Many Ltd, London (equity: €205,374k; result for year: −€32,854k)	10.1400
Craigmore Permanent Crop LP, Christchurch[6] (equity: €172,311k; result for year: −€4,089k)	34.5300
Deutsches Forschungszentrum für Künstliche Intelligenz GmbH, Kaiserslautern (equity: €29,410k; result for year: €1,646k)	2.5000
Earlybird DWES Fund VII GmbH & Co. KG, Munich (equity: €79,020k; result for year: −€928k)	14.2857
Earlybird Growth Opportunities Fund V GmbH & Co. KG, Munich (equity: €1k; result for year: −€58k)	20.0000
FIA Timber Partners II LP, Wilmington, Delaware[6] (equity: €136,335k; result for year: €9,020k)	39.0800
Forge Global Inc., Lewes, Delaware (equity: €210,428k; result for year: −€4,080k)	2.4000

Company and registered seat	% share of capital
Fraugster Services GmbH, Berlin (equity: €3,364k; result for year: −€6,202k)	7.1952
Ghost Security Inc., Wilmington, Delaware[9] (equity: €–; result for year: €–)	1.1000
Green Acre Investments, LLC, Wilmington, Delaware[6] (equity: €53,128k; result for year: €312k)	31.9361
Hancock Timberland XII LP, Wilmington, Delaware (equity: €308,239k; result for year: €19,606k)	15.1500
heal.capital I GmbH & Co. KG, Berlin (equity: €25,050k; result for year: −€2,492k)	15.8888
IK Objekt Bensheim Immobilienfonds GmbH & Co. KG, Düsseldorf (equity: €18,233k; result for year: €99k)	16.2445
Inspectify Inc., Dover, Delaware (equity: €7,014k; result for year: −€1,722k)	4.3700
Longroad Energy Holdings LLC, Wilmington, Delaware (equity: €950,050k; result for year: −€93,310k)	12.0000
M 31 Beteiligungsgesellschaft mbH & Co. Energie KG, Düsseldorf (equity: €1,408,977k; result for year: €90,989k)	18.6246
m:solarPOWER GmbH & Co. KG, Düsseldorf (equity: €577k; result for year: €138k)	0.0000
Nova Labs Inc., Dover, Delaware (equity: €124,010k; result for year: €5,481k)	3.8992
Nürnberger Beteiligungs AG, Nuremberg (equity: €733,923k; result for year: €55,696k)	19.1038
Olivia Holdings LLC, Wilmington, Delaware (equity: €1,174,794k; result for year: €86,233k)	8.8000
Parametrix Group Holdings Inc., Wilmington, Delaware (equity: €6,015k; result for year: −€3,327k)	5.0000
PRORENDITA DREI GmbH & Co. KG, Düsseldorf (equity: €1,982k; result for year: €20k)	0.0065
PRORENDITA FÜNF GmbH & Co. KG, Düsseldorf (equity: €3,504k; result for year: −€95k)	0.0018
PRORENDITA VIER GmbH & Co. KG, Düsseldorf (equity: €2,208k; result for year: €19k)	0.0029
Ridecell Inc., Wilmington, Delaware (equity: €47,887k; result for year: −€21,959k)	2.1580
RMS Forest Growth International LP, George Town, Grand Cayman[6] (equity: €18,307k; result for year: €2,721k)	43.4700
Saudi Enaya Cooperative Insurance Company, Jeddah (equity: €14,882k; result for year: −€15,663k)	2.1700
Slice Labs Inc., Ottawa, Ontario (equity: −€2,808k; result for year: −€3,713k)	8.1256
Solarpark 1000 Jahre Fürth GmbH & Co. KG, Düsseldorf (equity: €676k; result for year: €70k)	0.9091
Spectrum Labs Inc., Dover, Delaware (equity: €28,642k; result for year: −€8,084k)	4.2657
Stor-Skälsjön Vind Holding AB, Hässleholm[11] (equity: €57,287k; result for year: −€274k)	75.0000
T&R MLP GmbH, Bonn (equity: €29k; result for year: €0k)	10.0020
T&R Real Estate GmbH, Bonn (equity: €140,869k; result for year: €1k)	10.0020
Team8 Capital I LP, George Town, Grand Cayman (equity: €185,787k; result for year: −€3,619k)	4.2000
Team8 Partners II LP, George Town, Grand Cayman (equity: €113,282k; result for year: €45,662k)	8.5300
Thunderbolt Technology Inc., Wilmington, Delaware[10] (equity: €–; result for year: €–)	6.5000
Ticker Limited, London (equity: €2,412k; result for year: −€5,855k)	16.3600
Twelve Benefit Corporation, Wilmington, Delaware (equity: €39,321k; result for year: −€14,269k)	7.0020
Wataniya Insurance Company, Jeddah (equity: €52,657k; result for year: −€13,768k)	5.0000
welivit TOP SOLAR GmbH & Co. KG, Düsseldorf (equity: €78k; result for year: €34k)	0.0000
Zanskar Geothermal & Minerals Inc., Wilmington, Delaware (equity: €2,264k; result for year: −€770k)	4.7280

1 Munich Reinsurance Company or one of its consolidated subsidiaries is a fully liable partner in this company.
2 This fully consolidated German subsidiary with the legal form of a partnership, as defined in Section 264a of the German Commercial Code (HGB), intends to fulfil the conditions required pursuant to Section 264b of the Commercial Code and, in the 2022 financial year, to avail itself of the relevant provision exempting it from preparing annual financial statements. As defined in Section 291 of the Commercial Code, this Group financial statement also exempts the subsidiary from the potential requirement to publish consolidated financial statements pursuant to Section 290 of the Commercial Code.
3 This fully consolidated German subsidiary intends to fulfil the conditions required in Section 264(3) of the German Commercial Code (HGB) and, in the 2022 financial year, to avail itself of the relevant provision exempting it from preparing annual financial statements. As defined in Section 291 of the Commercial Code, this Group financial statement also exempts the subsidiary from the potential requirement to publish consolidated financial statements pursuant to Section 290 of the Commercial Code.
4 Control due to voting majority or other control pursuant to IFRS 10.
5 Significant influence owing to representation of Munich Re on the board of directors and/or supervisory body or an equivalent governing body of the associate.
6 No control and/or no significant influence, as it is a purely financial investment under the managerial responsibility of an external asset manager.
7 No control, since the articles of association or another agreement bind the relevant operations to a quorum which cannot be achieved by Munich Re.
8 Representation of Munich Re on the board of directors and/or supervisory body or an equivalent governing body of the entity, whose relevant activities require the unanimous consent of the parties sharing control.
9 This company, which was newly founded in 2022, has not yet prepared any annual financial statements.
10 No financial statements available.
11 No control and no significant influence, as Munich Re does not have any decision-making rights with regard to the relevant activities to be performed until completion of the investment object.
12 Operating in future under the name of Joint HR MR Private Equity GmbH.

Drawn up and released for publication,
Munich, 6 March 2023.

The Board of Management

The auditor's report reproduced below includes a "Report on the assurance on the electronic rendering of the consolidated financial statements and the combined management report for publication purposes in accordance with Section 317(3a) of the Commercial Code (HGB)" ("separate report on ESEF compliance"). The subject matter (ESEF documents) to which the separate report on ESEF compliance relates is not attached. The assured ESEF documents can be inspected in, or retrieved from, the Unternehmensregister [German Company Register].

Translation from the German language of Independent auditor's report

To Münchener Rückversicherungs-Gesellschaft Aktiengesellschaft in München

Report on the audit of the consolidated financial statements and of the combined management report

Opinions

We have audited the consolidated financial statements of Münchener Rückversicherungs-Gesellschaft Aktiengesellschaft in München, Munich, and its subsidiaries (the Group), which comprise the consolidated balance sheet as at 31 December 2022, the consolidated income statement, the statement of recognised income and expense, the Group statement of changes in equity and the consolidated cash flow statement for the financial year from 1 January 2022 to 31 December 2022, and Notes to the financial statements, including a summary of significant accounting policies. In addition, we have audited the combined management report of Münchener Rückversicherungs-Gesellschaft Aktiengesellschaft in München for the financial year from 1 January 2022 to 31 December 2022. In compliance with German legal requirements, we have not audited the Group Statement on Corporate Governance which is published on the website referenced in the combined management report and is part of the combined management report, and the content of the Group non-financial statement included in chapter "Combined non-financial statement" of the combined management report. We have not audited corporate information that is not part of the Group annual report and is referenced in the "Munich Re Group", "Financial position" and "Munich Reinsurance Company (information reported on the basis of German accountancy rules)" chapters of the combined management report. In addition, we have not audited the content extraneous to management reports contained in section "Remuneration report of Munich Reinsurance Company" in chapter "Munich Reinsurance Company (information reported on the basis of German accountancy rules)", as well as "Internal control system" and "Statement on the adequacy and effectiveness of the risk management system and the internal control system" sections of the chapter Risk Report of the combined management report.

Disclosures extraneous to management reports are such disclosures that are neither required pursuant to Secs. 315, 315a or Secs. 315b to 315f HGB nor pursuant to DRS 20.

In our opinion, on the basis of the knowledge obtained in the audit,

- the accompanying consolidated financial statements comply, in all material respects, with the IFRSs as adopted by the EU, and the additional requirements of German commercial law pursuant to Section 315e(1) of the German Commercial Code [Handelsgesetzbuch, HGB] and, in compliance with these requirements, give a true and fair view of the assets, liabilities and financial position of the Group as at 31 December 2022 and of its financial performance for the financial year from 1 January 2022 to 31 December 2022, and

- the accompanying combined management report as a whole provides an appropriate view of the Group's position. In all material respects, this combined management report is consistent with the consolidated financial statements, complies with German legal requirements and appropriately presents the opportunities and risks of future development. Our opinion on the combined management report does not cover the above-mentioned Group Statement on Corporate Governance, the Group non-financial statement, the sections "Remuneration report of Munich Reinsurance Company" in chapter "Munich Reinsurance Company (information reported on the basis of German accountancy rules)", as well as the sections "Internal control system" and "Statement on the adequacy and effectiveness of the risk management system and the internal control system" contained in the risk report

Pursuant to Section 322(3) sentence 1 of the Commercial Code (HGB), we declare that our audit has not led to any reservations relating to the legal compliance of the consolidated financial statements or of the combined management report.

Basis for the opinions

We conducted our audit of the consolidated financial statements and of the combined management report in accordance with Section 317 of the Commercial Code (HGB) and the EU Audit Regulation No. 537/2014 (referred to subsequently as "EU Audit Regulation") and in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer [Institute of Public Auditors in Germany] (IDW). Our responsibilities under those requirements and principles are further described in the "Auditor's responsibilities for the audit of the consolidated financial statements and of the combined management report" section of our auditor's report. We are independent of the Group entities in accordance with the requirements of European law and German commercial and professional law, and we have fulfilled our other German professional responsibilities in accordance with these requirements. In addition, in accordance with Article 10(2)(f) of the EU Audit Regulation, we declare that we have not provided non-audit services prohibited under Article 5(1) of the EU Audit Regulation. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinions on the consolidated financial statements and on the combined management report.

Key audit matters in the audit of the consolidated financial statements

Key audit matters are those matters that, in our professional judgement, were of most significance in our audit of the consolidated financial statements for the financial year from 1 January 2022 to 31 December 2022. These matters were addressed in the context of our audit of the consolidated financial statements as a whole, and in forming our opinion thereon; we do not provide a separate opinion on these matters.

Below, we describe what we consider to be the key audit matters:

Measurement of the provision for outstanding claims in property-casualty business

Reasons for the designation as a key audit matter

The provision for outstanding claims in property-casualty business concerns the segments Property-casualty reinsurance, ERGO Property-casualty Germany, and ERGO International. This provision includes, among other things, the partial loss provision for known and unknown claims; it is calculated on the basis of an empirical value and by using actuarial techniques and statistical methods. In this context, past experience is used as a basis for making assumptions about premiums and ultimate loss ratios, as well as the time frames, factors, speed of claims settlement, and inflation of claims. Management determines the amount of the provision for outstanding claims based on the results of the actuarial techniques and additional information regarding the uncertainties associated with the calculations. The assessment of major losses is regarded separately in calculating the provision for outstanding claims.

Determining the provision for outstanding claims is subject to uncertainty and judgement, as the provision is largely based on estimates and assumptions. Uncertainties in estimation arise in particular from the occurrence, amount, and speed of settlement of major losses; long-term claims development and special loss scenarios (including third-party liability, particularly asbestos and environmental liability claims as well as claims related to the Russia-Ukraine war). We have therefore designated the measurement of the provision for outstanding claims as a key audit matter. In addition, the provision for outstanding claims in property-casualty business is a material liability item in the consolidated balance sheet.

Auditor's response

As part of our audit, we gained an understanding of the process of determining the provision for outstanding claims in property-casualty business. We also largely tested the effectiveness of the controls implemented for ensuring the completeness and accuracy of the recognition and correct measurement of claims.

We assessed the suitability of the actuarial techniques and methods utilised, as well as the derivation and transparency of key assumptions used, including loss ratios and assumptions with regard to claims settlement.

For the purpose of assessing the quality of estimates, we analysed the actual development of the previous year's provision for outstanding claims based on the run-off results.

We applied mathematical and statistical methods to generate our own loss projections for certain segments based on risk considerations. We first calculated a best estimate and defined an appropriate range based on statistical probabilities, and then compared these with management's calculations.

In addition, we compared the reserve level at the end of the reporting period with the previous year's level, and verified adjustments made to the actuarial estimate. In this context, we analysed the documentation of the underlying calculations or qualitative rationale.

As part of substantive audit procedures, we verified the calculation of the provisions for major losses on the basis of selecting specific items, taking into account the information and data available at the end of the reporting period. In the case of losses in connection with the Russia-Ukraine war, we assessed the measurement of the provisions based on contractual agreements.

With regard to measurement of the provisions for asbestos and environmental liability claims, we verified the procedures for validating the reserve level and re-calculated certain methods. We furthermore reconciled the comparative figures used with market studies available to the general public.

We assessed the derivation and appropriateness of the assumptions for development of price indices, construction cost indices, wage indices as well as medical inflation, and the impacts thereof on the portfolio. We verified the correct use of portfolio specific inflation assumptions based on a sample.We engaged our own specialists with knowledge of actuarial science in our audit.

Our audit has not led to any reservations relating to the measurement of the provision for outstanding claims in property-casualty business.

Reference to related disclosures

The information on the accounting and measurement policies used is disclosed in the section "Equity and liabilities – C Gross technical provisions" in the Notes to the consolidated financial statements. In addition, the use of estimates and assumptions is explained in the section Recognition and measurement, Use of judgements and estimates in recognition and measurement. Moreover, there is further information on the line items in section (22) Provision for outstanding claims. Risk information can be found in the section (40) Disclosures on risks from property-casualty insurance business in the Notes to the consolidated financial statements, and in the chapter Risk report in the combined management report.

Measurement of the provision for future policy benefits, the provision for outstanding claims, and deferred acquisition costs in life and health business

Reasons for the designation as a key audit matter

The provisions in life and health business concern the segments life and health reinsurance, ERGO Life and Health Germany, and ERGO International, and mainly comprise the provision for future policy benefits and the provision for outstanding claims. The measurement of the provision for future policy benefits is dependent on a number of assumptions, particularly relating to mortality, disability, morbidity, interest-rate development, lapse rates, costs, administration expenses as well as discount rates and inflation. Particularly because the assumptions are generally not based on observable market inputs, the determination or revision of the assumptions is subject to uncertainty and judgement. Additional uncertainties arise in the US market in connection with the COVID-19 pandemic.

The provision for outstanding claims in life and health reinsurance is determined on the basis of information from the cedants and/or on the basis of actuarial techniques that require estimates and assumptions.

A liability adequacy test is used to verify the adequacy of the provision for future policy benefits and the recoverability of deferred acquisition costs. The liability adequacy test is conducted on the basis of current assumptions.

This has been designated a key audit matter due to the estimations involved and the corresponding judgements in measurement. In addition, the provision for future policy benefits and the provision for outstanding claims in life and health business are material liability items in the consolidated balance sheet.

Auditor's response

As part of our audit, we gained an understanding of the processes of determining the provision for future policy benefits, the provisions for outstanding claims, and the deferred acquisition costs. We also largely tested the effectiveness of the controls implemented for ensuring the completeness and accuracy of the recognition and correct measurement of claims.

In addition, we methodically verified the actuarial techniques used to derive the key assumptions that are utilised to determine the provision for future policy benefits. We also analysed the discount rates used.

For the purpose of assessing the quality of the estimates for the provision for future policy benefits, we compared the results expected by the Company for the individual business units with the actual results and assessed them against our expectations based on market developments.

We performed our own calculation of the provision for future policy benefits on the basis of a risk-based sample of sub-portfolios and tariffs, and compared our results with those of the management.

We assessed the derivation and appropriateness of the assumptions used in the adequacy test.

We verified the provisions for outstanding claims on the basis of the cedants' account statements. Where the provisions for outstanding claims were measured using statistical methods, we generated our own actuarial projections for selected lines of business and compared them with the carrying amounts of the provisions.

In the case of losses in connection with the COVID-19 pandemic – and particularly in life reinsurance in the United States – we assessed whether the Company is affected by the losses based on contractual agreements, and also assessed the measurement of the provisions.

We engaged our own specialists with knowledge of actuarial science in our audit.

Our audit has not led to any reservations relating to the measurement of the provision for future policy benefits, the provision for outstanding claims or the deferred acquisition costs in life and health business.

Reference to related disclosures

The information on the accounting and measurement policies used is disclosed in the section "Equity and liabilities – C Gross technical provisions" in the Notes to the consolidated financial statements. In addition, the use of estimates and assumptions is explained in the section Recognition and measurement, Use of judgements and estimates in recognition and measurement. Moreover, there is further information on the line items in section (13) Deferred acquisition costs and (21) Provision for future policy benefits. Risk information can be found in section (39) Disclosures on risks from life and health insurance business in the Notes to the consolidated financial statements, and in the chapter Risk report in the combined management report.

Valuation of unlisted investments

Reasons for the designation as a key audit matter

The fair values of unlisted investments are primarily determined by using valuation models or values assessed by third parties. The primary parameters used are observable market inputs, such as duration-based yield curves and credit spreads. This applies particularly to the fair value measurement of unlisted fixed-interest securities, infrastructure loans, other loans, and derivatives. In addition, unobservable inputs are used to measure certain investments – particularly land and buildings, real estate funds, investments in private equity funds, and alternative direct investments (such as infrastructure). The valuation models selected and the assumptions about inputs defined are judgemental. The greater the number of inputs used that are not observable in the market but are instead based on internal estimates, the greater the scope for judgement.

The valuation of unlisted investments has been designated a key audit matter due to the judgements used in selecting the valuation models and the assumptions to be made with regard to the significant inputs. Moreover, unlisted investments contribute a substantial share of the investments line item in the consolidated balance sheet.

Auditor's response

As part of our audit, we gained an understanding of the processes of the valuation of unlisted investments. We also tested the effectiveness of the controls implemented for ensuring the completeness and accuracy of election and recording of input parameters as well as for ensuring accuracy of implemented valuation models.

We assessed whether the valuation models used ensured a reliable determination of fair values. In addition, we examined the key valuation parameters as to whether the significant valuation parameters used had been derived in a comprehensible manner by having valuation specialists make their own calculations in order to verify the fair values.

In the case of registered bonds and borrowers' note loans, we verified on the basis of a sample whether the credit spreads relevant to the valuation had been applied consistently within the portfolio and to the remaining term to maturity. We also performed own fair value calculations for a sample of registered bonds and borrowers' note loans (including embedded derivatives) and compared them with those made by the Company.

In addition, we performed our own fair value calculations for some derivatives on a sample basis and compared the fair values with those determined by the Company.

Moreover, we verified the fair value measurements of alternative direct investments on the basis of a sample, and assessed the calculation parameters used in consideration of the investment-specific circumstances. We compared the fair values of sub-portfolios of indirectly held real estate investments and of investments in private equity funds with external information. In the case of directly held real estate investments, we verified the measurements made on the basis of samples.

Our audit has not led to any reservations relating to the valuation of the unlisted investments.

Reference to related disclosures

The information on the accounting and valuation policies used is disclosed in the section "Assets – B Investments" in the Notes to the consolidated financial statements. In addition, the use of estimates and assumptions is explained in the section "Recognition and measurement, Use of judgements and estimates in recognition and measurement". Moreover, further information on the individual instruments can be found in the section "Notes to the consolidated balance sheet – Assets". Information about market risk and credit risk can be found in the chapter "Risk report" in the combined management report.

Other information

The Supervisory Board is responsible for the report of the Supervisory Board. Management and the Supervisory Board are responsible for the Declaration of Conformity with the German Corporate Governance Code pursuant to Section 161 of the German Stock Corporation Act (AktG), which is part of the Group Statement on Corporate Governance, as well as for the remuneration report pursuant to Section 162 of the German Stock Corporation Act (AktG). Management is otherwise responsible for the other information. The other information comprises the above-mentioned Group Statement on Corporate Governance, the Group non-financial statement as well as the above-mentioned sections "Remuneration report of Munich Reinsurance Company" in chapter "Munich Reinsurance Company (information reported on the basis of German accountancy rules)" of the combined management report and sections "Internal control system" and "Statement on the adequacy and effectiveness of the risk management system and the internal control system" of the risk report.

In addition, the other information comprises other parts of the Group annual report of which we received a version before issuing this auditor's report, in particular:

- Munich Re at a glance
- Letter to shareholders
- Responsibility statement

but not the consolidated financial statements, the disclosures in the combined management report covered by our audit, or our auditor's report.

Our opinions on the consolidated financial statements and on the combined management report do not cover the other information, and consequently we do not express an opinion or any other form of assurance conclusion thereon.

In connection with our audit, our responsibility is to read the other information and, in so doing, to consider whether the other information

- is materially inconsistent with the consolidated financial statements, with the combined management report, or our knowledge obtained in the audit, or
- otherwise appears to be materially misstated.

If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Responsibilities of management and the Supervisory Board for the consolidated financial statements and the combined management report

Management is responsible for the preparation of the consolidated financial statements that comply, in all material respects, with IFRSs as adopted by the EU and the additional requirements of German commercial law pursuant to Section 315e(1) of the Commercial Code (HGB) and that the consolidated financial statements, in compliance with these requirements, give a true and fair view of the assets, liabilities, financial position and financial performance of the Group. In addition, management is responsible for such internal control as they have determined necessary to enable the preparation of consolidated financial statements that are free from material misstatement, whether due to fraud (i.e., fraudulent financial reporting and misappropriation of assets) or error.

In preparing the consolidated financial statements, management is responsible for assessing the Group's ability to continue as a going concern. They also have the responsibility for disclosing, as applicable, matters related to going concern. In addition, they are responsible for financial reporting based on the going concern basis of accounting, unless there is an intention to liquidate the Group or to cease operations, or there is no realistic alternative but to do so.

Furthermore, management is responsible for the preparation of the combined management report that, as a whole, provides an appropriate view of the Group's position and is, in all material respects, consistent with the consolidated financial statements, complies with German legal requirements and appropriately presents the opportunities and risks of future development. In addition, management is responsible for such arrangements and measures (systems) as they have considered necessary to enable the preparation of a combined management report that is in accordance with the applicable German legal requirements, and to be able to provide sufficient appropriate evidence for the assertions in the combined management report.

The Supervisory Board is responsible for overseeing the Group's financial reporting process for the preparation of the consolidated financial statements and of the combined management report.

Auditor's responsibilities for the audit of the consolidated financial statements and of the combined management report

Our objectives are to obtain reasonable assurance about whether the consolidated financial statements as a whole are free from material misstatement, whether due to fraud or error, and whether the combined management report as a whole provides an appropriate view of the Group's position and, in all material respects, is consistent with the consolidated financial statements and the knowledge obtained in the audit, complies with the German legal requirements and appropriately presents the opportunities and risks of future development, as well as to issue an auditor's report that includes our opinions on the consolidated financial statements and on the combined management report.

Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with Section 317 of the Commercial Code (HGB) and the EU Audit Regulation and in compliance with German Generally Accepted Standards for Financial Statement Audits promulgated by the Institut der Wirtschaftsprüfer (IDW) will always detect a material misstatement. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these consolidated financial statements and this combined management report.

We exercise professional judgement and maintain professional scepticism throughout the audit. We also do the following:

- Identify and assess the risks of material misstatement of the consolidated financial statements and of the combined management report, whether due to fraud or error; design and perform audit procedures responsive to those risks; and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinions. The risk of not detecting a material misstatement resulting from fraud is higher than the risk of not detecting a material misstatement resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- Obtain an understanding of internal control relevant to the audit of the consolidated financial statements and of arrangements and measures (systems) relevant to the audit of the combined management report in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of these systems.

- Evaluate the appropriateness of accounting policies used by management and the reasonableness of estimates made by management and related disclosures.

- Conclude on the appropriateness of management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in the auditor's report to the related disclosures in the consolidated financial statements and in the combined management report or, if such disclosures are inadequate, to modify our respective opinions. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Group to cease to be able to continue as a going concern.

- Evaluate the overall presentation, structure and content of the consolidated financial statements, including the disclosures, and whether the consolidated financial statements present the underlying transactions and events in a manner that the consolidated financial statements give a true and fair view of the assets, liabilities, financial position and financial performance of the Group in compliance with IFRSs as adopted by the EU and the additional requirements of German commercial law pursuant to Section 315e(1) of the Commercial Code (HGB).

- Obtain sufficient appropriate audit evidence regarding the financial information of the entities or business activities within the Group to express opinions on the consolidated financial statements and on the combined management report. We are responsible for the direction, supervision and performance of the Group audit. We remain solely responsible for our opinions.

- Evaluate the consistency of the combined management report with the consolidated financial statements, its conformity with German law, and the view of the Group's position it provides.

- Perform audit procedures on the prospective information presented by management in the combined management report. On the basis of sufficient appropriate audit evidence we evaluate, in particular, the significant assumptions used by management as a basis for the prospective information, and evaluate the proper derivation of the prospective information from these assumptions. We do not express a separate opinion on the prospective information and on the assumptions used as a basis. There is a substantial unavoidable risk that future events will differ materially from the prospective information.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with the relevant independence requirements, and communicate with them all relationships and other matters that may reasonably be thought to bear on our independence and, where applicable, the related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the consolidated financial statements of the current period and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter.

Other legal and regulatory requirements

Report on the assurance on the electronic rendering of the consolidated financial statements and the combined management report for publication purposes in accordance with Section 317(3a) of the Commercial Code (HGB)

Opinion

We have performed assurance work in accordance with Section 317(3a) of the Commercial Code (HGB) to obtain reasonable assurance about whether the rendering of the consolidated financial statements and the combined management report (hereinafter the "ESEF documents") contained in the electronic file Munich_Re_ESEF-2022-12-31.zip and prepared for publication purposes complies in all material respects with the requirements of Section 328(1) of the Commercial Code (HGB) concerning the electronic reporting format ("ESEF format"). In accordance with German legal requirements, this assurance extends only to the conversion into ESEF format of the information contained in the consolidated financial statements and the combined management report and therefore relates neither to the information contained in this rendering nor to any other information contained in the file identified above.

In our opinion, the rendering of the consolidated financial statements and the combined management report contained in the file identified above and prepared for publication purposes complies in all material respects with the requirements of Section 328(1) of the Commercial Code (HGB) for the electronic reporting format. Beyond this reasonable assurance opinion and our audit opinion on the accompanying consolidated financial statements and the accompanying combined management report for the financial year from 1 January 2022 to 31 December 2022 contained in the above "Auditor's report on the consolidated financial statements and on the combined management report", we do not express any opinion on the information contained within these renderings or on any other information contained in the file identified above.

Basis for the opinion

We conducted our assurance work on the rendering of the consolidated financial statements and the combined management report contained in the file identified above in accordance with Section 317(3a) of the Commercial Code (HGB) and the IDW Assurance Standard: Assurance on the Electronic Rendering of Financial Statements and Management Reports Prepared for Publication Purposes in Accordance with Section 317 (3a) HGB (IDW AsS 410 (06.2022)). Our responsibility in accordance therewith is further described in the "Group auditor's responsibilities for the assurance work on the ESEF documents" section. Our audit firm has applied IDW Standard on Quality Management 1: Requirements for Quality Management in the Audit Firm (IDW QS 1).

Responsibilities of management and the Supervisory Board for the ESEF documents

Company management is responsible for the preparation of the ESEF documents, including the electronic rendering of the consolidated financial statements and the combined management report in accordance with Section 328(1) sentence 4, no. 1 of the Commercial Code (HGB) and for the tagging of the consolidated financial statements in accordance with Section 328(1) sentence 4, no. 2 of the Commercial Code (HGB).

In addition, company management is responsible for such internal control as they have determined necessary to enable the preparation of ESEF documents that are free from material non-compliance – intentional or unintentional – with the requirements of Section 328(1) of the Commercial Code (HGB) for the electronic reporting format.

The Supervisory Board is responsible for overseeing the process for preparing the ESEF documents as part of the financial reporting process.

Group auditor's responsibilities for the assurance work on the ESEF documents

Our objective is to obtain reasonable assurance about whether the ESEF documents are free from material non-compliance – intentional or unintentional – with the requirements of Section 328(1) of the Commercial Code (HGB). We exercise professional judgement and maintain professional scepticism throughout the assurance work. We also:

- Identify and assess the risks of material non-compliance – intentional or unintentional – with the requirements of Section 328(1) of the Commercial Code (HGB); design and perform assurance procedures responsive to those risks; and obtain assurance evidence that is sufficient and appropriate to provide a basis for our assurance opinion.

- Obtain an understanding of internal control relevant to the assurance on the ESEF documents in order to design assurance procedures that are appropriate in the circumstances, but not for the purpose of expressing an assurance opinion on the effectiveness of these controls.

- Evaluate the technical validity of the ESEF documents, i.e. whether the file containing the ESEF documents meets the requirements of Commission Delegated Regulation (EU) 2019/815, in the version in force at the date of the financial statements, on the technical specification for this file.

- Evaluate whether the ESEF documents enable XHTML rendering with content equivalent to the audited consolidated financial statements and to the audited combined management report.

- Evaluate whether the tagging of the ESEF documents with Inline XBRL technology (iXBRL) pursuant to Articles 4 and 6 of the Commission Delegated Regulation (EU) 2019/815 in the version in force at the date of the financial statements enables an appropriate and complete machine-readable XBRL copy of the XHTML rendering.

Further information pursuant to Article 10 of the EU Audit Regulation

We were elected as Group auditor by the annual general meeting on 28 April 2022. We were engaged by the Chair of the Audit Committee of the Supervisory Board on 8 August 2022. We have been the Group auditor of Münchener Rückversicherungs-Gesellschaft Aktiengesellschaft in München without interruption since the 2020 financial year.

We declare that the opinions expressed in this auditor's report are consistent with the additional report to the Audit Committee pursuant to Article 11 of the EU Audit Regulation (long-form audit report).

Other matters – Use of the auditor’s report

Our auditor’s report must always be read together with the audited consolidated financial statements and audited combined management report as well as the assured ESEF documents. The consolidated financial statements and combined management report converted to ESEF format – including the versions to be published in the Unternehmensregister [German Company Register] – are merely electronic renderings of the audited consolidated financial statements and the audited combined management report and do not take their place. In particular the ESEF report and our assurance opinion contained therein are to be used solely together with the assured ESEF documents made available in electronic format.

German Public Auditor responsible for the engagement

The German Public Auditor responsible for the engagement is Dr. Thomas Kagermeier.

Munich, 6 March 2023

Ernst & Young GmbH
Wirtschaftsprüfungsgesellschaft

Dr. Ott	**Dr. Kagermeier**
Wirtschaftsprüfer	Wirtschaftsprüfer
(German Public Auditor)	(German Public Auditor)

Independent auditor's report on a limited assurance engagement

The assurance engagement performed by Ernst & Young (EY) relates exclusively to the German version of the non-financial statement 2022 of Münchener Rückversicherungs-Gesellschaft Aktiengesellschaft in München. The following text is a translation of the original German Independent Assurance Report.

To Münchener Rückversicherungs-Gesellschaft Aktiengesellschaft in München, München

We have performed a limited assurance engagement on the non-financial statement included in the section "Combined non-financial statement" of the combined management report of Münchener Rückversicherungs-Gesellschaft Aktiengesellschaft in München, München, (hereinafter the "Company"), which is combined with the non-financial statement of the Group, as well as the section "Munich Re Group" of the combined management report incorporated by reference, for the period from 1 January to 31 December 2022 (hereinafter the "non-financial statement").

Not subject to our assurance engagement are other references to disclosures made outside the non-financial statement as well as prior-year disclosures.

Responsibilities of the executive directors

The executive directors of the Company are responsible for the preparation of the non-financial statement in accordance with Sec. 315c in conjunction with Secs. 289c to 289e HGB ["Handelsgesetzbuch": German Commercial Code] and Art. 8 of Regulation (EU) 2020/852 of the European Parliament and of the Council of 18 June 2020 on the establishment of a framework to facilitate sustainable investment and amending Regulation (EU) 2019/2088 (hereinafter the "EU Taxonomy Regulation") and the Delegated Acts adopted thereunder as well as in accordance with their own interpretation of the wording and terms contained in the EU Taxonomy Regulation and the Delegated Acts adopted thereunder as set out in various sections of the non-financial statement.

These responsibilities include the selection and application of appropriate non-financial reporting methods and making assumptions and estimates about individual non-financial disclosures that are reasonable in the circumstances. Furthermore, the executive directors are responsible for such internal control as the executive directors consider necessary to enable the preparation of a non-financial statement that is free from material misstatement, whether due to fraud (manipulation of the non-financial statement) or error.

The EU Taxonomy Regulation and the Delegated Acts adopted thereunder contain wording and terms that are still subject to considerable interpretation uncertainties and for which clarifications have not yet been published in every case. Therefore, the executive directors have disclosed their interpretation of the EU Taxonomy Regulation and the Delegated Acts adopted thereunder in various sections of the non-financial statement. They are responsible for the defensibility of this interpretation. Due to the immanent risk that undefined legal terms may be interpreted differently, the legal conformity of the interpretation is subject to uncertainties.

Independence and quality assurance of the auditor's firm

We have complied with the German professional requirements on independence as well as other professional conduct requirements.

Our audit firm applies the national legal requirements and professional pronouncements – in particular the BS WP/vBP ["Berufssatzung für Wirtschaftsprüfer/vereidigte Buchprüfer": Professional Charter for German Public Accountants/German Sworn Auditors] in the exercise of their Profession and the IDW Standard on Quality Management issued by the Institute of Public Auditors in Germany (IDW): Requirements for Quality Management in the Audit Firm (IDW QS 1) and accordingly maintains a comprehensive quality management system that includes documented policies and procedures with regard to compliance with professional ethical requirements, professional standards as well as relevant statutory and other legal requirements.

Responsibilities of the auditor

Our responsibility is to express a conclusion with limited assurance on the non-financial statement based on our assurance engagement.

We conducted our assurance engagement in accordance with International Standard on Assurance Engagements (ISAE) 3000 (Revised): "Assurance Engagements other than Audits or Reviews of Historical Financial Information" issued by the IAASB. This standard requires that we plan and perform the assurance engagement to obtain limited assurance about whether any matters have come to our attention that cause us to believe that the Company's non-financial statement is not prepared, in all material respects, in accordance with Sec. 315c in conjunction with Secs. 289c to 289e HGB and the EU Taxonomy Regulation and the Delegated Acts adopted thereunder as well as the interpretation by the executive directors disclosed in various sections of the non-financial statement. Not subject to our assurance engagement are other references to disclosures made outside the non-financial statement as well as prior-year disclosures.

In a limited assurance engagement, the procedures performed are less extensive than in a reasonable assurance engagement, and, accordingly, a substantially lower level of assurance is obtained. The selection of the assurance procedures is subject to the professional judgement of the auditor.

In the course of our assurance engagement we have, among other things, performed the following assurance procedures and other activities:

- Gain an understanding of the structure of the sustainability organisation and stakeholder engagement
- Inquiries of employees regarding the selection of topics for the non-financial statement, the risk assessment and the policies of the Company and the Group for the topics identified as material
- Inquiries of employees involved in the preparation of the non-financial statement about the preparation process, about the internal control system related to this process, and about disclosures in the non-financial statement
- Inquiries of employees responsible for data capture and consolidation as well as the preparation of the non-financial statement, to evaluate the reporting system, the data capture and compilation methods as well as internal controls to the extent relevant for the assurance of the disclosures in the non-financial statement
- Identification of likely risks of material misstatement in the non-financial statement
- Inspection of relevant documentation of the systems and processes for compiling, aggregating and validating data
- Analytical procedures on selected disclosures in the non-financial statement at the level of the Company and the Group
- Inquiries and inspection of documents on a sample basis relating to the collection and reporting of selected data
- Evaluation of the presentation of the non-financial statement
- Reconciliation of selected disclosures with the corresponding data in the annual financial statements and management report
- Evaluation of the process to compile the disclosures according to the EU Taxonomy Regulation in the non-financial statement

In determining the disclosures in accordance with Art. 8 of the EU Taxonomy Regulation, the executive directors are required to interpret undefined legal terms. Due to the immanent risk that undefined legal terms may be interpreted differently, the legal conformity of their interpretation and, accordingly, our assurance engagement thereon are subject to uncertainties.

Assurance conclusion

Based on the assurance procedures performed and the evidence obtained, nothing has come to our attention that causes us to believe that the non-financial statement of the Company for the period from 1 January to 31 December 2022 is not prepared, in all material respects, in accordance with Sec. 315c in conjunction with Secs. 289c to 289e HGB and the EU Taxonomy Regulation and the Delegated Acts adopted thereunder as well as the interpretation by the executive directors as disclosed in various sections of the non-financial statement.

We do not express an assurance conclusion on the other references to disclosures made outside the non-financial statement or prior-year disclosures.

Restriction of use

We draw attention to the fact that the assurance engagement was conducted for the Company's purposes and that the report is intended solely to inform the Company about the result of the assurance engagement. As a result, it may not be suitable for another purpose than the aforementioned. Accordingly, the report is not intended to be used by third parties for making (financial) decisions based on it. Our responsibility is to the Company alone. We do not accept any responsibility to third parties. Our assurance conclusion is not modified in this respect.

General Engagement Terms and liability

The "General Engagement Terms for Wirtschaftsprüfer and Wirtschaftsprüfungsgesellschaften [German Public Auditors and Public Audit Firms]" dated 1 January 2017 are applicable to this engagement and also govern our relations with third parties in the context of this engagement (www.de.ey.com/general-engagement-terms). In addition, please refer to the liability provisions contained there in no. 9 and to the exclusion of liability towards third parties. We accept no responsibility, liability or other obligations towards third parties unless we have concluded a written agreement to the contrary with the respective third party or liability cannot effectively be precluded.

We make express reference to the fact that we will not update the report to reflect events or circumstances arising after it was issued, unless required to do so by law. It is the sole responsibility of anyone taking note of the summarised result of our work contained in this report to decide whether and in what way this information is useful or suitable for their purposes and to supplement, verify or update it by means of their own review procedures.

Munich, 6 March 2023

Ernst & Young GmbH
Wirtschaftsprüfungsgesellschaft

Dr. Kagermeier	**Welz**
Wirtschaftsprüfer	Wirtschaftsprüfer
(German Public Auditor)	(German Public Auditor)

Responsibility statement

“To the best of our knowledge, and in accordance with the applicable reporting principles, the consolidated financial statements give a true and fair view of the assets, liabilities, financial position and profit or loss of the Group, and the combined management report for Münchener Rückversicherungs-Gesellschaft Aktiengesellschaft in München and the Group includes a fair review of the development and performance of the business and the position of the Group, together with a description of the material opportunities and risks associated with the expected development of the Group.”

Munich, 15 March 2023

Dr. Joachim Wenning

Dr. Thomas Blunck | Nicholas Gartside | Stefan Golling

Dr. Christoph Jurecka | Dr. Achim Kassow | Michael Kerner

Clarisse Kopff | Mari-Lizette Malherbe | Dr. Markus Rieß

Imprint/Service

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The official German original of this report is also available from the Company. In addition, you can find our annual and interim reports, along with further information about Munich Re and its shares, on the internet at www.munichre.com.

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Quarterly figures

		31.12.2022	30.9.2022	30.6.2022	31.3.2022
Balance sheet					
Investments (incl. insurance-related investments)	€m	230,925	235,191	234,394	245,295
Equity	€m	21,202	21,417	23,486	27,783
Net technical provisions	€m	232,456	237,781	233,017	234,551
Balance sheet total	€m	298,570	304,736	299,995	309,705
Shares					
Share price	€	304.00	247.50	224.20	243.00
Munich Reinsurance Company's market capitalisation	€bn	42.6	34.7	31.4	34.0
Other					
Combined ratio					
Reinsurance property-casualty	%	94.4	108.2	89.7	91.3
ERGO Property-casualty Germany	%	91.4	87.2	86.9	97.4
ERGO International	%	96.1	93.8	94.5	92.6
Number of staff		**41,389**	**40,569**	**40,177**	**39,458**

€m	Total	Q4 2022	Q3 2022	Q2 2022	Q1 2022
Gross premiums written	**67,133**	**16,222**	**18,228**	**15,850**	**16,833**
1. Earned premiums					
Gross	66,391	17,732	17,142	16,029	15,488
Ceded	–2,929	–898	–691	–640	–701
Net	63,462	16,834	16,451	15,389	14,787
2. Income from technical interest	3,435	1,089	964	817	565
3. Expenses for claims and benefits					
Gross	–49,405	–12,899	–13,765	–11,328	–11,412
Ceded share	2,448	992	372	452	633
Net	–46,957	–11,907	–13,393	–10,877	–10,780
4. Operating expenses					
Gross	–16,585	–4,782	–4,049	–3,949	–3,805
Ceded share	678	175	148	146	208
Net	–15,907	–4,607	–3,901	–3,803	–3,596
5. Technical result (1–4)	**4,032**	**1,409**	**121**	**1,527**	**976**
6. Investment result	**4,903**	**2,041**	**904**	**971**	**987**
Thereof: Associates and joint ventures accounted for using the equity method	52	9	9	13	21
7. Insurance-related investment result	–994	298	–167	–703	–423
8. Other operating income	1,265	397	287	302	280
9. Other operating expenses	–2,190	–671	–526	–517	–475
10. Deduction of income from technical interest	–3,435	–1,089	–964	–817	–565
11. Non-technical result (6–10)	**–450**	**976**	**–467**	**–764**	**–195**
12. Operating result	**3,582**	**2,385**	**–346**	**763**	**780**
13. Other non-operating result	–81	–52	–5	–11	–14
14. Currency result	676	–672	846	485	17
15. Net finance costs	–179	–42	–44	–46	–47
16. Taxes on income	–580	–104	76	–422	–130
17. Consolidated result	**3,419**	**1,516**	**527**	**768**	**608**
Thereof:					
Attributable to Munich Reinsurance Company equity holders	3,432	1,528	527	770	607
Attributable to non-controlling interests	–13	–11	0	–2	0

€	Total	Q4 2022	Q3 2022	Q2 2022	Q1 2022
Earnings per share	**24.63**	**11.05**	**3.79**	**5.50**	**4.34**

Important dates 2023

23 February 2023
Balance sheet media conference for 2022 consolidated financial statements (preliminary figures)

16 March 2023
Publication of the Group Annual Report 2022

5 May 2023
Annual General Meeting

17 May 2023
Quarterly Statement as at 31 March 2023

10 August 2023
Half-Year Financial Report as at 30 June 2023

8 November 2023
Quarterly Statement as at 30 September 2023

Important dates 2024

27 February 2024
Balance sheet media conference for 2023 consolidated financial statements (preliminary figures)

14 March 2024
Publication of the Group Annual Report 2023

25 April 2024
Annual General Meeting

8 May 2024
Quarterly Statement as at 31 March 2024

8 August 2024
Half-Year Financial Report as at 30 June 2024

7 November 2024
Quarterly Statement as at 30 September 2024

Münchener Rückversicherungs-Gesellschaft
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