

Best's Credit Rating Effective Date

December 21, 2023

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Information

[Best's Credit Rating Methodology](#)

[Guide to Best's Credit Ratings](#)

[Market Segment Outlooks](#)

Financial Data Presented

The financial data in this report reflects the most current data available to the Analytical Team at the time of the rating. Updates to the financial exhibits in this report are available here: [Best's Financial Report](#).

Hannover Rück SE

AMB #: 084092 | **AIIN #:** AA-1340125

Associated Ultimate Parent: AMB # 085259 - HDI Haftpflichtverband der Deutschen Industrie V.a.G.

Best's Credit Ratings - for the Rating Unit Members

Financial Strength Rating (FSR)

A+
Superior
Outlook: Stable Action: Affirmed

Issuer Credit Rating (ICR)

aa
Superior
Outlook: Stable Action: Affirmed

Assessment Descriptors

Balance Sheet Strength	Strongest
Operating Performance	Strong
Business Profile	Very Favorable
Enterprise Risk Management	Very Strong

Rating Unit - Members

Rating Unit: Hannover Rück SE | **AMB #:** 084092

AMB #	Rating Unit Members
085064	E+S Rückversicherung AG
020599	Glencar Insurance Company
094351	Hannover Life Re Co of America
068031	Hannover Life Reassurance Amer

AMB #	Rating Unit Members
085314	Hannover Re (Bermuda) Ltd
084133	Hannover Re (Ireland) DAC
085070	Hannover Rück SE

Rating Rationale

Balance Sheet Strength: **Strongest**

- The balance sheet strength of Hannover Rueck SE (Hannover Re) is underpinned by the strongest level of risk-adjusted capitalisation, as measured by Best's Capital Adequacy Ratio (BCAR), supported by strong capital generation from a diversified earnings profile and moderate net underwriting leverage.
- Risk-adjusted capitalisation is expected to remain within the strongest category. Well-defined risk controls, including conservative risk investment allocations, a strong liquidity profile and excellent asset-liability management, are expected to provide resilience to external pressures associated with capital market volatility and global economic uncertainty.
- Prudent reserving practices in place, underpinned by a track record of stable and overall positive reserve redundancies.
- Effective and prudent capital management, supported by access to capital markets and a track record of hybrid debt issues, contributes to strong capital buffers and reduces the potential for liquidity strain in a crisis.
- Comprehensive retrocession cover and effective catastrophe exposure management have proven to limit operating volatility and protect the group's capital base.

Operating Performance: **Strong**

- Track record of strong operating performance, supported by material contributions from investment income and profitable underwriting over the business cycle.
- The group has produced a weighted average return on equity of 11.5% and non-life combined ratio of 99.3% over the past five years (2018-2022) (as calculated by AM Best), underpinned by disciplined underwriting practices.
- At the end of the third quarter of 2023, Hannover Re reported a return on equity of 20%, underpinned by robust technical performance and stable investment return. Improved conditions in the property and casualty reinsurance segment and the large loss exposure, which has been in line with Hannover Re's large loss budget, supported a non-life combined ratio of 91.9% (IFRS 17 - discounted), as reported by the group.
- Performance of the non-life book is supported by moderate net catastrophe exposure, stringent underwriting and effective expense management. Excellent diversification of its non-life book is expected to support robust technical results, with higher reinsurance rates offsetting claim increases from high inflation.
- Investment return remains stable and robust, reflected by a five-year weighted average net investment return of 3.6% (2018-2022) (as calculated by AM Best). The higher interest rate environment is expected to further boost the group's investment return margins.

Business Profile: **Very Favorable**

- Globally diversified group with a defensible leading position in the global property/casualty and life reinsurance markets supported by excellent brand recognition and long-standing relationships with stakeholders.
- Excellent diversification by line of business and product type, with strong positions in niche market segments.
- Tailor-made financial solutions and structured reinsurance complement core traditional reinsurance business.
- Lean and efficient infrastructure partly mitigates the impact of a highly competitive environment and enables greater influence over pricing.
- Hannover Re is well positioned to continue to benefit from the improved P&C reinsurance market conditions.

Enterprise Risk Management: **Very Strong**

- Sophisticated enterprise risk management (ERM) framework embedded throughout the organisation and effectively utilised for strategic decision-making, resulting in a risk-aware culture at all levels.
- Strong risk culture and overall conservative management approach in place. The group maintains a clearly defined and consistent view of risk tolerances and appetites, including a conservative policy to support catastrophe risk management.
- A dynamic and sophisticated group internal capital model is in place and updated continuously to accurately reflect the evolving risk universe of Hannover Re.
- Extensive use of sophisticated tools and modelling techniques demonstrates a highly developed risk culture required to support the complexity of global operations.

- Major risks are statistically quantified, with their impact on capital assessed via various stress and scenario assessments.

Rating Lift/Drag

- Hannover Re group of companies maintains a high degree of financial and operational independence from the other operations of Talanx AG, an intermediate operating holding company, which is in turn owned by HDI Haftpflichtverband der Deutschen Industrie V.a.G. (HDI V.a.G.); therefore, no drag is applied.

Outlook

- The stable outlooks reflect AM Best's expectation that Hannover Re will maintain risk-adjusted capitalisation at the strongest level, as measured by BCAR, underpinned by prudent capital management and relatively low volatility. Operating performance is expected to remain strong over the medium term, supported by very strong ERM. Hannover Re's excellent market standing and competitive advantage as a leading global reinsurer is expected to allow the group to benefit from the hardening market rate environment.

Rating Drivers

- Negative rating pressure could occur if either Hannover Re's risk-adjusted capitalisation falls below AM Best's expectations for the strongest assessment or operating performance falls below expectations for the strong assessment, either of which could be due to factors such as outsized losses or deterioration in technical results.
- Negative pressure may arise if AM Best revises its assessments on the level of independence between Hannover Re and its parent company, Talanx AG.
- Positive rating actions are unlikely in the near term. Over a longer term, positive rating actions could arise if Hannover Re outperforms its peers in terms of operating results for an extended period of time and demonstrates strengthening of its key rating fundamentals to a standard commensurate with a higher rating level.

Key Financial Indicators

AM Best may recategorize company-reported data to reflect broader international reporting standards and increase global comparability.

Best's Capital Adequacy Ratio (BCAR) Scores (%)

Confidence Level	95.0	99.0	99.5	99.6
BCAR Score	55.0	40.0	33.8	31.9

Source: Best's Capital Adequacy Ratio Model - Global

Key Financial Indicators	2022 EUR (000)	2021 EUR (000)	2020 EUR (000)	2019 EUR (000)	2018 EUR (000)
Net Premiums Written:					
Life	8,034,999	7,519,457	7,155,189	6,931,919	6,484,807
Non-Life	21,637,390	16,623,863	14,205,380	12,797,639	10,804,172
Composite	29,955,881	24,857,260	22,327,622	20,345,381	17,397,532
Net Income	1,542,739	1,300,221	918,785	1,373,366	1,145,527
Total Assets	86,952,369	82,902,252	71,437,475	71,356,404	64,508,637
Total Capital and Surplus	8,747,713	12,756,231	11,839,416	11,354,479	9,542,028

Source: BestLink® - Best's Financial Suite

Key Financial Indicators & Ratios	2022 EUR (000)	2021 EUR (000)	2020 EUR (000)	2019 EUR (000)	2018 EUR (000)	Weighted 5-Year Average
Profitability:						
Balance on Life Technical Account	253,985	-215,472	56,750	280,937	103,828	...
Balance on Non-Life Technical Account	-25,137	334,943	-273,960	187,708	337,027	...
Net Income Return on Revenue (%)	4.9	5.0	4.0	6.4	6.1	5.2
Net Income Return on Capital and Surplus (%)	14.3	10.6	7.9	13.1	12.2	11.5
Non-Life Combined Ratio (%)	100.1	98.0	101.9	98.5	96.9	99.3
Net Investment Yield (%)	3.6	3.7	3.5	3.9	3.7	3.7
Leverage:						
Net Premiums Written to Capital and Surplus (%)	370.2	209.1	203.1	193.3	198.2	...

Source: BestLink® - Best's Financial Suite

Credit Analysis

Balance Sheet Strength

Hannover Re group's balance sheet strength is assessed as strongest by AM Best. The BCAR scores presented under the "Best Capital Adequacy Ratio Summary" section of this report are based on financial year-end data as at December 2022. The group reports under the IFRS 17 framework since January 2023.

Capitalisation

Hannover Re's balance sheet strength is underpinned by risk-adjusted capitalisation at the strongest level as measured by BCAR, and benefits from significant capital buffers that are in place to support its exposures. Hannover Re's risk-adjusted capitalisation is supported by prudent capital management and a track record of strong and stable earnings generation, which has been above the industry average over the past five years (2018-2022).

Within the BCAR model, AM Best gives capital credit to Hannover Re for its hybrid debt issue and the value-in-force of the life business, however, the group is not over-dependent on these softer capital elements.

Hannover Re has demonstrated its ability to manage its capital effectively and limit its earnings volatility through the use of comprehensive retrocession cover and a prudent reserving approach that is underpinned by a track record of stable reserve redundancies. The group has reported a compound annual growth rate (CAGR) of its capital and surplus of -1% over the period 2018 to 2022, driven by a strong decline in fixed asset valuations (unrealised losses) due to the change in interest rate environment. However, underlying capital generation driven by solid earnings in each of the past five years remained robust and positive. AM Best believes that despite external pressures, associated with the financial market volatility, global economic uncertainty as well as increased inflation pressures, the strength of the group's balance sheet is well positioned to remain resilient, supported by a strong liquidity profile and excellent asset-liability management.

At third quarter 2023, Hannover Re's capital and surplus grew by about 5% to EUR 10.49 billion from EUR 9.95 billion at year-end 2022.

Capital management:

Hannover Re has a comprehensive capital management strategy and manages capital both on an economic and regulatory perspective with decision making based on its internal capital model. Capital is managed at the group level and is considered to be fungible across group subsidiaries. The allocation of capital across the group's operational companies is based upon the economic risk content of the respective business operation, after taking into consideration the local capital and solvency requirements.

The group maintained a Solvency II ratio of 252% at end of 2022 (2021: 243%) and 270% at end of nine-months 2023 which remains comfortably above its minimum target ratio threshold of 200%, proving resilience against yield movements and unexpected large losses. The increase in the Solvency II ratio at end of nine-months 2023 is largely driven by strong capital generation and moderate growth.

Balance Sheet Strength (Continued...)

The group's effective capital management strategy also encompasses the utilisation of other sources of capital, underpinned by a track record of hybrid debt issues and the use of traditional and alternative retrocession protection, to offset the high costs associated with the use of equity capital.

Financial flexibility:

Hannover Re's financial flexibility is considered excellent, due to a track record of strong capital generation, moderate financial leverage, good coverage ratios and a good standing in the equity and debt markets. The group's access to the debt markets, as well as to the traditional and alternative markets to support its retrocession needs, is a factor that underpins AM Best's assessment of the group's financial flexibility. Additionally, the group has access to letters of credit and other facilities with various financial institutions to support its operations. Hannover Re maintains financial leverage and interest coverage ratios at levels that are within AM Best's tolerances for the strongest balance sheet strength assessment.

Hannover Re's financial flexibility is enhanced by its association to its intermediate parent, Talanx AG, which also maintains strongest risk-adjusted capitalisation. AM Best believes that the Hannover Re group of companies maintains a high degree of financial and operational independence from other operations of Talanx AG. Hannover Re has both, direct access to capital markets being a publicly listed entity as well as through the group.

Capital Generation Analysis	2022 EUR (000)	2021 EUR (000)	2020 EUR (000)	2019 EUR (000)	2018 EUR (000)
Beginning Capital and Surplus	12,756,231	11,839,416	11,354,479	9,542,028	9,286,558
Net Income	1,542,739	1,300,221	918,785	1,373,366	1,145,527
Net Unrealized Capital Gains (Losses)	-5,010,754	-514,379	1,029,438	966,762	-494,654
Currency Exchange Gains (Losses)	237,706	706,198	-726,193	182,389	267,406
Stockholder Dividends	-723,479	-588,480	-708,837	-687,252	-657,728
Other Changes in Capital and Surplus	-54,730	13,255	-28,256	-22,814	-5,081
Net Change in Capital and Surplus	-4,008,518	916,815	484,937	1,812,451	255,470
Ending Capital and Surplus	8,747,713	12,756,231	11,839,416	11,354,479	9,542,028
Net Change in Capital and Surplus (%)	-31.4	7.7	4.3	19.0	2.8

Source: BestLink® - Best's Financial Suite

Liquidity Analysis (%)	2022	2021	2020	2019	2018
Liquid Assets to Total Liabilities	62.9	71.5	72.9	71.1	69.1
Total Investments to Total Liabilities	73.0	80.3	82.4	79.6	76.9

Source: BestLink® - Best's Financial Suite

Asset Liability Management - Investments

Hannover Re maintains a conservative investment profile which is actively managed to ensure that the group can react to changing market conditions. The group maintains a low-risk investment portfolio, which is of high credit quality and well diversified. It consists mainly of fixed-income securities and cash which are considered to be highly liquid in nature. Additionally, approximately 7% of total investment portfolio consisted of direct or indirect real estate investment and 4% of private equities, as of end of third quarter 2023. The group's credit quality remains defensive but is adjusted to geographical shifts in operational exposure as the group aims to match its liabilities, which include a modestly increasing shift towards emerging markets.

Hannover Re also invests in structured fixed-income securities: fixed-to-float notes, callable or puttable bonds and inflation linked bonds and are subject to strict investment guidelines. While a major part of the callable bonds are related to the corporate bond portfolio where a call feature at the end of maturity becomes more dominant in the market, the inflation linked bonds are held for hedging purposes and match the group's liability profile. The group has built up its inflation linked bond holdings (about 8% of total investment portfolio) prior to the excessive increase in inflation, which have notably supported ordinary investment income.

Hannover Re continuously monitors its investment guidelines but new investment initiatives are undertaken conservatively and are not expected to increase the overall investment risk profile of the group. The group pursues a duration neutral strategy in its asset-liability management. Its investment portfolio largely matches its liabilities in terms of currency and duration and remained predominantly

Balance Sheet Strength (Continued...)

congruent with liability- and capital-driven targets. The overall modified duration of fixed income declined slightly as of third quarter 2023 compared to the prior year period as a result of higher market yields.

Hannover Re also benefits from a strong liquidity profile, mainly supported through strong cash flow (premium income) and a highly liquid asset portfolio. Furthermore, liquidity levels are also underpinned by collateralised reinsurance agreements. The group's excellent asset-liability management also supports its liquidity profile.

Composition of Cash and Invested Assets	2022 EUR (000)	2021 EUR (000)	2020 EUR (000)	2019 EUR (000)	2018 EUR (000)
Total Cash and Invested Assets	57,061,847	56,343,054	49,106,794	47,738,612	42,260,889
Cash (%)	3.3	3.2	3.3	3.3	3.5
Bonds (%)	82.9	85.3	84.4	86.0	86.2
Equity Securities (%)	...	0.6	0.8	0.1	0.1
Real Estate, Mortgages and Loans (%)	5.9	4.9	4.6	5.0	5.2
Other Invested Assets (%)	4.0	5.7	6.2	5.1	4.7
Total Cash and Unaffiliated Invested Assets (%)	96.1	99.6	99.3	99.5	99.7
Investments in Affiliates (%)	3.9	0.4	0.7	0.5	0.3
Total Cash and Invested Assets (%)	100.0	100.0	100.0	100.0	100.0

Source: BestLink® - Best's Financial Suite

Reserve Adequacy

The group has demonstrated a very conservative reserving approach, characterised by the establishment of sizeable reserve buffers. Reserves are determined based on statistical (stochastic and deterministic) methods, with the adequacy verified and agreed upon by an independent third party on an annual basis.

The group's strategy is to maintain an adequate reserve buffer, particularly in light of challenging market environment over the past years. This strategy has been underpinned by relatively stable reserve redundancy levels during the past five years (2018-2022). Traditionally, the group has a high confidence level in its reserves. Contributions from prior-year run-off profits have generally been within AM Best's expectations, with positive claims development illustrated over the past five years. It is anticipated that Hannover Re will continue to use the hard market phase to further strengthen its reserve resilience.

Hannover Re's L&H reserves are dominated by mortality and longevity risks. The reserving practices use cedants' data, with Hannover Re's adopting its own assumptions and utilising market-specific information. Specific concerns in the past relating to a book of US life business that Hannover Re acquired in 2009 are considered to be fully resolved, following consistent in-force management since 2017. Mortality and morbidity claims relating to the Covid-19 pandemic appear to be prudently reserved, with positive reserve development in 2023.

Overall, AM Best believes that Hannover Re's reserving strategy will continue to support the generation of strong technical profits, despite challenging market fundamentals.

Operating Performance

Hannover Re has a track record of stable and strong operating performance, supported by profitable underwriting and investment activities over the business cycle. The group's strong operating performance is underpinned by a highly diversified earnings profile, which is reflective of its diverse spread of risks both geographically and by line of business, conservative investment strategy as well as effective catastrophe management. The group's performance metrics have consistently been one of the strongest compared to its main peers over the past ten years (2013-2022).

Hannover Re has an excellent ten-year average return of equity (ROE) of 12% (2013-2022), as calculated by AM Best, with a track record of limited earnings volatility during that period. Despite the various large catastrophe events that occurred in 2017 and 2018 and 2022, the group was able to generate an ROE of 11%, 12% and 14% respectively in those years. At the third quarter 2023 the ROE stood at 20% (Q3 2022: 15.3%). The group targets a minimum ROE of 1000 bps above "risk free" (900 bps until 2022), which is defined by the 5-year rolling average of the 10-year German government bond rate.

Operating Performance (Continued...)

The group benefits from diversified earnings contributions with limited earnings volatility over the past 10 years. Hannover Re's non-life and life operations have contributed consistently positively to earnings in the majority of years. Investment income has historically been the main earnings contributor, as the group benefits from a large asset base and a low-risk investment strategy.

The history of good technical results is mainly underpinned by a strong performance of the non-life book, with technical performance being supported by moderate net catastrophe exposure, effective expense management due to the group's lean organisational structure and a conservative reserving policy. The stringent management of the group's natural catastrophe exposures and a less volatile business mix also contributed to strong and stable earnings over the cycle. The benefit of Hannover Re's less volatile operating model is demonstrated by the group's stable performance (underwriting and overall) since 2009. Additionally, Hannover Re's focus on prudent reserving helps it to limit underwriting volatility. Positive run-offs have allowed the group to generate strong technical profits despite deterioration in market fundamentals in recent years. As an illustration, Hannover Re reported a ten-year standard deviation in its non-life combined ratio of 3% (2013-2022).

Non-Life Reinsurance:

The underwriting performance of the group's P&C portfolio remains strong over the cycle, a reflection of its highly diversified profile. The group has been able to achieve consistent underwriting results in its non-life book which were close to its target levels over the past years, with results being notably better than those of its main peers. Hannover Re has produced a five-year (2018 to 2022) average non-life combined ratio of 99.3%, ranging between 96.9% and 101.9% (as calculated by AM Best). In 2022, the group reported a combined ratio of 100.1%, with a number of large Nat-Cat losses weighting on results, which added up to a EUR 1.7 billion net loss for Hannover Re.

The group has a track record of benefiting from its diversified retrocession cover and its prudent reserve holdings to manage earnings volatility. Positive run-offs have allowed the group to continue to generate strong technical profits despite the deterioration of market fundamentals and a number of major losses in recent years. In 2022, Hannover Re's reserve run-off profit was about EUR 732 million (2021: 848 million), or 3.4% of the group's net earned P&C premium (2021: 5.1%).

For the first nine months of 2023, the group reported a combined ratio of 91.9% (IFRS 17 - discounted) (94.6% in Q3 2022), which reflects strong rate increases as well as the large loss exposure which remained within the company's large loss budget.

Life and Health Reinsurance:

The technical performance of the life and health segment has shown a positive development in 2022 and first nine month of 2023, following fluctuation in results in prior years, largely owing to the underperformance of the group's mortality portfolio. In 2020 and 2021 increased mortality losses related to the pandemic have weighted on performance. However, the group's financial solutions business continued to show strong profitability.

The total Life & Health net income for the first nine months of 2023 improved to EUR 730 million compared to EUR 637 million for the same period of 2022, largely reflecting strong underlying performance in financial solutions and favourable claims development in mortality business. Net income from investments in life and health reinsurance, which had benefited from two sizeable special effects in the previous year, totaled EUR 315 million in Q3 2023 (EUR 359 million). Hannover Re's target is to generate a full year EBIT of EUR 750 million for full year 2022.

Investment Results:

Hannover Re has a track record of relatively strong investment income with low volatility, underpinned by a five-year weighted average net investment return of 3.7% (2018-2022), as calculated by AM Best. The group reported positive investment returns in recent years above its target return of at least 2.4%, supported by a diversified and conservative asset allocation with small pockets of alternative investments boosting ordinary investment income over the past years. Investment return continues to support overall operating earnings and is assumed to benefit notably from the higher interest rate environment and the group's low-risk investment approach. Investment return levels have partly benefited from opportunistic one-off-sales and well-timed transactions in the past.

At third quarter 2023, the group reported an ordinary investment yield of 3.4% (3.3%). The increase reflects higher locked-in yields due to the higher yield rate for reinvestments. The investment income also reflects a contribution from inflation-linked bonds (EUR 109 million).

Operating Performance (Continued...)

Financial Performance Summary	2022 EUR (000)	2021 EUR (000)	2020 EUR (000)	2019 EUR (000)	2018 EUR (000)
Pre-Tax Income	1,996,369	1,651,790	1,123,871	1,766,097	1,518,388
Net Income after Non-Controlling Interests	1,406,734	1,231,334	883,073	1,284,167	1,059,493

Source: BestLink® - Best's Financial Suite

Operating and Performance Ratios (%)	2022	2021	2020	2019	2018
Overall Performance:					
Return on Assets	1.8	1.7	1.3	2.0	1.8
Return on Capital and Surplus	14.3	10.6	7.9	13.1	12.2
Non-Life Performance:					
Loss and LAE Ratio	71.9	69.3	72.8	69.0	66.9
Expense Ratio	28.2	28.7	29.1	29.5	30.0
Non-Life Combined Ratio	100.1	98.0	101.9	98.5	96.9

Source: BestLink® - Best's Financial Suite

Business Profile

Hannover Re maintains a very favourable business profile as a leading global reinsurer. Hannover Re's leading market position reflects its highly diversified business mix (by product offerings and geographic spread), excellent financial strength, strong brand recognition and long-standing relationships with various stakeholders in the market. The established group's brand is underpinned by the expertise of its management team and successful track record of executing its strategy. The wide product offering allows Hannover Re to remain flexible and competitive in times of adverse market conditions or economic volatility, which in turn should support robust future operating results and long-term financial strength.

The group also benefits from strong underwriting and claims service abilities, as well as long standing relationships with brokers and clients. Hannover Re's ability to offer and access tailor-made structured reinsurance deals is one of its main competitive advantages, as the required expertise for this business enables only a few larger reinsurance players to offer it. In addition, its expertise across all lines of business enables it to cater to the growing demand for sophisticated multi-line solutions. The group is also one of the market leaders in Marine, Aviation and Credit & Surety reinsurance.

The group's excellent competitive position is a reflection of its business strategy, which pursues value-driven growth and the generation of risk-based returns in excess of the cost of capital. Hannover Re follows these strategic objectives through its ability to undertake active cycle management, allowing the group to optimally diversify its portfolio whilst balancing its risk return profile. Hannover Re therefore benefits from its ability to effectively deploy capital across its various business segments, thereby providing the group with the flexibility to maneuver through the varying market cycles.

Furthermore, Hannover Re's lean and efficient structures support its ability to focus on selective underwriting and bottom-line profits, particularly in challenging market conditions, without immediate concerns of the expense strain.

Market position:

At year-end 2022, Hannover Re ranked as the third largest composite reinsurer globally with GWP of EUR 33.3 billion (2021: EUR 27.8 billion), according to an AM Best study. As the operating conditions in the global reinsurance market benefit from hard pricing conditions, the group was able to benefit notably from this environment due to primary insurers looking to cede risks to reinsurers with a strong market standing and high credit profile. Hannover Re was able to partly increase its share and rates in most of its main lines of business during 2023, despite continued competitive market conditions. The group recorded GWP growth of 19.9% (foreign exchange adjusted) in 2022. In the first nine months of 2023 reinsurance revenue (gross) increased by 1.0%. The moderate growth reflects cycle management with a shift towards non-proportional business and disciplined underwriting.

AM Best believes that Hannover Re's excellent diversification and lean operational structure support its ability to focus on selective underwriting and bottom-line profits. The group benefits from a well-balanced portfolio by geography and lines of business. In 2022, approximately 43% (2021: 39%) of Hannover Re's P&C GWPs originated from North America, followed by Asia 15% (14%), United Kingdom 10% (11%), Germany 8% (9%), Australia 4% (4%), Latin America 4% (4%), Africa 1% (2%) and the rest of Europe 15% (17%). Hannover Re holds a strong position in the US and is the third largest life reinsurer there measured by life insurance in force (at

Business Profile (Continued...)

year-end 2022). This position is likely to remain stable over the medium term, due to the high barriers to entry in the US life reinsurance segment.

In its domestic market of Germany, Hannover Re benefits from its affiliation with Talanx AG, a leading multi-brand insurance group in Europe, and the excellent competitive position of its subsidiary, E+S Rueckversicherung AG, one of the largest composite reinsurer in Germany and a leading player within the domestic motor segment.

Opportunities:

The group continues to focus on strengthening its footprint in Asia-Pacific. The group has a strong market position in China as a local reinsurer and enjoys good customer relationships. Hannover Re regards Asia-Pacific as a key growth market due to strong demographic growth and increasing insurance density in emerging markets.

The group normally pursues a central underwriting approach with local talent as leads. However, for the Asia expansion the group is building up local underwriting expertise. This is a controlled transformation, by training key personnel in Hannover to instill culture and underwriting skills. No significant cost increase is expected due to the choice of low-cost hubs. The main growth LOBs in Asia are financial solutions and short-term health and critical illness. Hannover Re also benefits from its strong market profile as a provider of alternative reinsurance products and services, with structured reinsurance and ILS offerings supporting the group's expansion in recent years. Additionally, Hannover Re's expansion continues to benefit from strong economic demand in the emerging markets. Hannover Re is expected to continue to benefit from its competitive edge in structured solutions business with significant opportunities both in the life and non-life segment. The group has been able to benefit especially from high demand relating to capital and solvency relief cover from clients. Additionally, Hannover Re benefits from its strong reputation for innovative solutions combined with strong execution. Its expertise in specialty business, where it sees a strong demand for proportional reinsurance cover, is also a growth driver.

Going forward the group expects overall growth to be mainly driven by cyber risk (P&C), structured solutions (P&C), longevity (L&H) business, and more broadly in the Asia-Pacific region.

Distribution:

Hannover Re benefits from a good distribution channel mix and maintains excellent relationships with its stakeholders which ensures access to business even during periods of intense competition. A key strategic focus is customer excellence. The group is continuously aiming to broaden client relationships and seek leadership in customer centricity.

Long-standing relationships with clients allow the group to write tailor-made solutions on individual basis. Traditionally, around one third of the non-life business is written directly, with the rest being placed via brokers. Outside of its domestic market, the majority of the business is sourced through brokers, especially for non-proportional business. The relatively high share of direct business supports a flexible cost base.

In view of the digitalisation processes taking place in the insurance industry, Hannover Re places great focus on cooperation with cedants in order to offer the end-customers on-line underwriting and distribution solutions.

Operations:

Hannover Re reports through two business segments: Non-life Reinsurance and Life and Health Reinsurance.

Non-life Reinsurance:

The non-life portfolio [representing approximately 73% of consolidated GWP in 2022 (2021: 69%)], is highly diversified by line of business and territory. The group operates through two market segments: regional markets make up about 55% in 2022 (2021: 60%) of its non-life book and mainly comprise markets of North America and Continental Europe and an increasing share of the Asian market. Global lines comprise the remaining 45% (40%) which consist of marine and aviation, credit surety and political risks, facultative reinsurance, agricultural risks, structured reinsurance and insurance-linked securities (ILS).

The non-life portfolio has achieved a good growth over the past five years (2018-2022), as demonstrated by a CAGR of 17.7% in GWP. However, growth has been subject to fluctuations, which can partially be attributed to foreign exchange rate fluctuations. The 26.1% rise in non-life GWP in 2022 was largely driven by diversified growth from traditional and structured reinsurance business including strong rate increases.

Business Profile (Continued...)

Hannover Re also continues to benefit from its strong market profile as a provider of alternative reinsurance products and services, with structured reinsurance and ILS offerings supporting the group's expansion in recent years. Additionally, Hannover Re's expansion continued to benefit from strong economic demand in the emerging markets.

Life and Health Reinsurance:

The life and health portfolio [representing approximately 27% of consolidated GWP in 2022 (2021: 31%)] has been a growth story for Hannover Re overall, supported both organically and through acquisitions, although growth has been lower compared to the group's overall growth levels over the past years (2018-2022).

In 2009, Hannover Re acquired the ING US individual life reinsurance business from Scottish Re Group Limited, along with its infrastructure to support the underwriting of new term reinsurance treaties. This transaction enhanced Hannover Re's profile in the US life segment.

Hannover Re operates its life and health business through two categories, namely financial solutions (approximately 15% of L&H GWP in 2022) and risk solutions, which consists of mortality (40% of L&H GWP in 2022), morbidity (28%) and longevity business (17%). The group is a leading provider of financial solutions, which seeks to optimise cedants' balance sheets through capital and reserve relief. Such transactions provide funding for new business strain and mergers and acquisitions, release embedded values in maturing portfolios and optimise tax, solvency and surplus requirements.

North America, Asia and the UK are Hannover Re's largest life markets representing 63% of life and health GWP in 2022 (combined), followed by Australia/New Zealand, Rest of Europe, Latin America, Germany and Africa. In the US, Hannover Re is focused on the areas of mortality and financial solutions, whilst in Europe the group targets the areas of longevity, retirement provisions and long-term care. Life and health business is generally sourced on a direct basis through a worldwide network of branch offices and subsidiaries.

Growth of the life and health portfolio has shown modest levels over the past five years (2018-2022), as demonstrated by the CAGR for this segment of 5%, with GWP development fluctuating between a decline of 1.7% and a growth of 8.6% over this period. The movement in premium volumes has been largely affected by the prevailing strong competitive conditions globally. However, demand for capital relief offerings, especially in regions moving to a risk-based insurance regulatory approach has remained strong. Opportunities also arose in the financial solutions segment as demand from financially robust reinsurers was high.

At year-end 2022, life and health GWP rose by 5.8% (2021: 6.4%), driven by growth of all of the group's life segments.

Management quality:

The management team of Hannover Re demonstrates an in-depth expertise and understanding of the group's business. In recent years, the group has proven its ability to execute on its key strategic plans and adapt its expectations as required by the changing operating environment. This was shown over the past years (2018 to 2022), when, after a series of natural catastrophe events and large losses, the group was able to meet or outperform its pre-announced guidance targets by the end of each of those years. In 2023, the group has lifted its profit targets at the end of the year due to its strong underlying performance.

Group structure and affiliations:

Hannover Re is the intermediate operating holding company of the Hannover Re group of companies. The reinsurer is owned by Talanx AG (which held a 50.2% share of the group as of December 2021), institutional investors (37.7%) and private investors (12.1%). Hannover Re became a Societas Europea (SE) (a European public limited company) in March 2013.

Talanx AG is the intermediate operating holding company of the Talanx group of companies, a leading multi-brand insurance holding group in Europe. Talanx AG became an operating holding company in January 2019, following changes in its structure to an intra group reinsurer. Talanx AG consists mainly of primary insurance companies, in addition to its stake in Hannover Re. Less than 5% of Hannover Re's business is derived from subsidiaries of the Talanx group. AM Best believes that the Hannover Re group of companies maintains a high degree of financial and operational independence from the other operations of Talanx AG. The change in the Talanx AG structure is not impacting the business of Hannover Re, as internal reinsurance was previously provided by another Talanx group company.

In October 2012, Talanx AG was listed on the Frankfurt Stock Exchange resulting in its majority ultimate parent, HDI Haftpflichtverband der Deutschen Industrie V.a.G. (HDI V.a.G.), maintaining a 78.9% stake in Talanx AG (as of December 2021). HDI V.a.G. is a mutual holding company and its stake in Talanx remained relatively unchanged in recent years.

Business Profile (Continued...)

In January 2018, Hannover Re (through its subsidiary Hannover Finance Inc.) completed its purchase of Omaha Indemnity Co., a Wisconsin-domiciled property/casualty insurer in run-off. The main purpose of the acquisition was to enhance Hannover Re's operational flexibility in the US by having a licensed carrier there. The company has been renamed to Glencar Insurance Co. and is writing a small amount of business produced by Glencar Underwriting Managers Inc., which is also a part of the Hannover Re group.

Hannover Re has also sold its 49.8% stake in HDI Global Specialty to HDI V.a.G. in 2021, in order to solely focus on reinsurance business. The sale is not expected to have a materially impact on Hannover Re's business profile due to the relatively small direct contribution of Inter Hannover/HDI Global SE's premium base to overall premium income. Hannover Re continues to benefit from cessions of that business.

Company History:

Hannover Re was founded in Germany in 1966 as a reinsurance and direct insurance company and was incorporated under the name Aktiengesellschaft fuer Transport und Rueckversicherung. In 1976, the company adopted the name, Hannover Rueckversicherung Aktiengesellschaft, after transferring its direct marine portfolio to its parent company, HDI Haftpflichtverband der Deutschen Industrie V.a.G. Since then, the company has written reinsurance business.

In 1997, Hannover Re acquired part of the in-force reinsurance portfolios of Skandia International Insurance Company of Stockholm, as well as Skandia's related infrastructure. The transaction complemented Hannover Re's activity in certain growth segments, namely, life and health reinsurance, facultative reinsurance and aviation/space reinsurance. The transaction provided further geographic diversification and consequently positioned the group as a leader in the worldwide aviation market. Hannover Re also acquired the renewal rights of all the property and casualty reinsurance business as of 1 January 1998.

Hannover Re played a pioneering role in the securitisation of insurance risk and announced the first financing securitised by life insurance policies in 1998. The company established a reinsurer in Bermuda in 2001 and has since participated successfully in the global catastrophe market.

Geographical Breakdown of Gross Premium Written	2022 EUR (000)	2021 EUR (000)	2020 EUR (000)	2019 EUR (000)	2018 EUR (000)
Other Africa	631,996	622,441	518,085	570,707	524,109
Total Africa	631,996	622,441	518,085	570,707	524,109
Other Asia	5,325,845	4,463,120	4,340,543	3,793,197	2,955,658
Total Asia	5,325,845	4,463,120	4,340,543	3,793,197	2,955,658
France	1,131,745	1,034,597	1,099,165	954,044	813,904
Germany	2,107,512	1,998,499	1,753,635	1,490,616	1,168,186
Other Europe	3,518,105	3,253,195	2,751,329	2,673,085	2,389,166
United Kingdom	4,261,626	3,722,549	3,406,117	3,017,091	2,560,443
Total Europe	11,018,988	10,008,840	9,010,246	8,134,836	6,931,699
United States	12,881,095	9,688,940	8,185,890	7,788,325	6,608,779
Total North America	12,881,095	9,688,940	8,185,890	7,788,325	6,608,779
Australia	2,093,264	1,848,562	1,653,305	1,245,897	1,263,171
Other World-Wide	1,324,340	1,130,411	1,062,273	1,064,678	892,942
Total	33,275,528	27,762,314	24,770,342	22,597,640	19,176,358

Source: BestLink® - Best's Financial Suite

Enterprise Risk Management

Hannover Re's enterprise risk management (ERM) is supportive of a very strong assessment. The group's risk management capabilities are superior and suitable for its complex and globally diversified operations, underpinned by the utilisation of a strong risk management framework. The ERM framework is highly sophisticated and is fully embedded across the organisation from the Board, through to individual business units.

The group has demonstrated active use of its risk management tools, including its internal model, to identify, quantify and measure risks and risk correlations in order to mitigate and manage its relatively high risk exposure. This has enabled Hannover Re to implement

Enterprise Risk Management (Continued...)

its strategic plan and maintain successful performance over the long term. Hannover Re's corporate governance and risk culture promotes strong risk awareness and a disciplined risk-return approach. The group's risk framework is time and stress tested.

In AM Best's opinion, Hannover Re maintains a relatively high insurance risk profile, driven by its exposure to worldwide property catastrophe business and specialty lines. In addition, the group maintains exposure to long-tail lines of business, such as life and casualty, which can be sensitive to changes in the regulatory and economic environment. To manage its insurance risk, Hannover Re conducts regular reviews of underwriting and pricing guidelines.

The group's risk strategy, risk register and central system of limits and thresholds are reviewed at least annually and form a key component of its Risk and Capital Management Guideline. Hannover Re's Group Risk Management Division is responsible for naming, measuring and evaluating the main risks of the group. It develops models to estimate various loss probabilities, reserve recommendations, assesses risks of catastrophes and large losses and develops Hannover Re's internal capital model, which lies at the foundation of the group's ERM.

The group operates the "three lines of defence" model within its ERM. The first line of defence consists of risk steering and original risk responsibility for risk identification and assessment on the divisional or company level. The second line of defence - risk monitoring - is supported by the actuarial and compliance functions. The third line of defence represents the process-independent and group-wide risk monitoring performed by the internal audit function on behalf of the Executive Board. The group's Supervisory Board is at the top of its risk management system and is advising and supervising the Executive Board in its management of the company, inter alia with respect to risk management.

The group manages its total enterprise risk so that it can expect to generate positive group net income with a probability of 90% p.a. and the likelihood of the complete loss of its economic equity and shareholders' equity does not exceed 0.03% p.a. These indicators are monitored using the internal capital model. As a result, Hannover Re's business is managed on a risk-adjusted basis. Additionally, the group utilises the "intrinsic value creation" (IVC) concept to support strategic decisions - a measure which indicates whether the group's business is generating a profit in excess of the cost of capital. Where the business segment fails to meet the IVC metric, the group is active in its response of applying corrective measures.

Special attention is given to emerging risks, from which potential danger is not yet known. In this regard, Hannover Re has established a working group called Emerging Risks and Scientific Affairs, which identifies, evaluates and monitors emerging risks. It analyses risks associated with climate change, technological developments, shortage of resources and supply chain, amongst others. Appropriate risk management actions are taken as needed by Hannover Re in order to control these risks and may include, for example, the implementation of contractual exclusions or the development of new reinsurance products. Hannover Re employees are kept updated on these topics through an in-house information system. The group has also built up capabilities to include scenario based cyber modelling explicitly in its internal model, which in light of its increasing exposure to cyber risk will support the group to manage its risk profile adequately.

During the past few years, Hannover Re was subject to a number of risks related to recent changes in the political and regulatory environment in countries where it operates. The group has shown proactive management and sought necessary regulatory approvals and restructured its business activities as needed in order to mitigate any downside scenarios that may arise from these changes.

Catastrophe Exposure and Management:

Hannover Re has a conservative framework in place to support its catastrophe risk management. This process begins with the implementation of the group's catastrophe risk appetite within the strategic planning process, in which a defined portion of Hannover Re's capital is then allocated to the planned exposures for the year, according to the outcome of an internal model. The group's retrocession protection is then considered, based on underwriters' capacity demands and considering the risk budget for the group's catastrophic exposures.

Continuous monitoring of Hannover Re's exposures is being undertaken with the use of sophisticated modelling tools and support from the actuarial function. Additionally, stress tests are applied based on scenarios of various catastrophic events and their impact on the group's financial profile. Model validations are regularly undertaken to assess the limitations of the model and to test the validity of the model's outcome. In AM Best's opinion, Hannover Re demonstrates a thorough understanding of its catastrophe models and compensates prudently for any shortfalls.

Hannover Re's evaluation of its exposures to major catastrophic events also encompasses terrorism risk. The group utilises various tools, along with company- and market-specific data to support the assessment of its exposures based on several realistic disaster

Enterprise Risk Management (Continued...)

scenarios (RDS) in key locations. Pandemic risk and the risk of adverse long-term mortality trends associated with its life and health portfolio are also actively monitored. One of the tools to manage this risk is an index-based pandemic cover which Hannover Re introduced in 2013. This collateralised swap instrument has been placed with different investors in various tranches since then.

Reinsurance Summary

In AM Best's opinion, Hannover Re's retrocession strategy is a successful component within its risk management framework. The group has a comprehensive retrocession programme, which supports the stabilisation of its technical results through the elimination of peak exposures and therefore provides long-term protection of the group's capital. In addition to its traditional retrocession placements, Hannover Re benefits from its securitisation programmes allowing the group to control its aggregate exposures thereby maintaining losses within its risk appetite. The group's retrocession programme is considered to be appropriate for its underwriting exposure, including the management of its Nat-Cat exposures.

The group's retrocession programme includes a "whole account" protection which is a world-wide treaty consisting of two sections for peak and non-peak scenarios and a unique "K-cession" arrangement representing a modelled programme which has been utilised by the group for many years, as well as a large loss aggregate excess of loss cover, and additional covers which Hannover Re purchases with restricted territorial scope for its subsidiaries and branches.

The K-cession represents a modelled programme consisting of non-proportional reinsurance treaties for property, catastrophe, aviation and marine lines placed primarily in the capital markets. This transaction provides fully collateralised retrocession protection on peak worldwide catastrophe exposures. Despite losses experienced on this programme in recent years, Hannover Re continues to attract capacity to the K-cession. The group has traditionally benefited from its high risk diversification and strong relationships with its retrocessionaires, which has supported consistency in its placement of its retrocession cover.

At the same time, the group is not over-dependent on its retrocession, as demonstrated by an average retention ratio (non-life) of 87.5% over the past five years (2018-2022). Furthermore, AM Best believes that the credit risk exposure to its panel of retrocessionaires is limited. This reflects the low counterparty exposure to a single party and the excellent credit quality of its panel. Additionally, a large portion of recoverables is collateralised with deposits or letters of credit. Hannover Re also transacts incoming business and is therefore able to potentially offset any liabilities.

Environmental, Social & Governance

AM Best considers Hannover Re's exposure to environmental, social, and corporate governance (ESG) risks to be elevated but manageable. As a diversified global P/C and L/H insurer and reinsurer, writing effectively all personal, commercial and specialty lines of business on a worldwide basis, ESG is a meaningful consideration with respect to Hannover Re's global operational and credit profile.

Hannover Re has a robust and sophisticated process for managing its ESG-related risks. AM Best believes that the group carefully monitors its product segments and international markets in which it participates - both as an underwriter and investor - in order to actively manage its enterprise-wide exposure to a diverse array of ESG-related exposures.

The company has formulated an ESG framework and developed statements and policies to identify and manage ESG risk in underwriting. The group has started to align its investment operations with ESG practices and evolving disclosure requirements in 2012.

Through its P/C insurance and reinsurance segments, the group's underwriting operations are exposed to global climate-related risk, most notably to natural weather-related catastrophes, with natural catastrophe events representing some of the largest loss events in recent years. In order to manage weather-related risks, the group takes advantage of its sophisticated risk modelling tools in order to identify and measure its aggregate exposures. Hannover Re mitigates its exposure by setting limits for natural catastrophe risks and by utilising some reinsurance and retrocession. In addition to traditional retrocession, the group uses alternative risk transfer for natural catastrophe risks in particular. The group has managed the occurrence of large natural catastrophe events better than many of its peers, owing to its diversified portfolio, strong modeling and risk controls, comprehensive retrocession program, as well as its ability to reprice its catastrophe contracts on an annual basis which supports it to assimilate an ongoing raise in claim trends.

Hannover Re is also partly exposed to ESG-related litigation trends and reputational risk. These risks have been managed through prudent reserving and stringent underwriting practices.

Enterprise Risk Management (Continued...)

Hannover Re has also integrated ESG-related criteria into its investment policy, which includes negative screening and reflects various sustainable and ethical investment criteria. The group's strong integration of ESG-related criteria in its investment policy reduces the potential exposure to toxic assets and impacts of adverse asset valuations that could result from ESG-related triggers. Hannover Re's governance and ERM framework is robust. The company has very strong risk controls and governance in place, and has developed a solid approach to risk identification, quantification and mitigation across its operations.

Rating Lift/Drag

Hannover Re group of companies maintains a high degree of financial and operational independence from the other operations of Talanx AG, an intermediate operating holding company, which is in turn owned by HDI Haftpflichtverband der Deutschen Industrie V.a.G. (HDI V.a.G.).

Financial Statements

	12/31/2022		12/31/2022
	EUR (000)	%	USD (000)
Balance Sheet			
Cash and Short Term Investments	1,855,359	2.1	1,981,004
Bonds	47,307,197	54.4	50,510,840
Equity Securities	15,060	...	16,080
Other Invested Assets	7,884,231	9.1	8,418,151
Total Cash and Invested Assets	57,061,847	65.6	60,926,075
Reinsurers' Share of Reserves	3,766,559	4.3	4,021,630
Debtors / Amounts Receivable	9,060,252	10.4	9,673,812
Other Assets	17,063,711	19.6	18,219,266
Total Assets	86,952,369	100.0	92,840,783
Unearned Premiums	6,295,325	7.2	6,721,644
Non-Life - Outstanding Claims	41,723,048	48.0	44,548,533
Life - Outstanding Claims	5,857,816	6.7	6,254,507
Life - Long Term Business	7,824,075	9.0	8,353,921
Total Gross Technical Reserves	61,700,264	71.0	65,878,606
Debt / Borrowings	5,398,696	6.2	5,764,296
Other Liabilities	11,105,696	12.8	11,857,774
Total Liabilities	78,204,656	89.9	83,500,675
Capital Stock	120,597	0.1	128,764
Retained Earnings	9,699,372	11.2	10,356,213
Other Capital and Surplus	-1,728,995	-2.0	-1,846,083
Non-Controlling Interests	656,739	0.8	701,213
Total Capital and Surplus	8,747,713	10.1	9,340,108
Total Liabilities and Surplus	86,952,369	100.0	92,840,783

Source: BestLink® - Best's Financial Suite

				12/31/2022	12/31/2022
	Non-Life EUR (000)	Life EUR (000)	Other EUR (000)	Total EUR (000)	Total USD (000)
Income Statement					
Gross Premiums Written	24,242,258	9,033,270	...	33,275,528	35,528,947
Net Premiums Earned	21,637,390	8,034,999	...	29,672,714	31,682,150
Net Investment Income	...	589,677	1,471,174	2,060,851	2,200,412
Total Revenue	21,637,390	8,624,676	1,471,174	31,733,565	33,882,562
Benefits And Claims	15,558,745	6,784,238	...	22,342,983	23,856,050
Net Operating And Other Expenses	6,103,782	1,586,453	-296,022	7,394,213	7,894,949
Total Benefits, Claims And Expenses	21,662,527	8,370,691	-296,022	29,737,196	31,750,999
Pre-Tax Income	-25,137	253,985	1,767,521	1,996,369	2,131,563
Income Taxes Incurred	...	...	...	453,630	484,350
Net Income before Non-Controlling Interests	...	...	...	1,542,739	1,647,213
Non-Controlling Interests	...	...	...	136,005	145,215
Net Income/(loss)	...	...	...	1,406,734	1,501,998

Source: BestLink® - Best's Financial Suite

Related Methodology and Criteria

[Best's Credit Rating Methodology, 11/13/2020](#)

[Catastrophe Analysis in A.M. Best Ratings, 03/10/2023](#)

[Available Capital & Holding Company Analysis, 10/13/2017](#)

[Scoring and Assessing Innovation, 02/27/2023](#)

[Understanding BCAR for U.S. and Canadian Life/Health Insurers, 05/25/2023](#)

[Understanding Global BCAR, 07/06/2023](#)

Additional Rating Types

AM Best assigns Best's Issue Credit Ratings. Refer to the profile page to view current Issue Ratings for [Hannover Rück SE \(AMB#085070\)](#)

A Best's Financial Strength Rating opinion addresses the relative ability of an insurer to meet its ongoing insurance obligations. The ratings are not assigned to specific insurance policies or contracts and do not address any other risk, including, but not limited to, an insurer's claims-payment policies or procedures; the ability of the insurer to dispute or deny claims payment on grounds of misrepresentation or fraud; or any specific liability contractually borne by the policy or contract holder. A Financial Strength Rating is not a recommendation to purchase, hold or terminate any insurance policy, contract or any other financial obligation issued by an insurer, nor does it address the suitability of any particular policy or contract for a specific purpose or purchaser.

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