# BEST'S RATING REPORT

## Hannover Rück SE

Karl-Wiechert-Allee 50, 30625 Hannover, Germany

| | | |
|---|---|---|
| AMB #: 084092 | NAIC #: N/A | FEIN #: AA-1340125 |
| Phone: 49-511-5604-0 | Fax: 49-511-5604-1188 | Website www.hannover-re.com |


| | |
|---|---|
| Hannover Rück SE | A+ |
| E+S Rückversicherung AG | A+ |
| Hannover Life Re Co of America. | A+ |
| Hannover Life Reasr Bm Ltd | A+ |
| Hannover Life Reassurance Amer | A+ |
| Hannover Re (Bermuda) Ltd | A+ |
| Hannover Re (Ireland) DAc | A+ |
| International Ins Co Hannover | A+ |

Financial Strength Rating
A+ Superior

# Hannover Rück SE

**Report Release Date:**
January 25, 2018

**Group Members Rating Effective Date:**
December 7, 2017

**Disclosure Information:** Refer to rating unit members for each company's Rating Disclosure Form

## Analytical Contacts

**A.M. Best Europe - Rating Services Ltd.**

Valeria Ermakova
Senior Financial Analyst
Valeria.Ermakova@ambest.com
+44 207 626 0269

Mahesh Mistry
Senior Director-Analytics
Mahesh.Mistry@ambest.com
+44 207 397 0325

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

**A.M. Best Rating Unit:** 084092 - Hannover Rück SE

## Best's Credit Ratings for Group Members:

Rating Effective Date: December 7, 2017

| | | | Best's Financial Strength Ratings | | | Best's Issuer Credit Ratings | | |
|---|---|---|---|---|---|---|---|---|
| AMB# | Company | | Rating | Outlook | Action | Rating | Outlook | Action |
| ***084092*** | ***Hannover Rück SE*** | ***Rating Unit*** | | | | | | |
| 085070 | Hannover Rück SE | | A+ | Stable | Affirmed | aa | Stable | Upgraded |
| 085064 | E+S Rückversicherung AG | | A+ | Stable | Affirmed | aa | Stable | Upgraded |
| 094351 | Hannover Life Re Co of America | | A+ | Stable | Assigned | aa | Stable | Assigned |
| 088859 | Hannover Life Reasr BM Ltd | | A+ | Stable | Affirmed | aa | Stable | Upgraded |
| 068031 | Hannover Life Reassurance Amer | | A+ | Stable | Affirmed | aa | Stable | Upgraded |
| 085314 | Hannover Re (Bermuda) Ltd | | A+ | Stable | Affirmed | aa | Stable | Upgraded |
| 084133 | Hannover Re (Ireland) DAC | | A+ | Stable | Affirmed | aa | Stable | Upgraded |
| 086486 | International Ins Co Hannover | | A+ | Stable | Affirmed | aa | Stable | Upgraded |

# Rating Rationale:

## Balance Sheet Strength: Strongest

- Balance sheet strength underpinned by strongest level of risk-adjusted capitalisation as measured by Best's Capital Adequacy Ratio (BCAR), moderate use of soft capital elements, prudent reserving approach, access to capital markets and effective capital management.
- Risk-adjusted capitalisation supported by good earnings generation from diversified sources, low-risk investment portfolio and excellent credit quality of the retrocession panel.
- Intangible elements, such as the value of in-force life business and hybrid debt, contribute to the significant capital buffers.

- Comprehensive retrocession programme, including capital market transactions, helps to limit operating volatility and protect its capital base.
- Effective management of the business undertaken through the use of capital management tools.

## Operating Performance: Strong

- Track record of maintaining strong operating performance through business cycles. The group has produced a weighted average return on equity of 14.6% and combined ratio of 94.9% over the past five years (2012-2016).
- The natural catastrophe losses in the third quarter of 2017 are expected to dampen overall earnings; however, the group is on track to achieve its revised guidance of approximately EUR 800 million net income for the full year, boosted by realised investment gains and life technical margins.
- Investment performance is good with the five-year weighted average net investment return of 4.2%, but limited by the low interest rate environment and the group's low-risk investment approach.
- Performance of the non-life book supported by moderate net catastrophe exposure and effective expense management due to the group's lean organisational structure.
- The life underwriting portfolio continues to be affected by under-performance of the legacy U.S. mortality book, which is offset by improved margins on new life business.

## Business Profile: Very Favorable

- Globally diversified group with a leading market profile in the reinsurance sector.
- Business profile supported by a strong brand recognition and long-standing relationships with stakeholders.
- Excellent diversification by line of business and product type, with strong positions in niche market segments.
- Primary insurance in selected markets and tailored-made financial solutions complement core reinsurance business.
- Lean and efficient infrastructure partly mitigates the impact of highly competitive environment and enables greater influence over pricing.

## Enterprise Risk Management: Very Strong

- Risk management framework fully embedded within the organisation and effectively utilised for strategic decision making, which includes the utilisation of internal capital model.
- Extensive use of sophisticated tools and modelling techniques demonstrates 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.
- Conservative policy in place to support catastrophe risk management.

## Rating Lift/Drag

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

## Outlook

The stable outlooks reflect the expectation that Hannover Re's rating fundamentals will remain unchanged over the medium term.

# Rating Drivers

Positive rating actions are unlikely in the near term, but could occur over a longer time horizon if Hannover Re demonstrates strengthening of its key rating fundamentals to a standard commensurate with a higher rating level.

Additionally, a track record of improvements and greater stability in the performance of Hannover Re's life and health book will be required to support upwards rating pressure.

Negative rating actions could occur if Hannover Re's consolidated risk-adjusted capitalisation or operating performance were to fall to a level outside of A.M. Best's expectations, due to factors such as unexpectedly high losses, deterioration in underwriting risk controls resulting in sustained decline in technical results or the implementation of a high risk investment strategy.

Negative pressure may also arise if A.M. Best revises its assessments on the level of independence between Hannover Re and its parent company, Talanx.

## Financial Data Notes:

**Time Period:** Annual - 2016 **Status:** A.M. Best Quality Cross Checked **Data as of:** 01/18/2018

## Key Financial Indicators:

### Key Financial Indicators (000)

| | Year End | | | | |
|---|---|---|---|---|---|
| | 2016 | 2015 | 2014 | 2013 | 2012 |
| Premiums | | | | | |
| Net premiums written - combined | 14,603,998 | 14,849,569 | 12,580,737 | 12,420,488 | 12,366,393 |
| Net premiums written - non life | 7,985,047 | 8,099,717 | 7,011,347 | 6,866,317 | 6,854,040 |
| Net premiums written - life | 6,432,387 | 6,492,412 | 5,411,425 | 5,359,847 | 5,425,620 |
| Capital & Surplus | 8,997,230 | 8,068,344 | 7,550,758 | 5,888,436 | 6,032,472 |
| Total Assets | 63,528,602 | 63,214,938 | 60,457,584 | 53,915,544 | 54,811,676 |

Source: Bestlink - Best's Statement File - Global
Local Currency: Euro
US $ per Local Currency Unit 1.05373 = 1 Euro (EUR)

### Key Financial Indicators - A.M. Best Ratios (%)

| | Year End | | | | |
|---|---|---|---|---|---|
| | 2016 | 2015 | 2014 | 2013 | 2012 |
| Combined Ratio | 94.0 | 94.7 | 95.0 | 95.1 | 96.0 |
| Net Premiums Written to Equity | 162.3 | 184.0 | 166.6 | 210.9 | 205.0 |
| Liquidity | | | | | |
| Liquid Assets to Total Liabilities | 69.8 | 65.2 | 63.1 | 61.5 | 61.6 |
| Total Investments to Total Liabilities | 76.8 | 71.5 | 68.6 | 66.5 | 65.5 |

Source: Bestlink - Best's Statement File - Global

### Best's Capital Adequacy Ratio Summary - AMB Rating Unit (%)

| Confidence Level | 95.0 | 99.0 | 99.5 | 99.6 |
|---|---|---|---|---|
| BCAR Score | 70.5 | 58.7 | 54.1 | 52.5 |

Source: Best's Capital Adequacy Ratio Model - Universal

# Credit Analysis:

## Balance Sheet Strength: Strongest

### Capitalization:

The BCAR scores presented under the “Best's Capital Adequacy Ratio Summary” section of this report are based on the year-end 2016 audited financial statements.

Hannover Re's balance sheet strength is underpinned by risk-adjusted capitalisation at the strongest level as measured by Best's Capital Adequacy Ratio (BCAR). Within the BCAR model, A.M. 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 of these softer capital elements. On a catastrophe-stressed basis, Hannover Re's BCAR scores show resilience and remain at the strongest level due to its effective catastrophe risk management.

Over several years, Hannover Re has demonstrated its ability to manage its capital effectively and limit its earnings volatility through the use of comprehensive retrocession programme and prudent reserving approach. The group has reported a compound annual growth rate (CAGR) of its capital and surplus of 12.6% over the period 2012 to 2016, supported by strong internal capital generation through solid earnings in each of those years, both from technical margins as well as investment income. For the first nine months of 2017, Hannover Re reported a decline of capital and surplus to EUR 10.4 billion from EUR 11.2 billion at year-end 2016, largely owing to a step-up in dividend payments and negative effects of currency translations. Going forward, A.M. Best expects Hannover Re to continue to generate capital to support its growth plans.

Capital management:

Hannover Re utilises effective capital management strategy with decision making based on its internal capital model. Additionally, the group benefits from robust regulatory oversight in the markets where it operates. At year-end 2016, Hannover Re had a Solvency II ratio of 230%, which remained at a similar level at half-year 2017.

Additionally, the group's capital management strategy encompasses the utilisation of other sources of capital, which include hybrid debt and traditional and alternative retrocession protection, to offset the high costs associated with the use of equity capital.

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's regulatory solvency position is expected to improve by year-end 2017, following the de-risking of its investment portfolio and the approval of the operational risk module of its internal model. These actions are expected to neutralise the impact of the catastrophe losses on the group's solvency position.

Financial flexibility:

Hannover Re's access to the debt markets, as well as the traditional and alternative markets to support its retrocession needs, is a factor that underpins A.M. Best's opinion of the group's excellent 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 A.M. Best's tolerances. Hannover Re's financial flexibility was enhanced by the initial public offering of its intermediate parent, Talanx, in 2012, which also maintains strong risk-adjusted capitalisation.

A.M. Best believes that the Hannover Re group of companies maintains a high degree of financial and operational independence from other operations of Talanx. The group has direct access to capital markets being a publicly listed entity, as well as through the group.

Liquidity:

## Capitalization: (Continued...)

Hannover Re maintains excellent liquidity levels, as demonstrated by a substantial operating cash flow of EUR 2.3 billion, with cash and cash equivalents holdings of EUR 848.7 million and short-term investment holdings of EUR 839.0 million at year-end 2016. The group maintains a highly liquid portfolio, and the fixed income portfolio is of a relatively short duration with a modified duration of 5.0 years at year-end 2016.

Retrocession:

In A.M. 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 includes a "whole account" protection which is a world-wide treaty consisting of two sections for peak and non-peak scenarios, a unique "K-cession" arrangement representing a modelled programme which has been utilised by the group for many years, as well as an aggregate excess of loss cover, 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 natural catastrophe exposures. Despite losses experienced on this programme, Hannover Re continues to attract capacity to the K-cession, meeting its targets of obtaining at least USD 400 million of 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 87.8% over the past 5 years (2012-2016). Furthermore, in regard to its credit risk exposure to its panel of retrocessionaires, A.M. Best believes that the downside associated with the potential for default is limited. This reflects the low counterparty exposure to a single party and the excellent credit quality of its panel. In 2016, approximately 75% of total reinsurance recoverables were from companies rated "a-" or above (as per A.M. Best's Issuer Credit Rating scale). Additionally, 47.5% of recoverables were collateralised with deposits or letters of credit.

### Capital Generation Analysis (000)

| | Year End | | | | |
|---|---|---|---|---|---|
| | 2016 | 2015 | 2014 | 2013 | 2012 |
| Capital & surplus brought forward | 8,777,470 | 8,252,960 | 6,530,027 | 6,714,144 | 5,606,655 |
| Change in non-distributable reserves | ... | ... | ... | ... | -5,717 |
| Change in other reserves | ... | ... | ... | ... | 5,717 |
| Currency exchange gains | 173,829 | 325,652 | 443,189 | -233,757 | -29,531 |
| Profit or loss for the year | 1,226,426 | 1,214,713 | 1,065,107 | 939,249 | 924,989 |
| Capital gains or (losses) | 166,566 | -444,923 | 595,916 | -442,611 | 536,577 |
| Dividend to shareholders | -612,953 | -557,435 | -403,380 | -410,284 | -321,994 |
| Other changes | 9,209 | -13,497 | 22,101 | -36,714 | 23,584 |
| Total change in capital & surplus | 963,077 | 524,510 | 1,722,933 | -184,117 | 1,133,625 |
| Capital & surplus carried forward | 9,740,547 | 8,777,470 | 8,252,960 | 6,530,027 | 6,740,280 |

Source: Bestlink - Best's Statement File - Global
Local Currency: Euro
US $ per Local Currency Unit 1.05373 = 1 Euro (EUR)

## Asset Liability Management – Investments:

Hannover Re actively manages its investments to ensure it maintains a conservative profile so that it can react to changing market conditions.

The group maintains a low-risk highly diversified investment portfolio, consisting of fixed-income securities (85% of total investments at year-end 2016), real estate (4%), cash and deposits (4%), equities (4%) and other holdings.

## Asset Liability Management – Investments: (Continued...)

At year-end 2016, approximately 52% of Hannover Re's fixed-income portfolio consisted of government and semi-government bonds, followed by corporate bonds and asset-backed securities. Approximately 95% of the portfolio's credit quality was investment grade.

In view of the low interest rate environment, in 2016, Hannover Re utilised a Barbell approach investment management keeping the overall credit quality the same through enlarging its holdings of lower-rated securities and emerging market holdings, at the same time increasing the proportion of government bonds. Additionally, in the third quarter of 2017, Hannover Re realised gains on almost all of its listed equities, which resulted in equities representing a negligible share of its investment portfolio. Overall, investment portfolio remains of a very high credit quality and A.M. Best does not expect a significant deviation from Hannover Re's current strategic asset allocation in the medium term.

## Reserve Adequacy:

The group demonstrates a conservative approach in the establishment of reserve provisions. 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 strategy is to maintain a reserve buffer, particularly in light of the soft market conditions. Traditionally, the group has a high confidence level in its reserves and a margin above its external actuary's best estimate. Contributions from prior-year run-off profits have generally been within A.M. Best's expectations, with positive claims development illustrated over the past five-years.

Historically, the group maintains a large loss budget set each year within its property and casualty reserves. In 2016, the large loss budget was EUR 825.0 million compared to the actual burden of large losses of EUR 627.0 million.

A.M. Best believes that Hannover Re's conservative reserving strategy is likely to continue to support the generation of strong technical profits, despite the deterioration in market fundamentals.

# Operating Performance: Strong

Operating Results:

Hannover Re has a track record of maintaining strong operating results through business cycles. The group's highly diversified earnings profile is reflective of its diverse spread of risks both geographically and by line of business, conservative investment strategy and effective catastrophe management. The group's financial metrics are largely in line with its peers, however the company performance is impacted by the weakness in Hannover Re's life book, which has been underperforming in recent years and is expected to continue to place a drag on earnings over the coming years.

Over the past five years (2012-2016), Hannover Re has produced an average return on equity (ROE) of 14.6%, (based on A.M. Best's calculations) with double-digit returns experienced in each year over the period. Despite the high incidence of major losses in 2011, Hannover Re was able to produce an excellent return of 14.3%, which A.M. Best believes is a testament to its very strong risk management framework.

Hannover Re has generated better and more stable results since 2008, with the improvements being driven by several factors that include the implementation of a more conservative investment and reserving strategy, the stringent management of the group's natural catastrophe exposures and a shift to a less volatile business mix. In 2016, the life and health segment accounted for 44% of consolidated gross written premiums (GWP) compared with approximately a quarter of premium volumes in the mid-2000s.

Operating results at year-end 2016 remained strong with a net profit of EUR 1.2 billion (2015: EUR 1.2 billion). Despite a number of natural catastrophe events in the year, including forest fires in Canadian province of Alberta, Hurricane Matthew and the earthquakes in Ecuador and New Zealand, the group was able to achieve a strong non-life combined ratio of 94.0% (2015: 94.7%). The life and health account produced an EBIT margin (relative to net earned premiums) of 5.3% (2015: 6.2%).

Underwriting Results:

Non-Life Reinsurance:

The underwriting performance of Hannover Re's non-life portfolio is strong, as demonstrated by a five-year weighted average non-life combined ratio of 94.9% and is consistent with that of its peers over the period. Excluding the 2011 year, which was affected by a high incidence of major loss events resulting in a combined ratio of 104.5%, the combined ratio has remained below 100% since 2008. This is in contrast to the five-year period before 2008, in which the group consistently produced a combined ratio in excess of 100% (including the benefits of run-off profits).

Hannover Re incorporates an annual major loss load within its forecast, amounting to EUR 825 million for the 2016 year (2015: EUR 690 million). Major losses have contributed on average roughly 5-10 percentage points to the loss ratio between 2010 and 2016. Additionally, contributions from the positive run-off in reserves to technical results have been relatively stable and within expectations, benefitting the loss ratio in recent years.

The group's lean organisational infrastructure supports its ability to operate on a relatively low expense base. This is demonstrated by a five-year weighted average non-life expense ratio of 25.8% (2012-2016).

Life and Health Reinsurance:

The technical performance of the life and health segment is a partially offsetting rating factor for Hannover Re, owing to the underperformance of the mortality/morbidity portfolios. These accounts have generated higher than expected levels of mortality and morbidity experience due to a combination of factors that have affected the market as a whole, particularly for the US mortality and Australian disability income insurance (DII) sector. Although, corrective measures have been taken to improve the profitability of the life and health segment, the results of the mortality and morbidity accounts continue to fail to consistently meet Hannover Re's internal performance expectations. At the same time, the new life business is noted to have better performance partially offsetting losses from the older book.

Hannover Re reported an EBIT margin (relative to net earned premium) for the life and health portfolio of 5.3% for 2016 (2015: 6.2). The decline was due to the elimination of a one-off effect. The mortality and morbidity account alone produced an EBIT margin of 3.4%, below Hannover Re's internal target of 6.0%, largely owing to higher than expected mortality and lapses affecting the US mortality portfolio.

The life and health segment is expected to continue to yield positive earnings, supported by the good level of profit emergence anticipated from this portfolio. The profitability associated with new business written continued to develop positively with the value of new business amounting to EUR 893 million in 2016 (2015: EUR 543 million), outperforming Hannover Re's internal targets of EUR 220 million for 2016.

Investment Results:

Hannover Re's operating results have benefitted from a relatively stable investment return (including realised and unrealised gains and losses and excluding funds withheld and contract deposits) of 4.2% in the past five years (2012-2016). The impact of low interest rates on the group's investment earnings has been compensated by the effect of the rise in premium volumes on a larger asset base, higher investment income derived from the group's expanding corporate bond asset class and, more recently, the equity and real estate portfolio, which has generated gains.

Interim Results:

For the first nine months of 2017, Hannover Re reported a net income of EUR 549 million, compared to EUR 792 million reported for the same period of 2016. The results were affected by a higher reported combined ratio of 104.4% (nine months 2016: 95.0%) due a series of natural catastrophe events. At the same time, the severity of these losses was cushioned by the positive operating results of the life business and exceptionally strong investment income of over EUR 200 million, following the sale of listed equities.

Net losses from natural catastrophe events, including hurricanes Harvey, Irma and Maria, as well as some man-made events amounted to EUR 894 million in the first nine months of 2017, marginally exceeding the group's large loss budget for the year of EUR 825 million. Nonetheless, the group's net exposure demonstrated the effectiveness of its retrocession programme, with approximately 45% of the gross loss burden from the natural and man-made catastrophe events in this period being borne by Hannover Re's retrocessionaires.

As a result, the group's return on equity for nine months of 2017 was slightly below its strategic target, although still at a solid level at 8.5%, thanks to the exceptional investment income and good technical margins from the life and health book.

In A.M. Best's opinion, Hannover Re is well on track to achieve its revised guidance for the full year 2017, including EUR 800 million of net income.

## Financial Performance Summary (000)

| | Year End | | | | |
|---|---|---|---|---|---|
| | 2016 | 2015 | 2014 | 2013 | 2012 |
| Pre-Tax Income | 1,617,655 | 1,670,920 | 1,370,670 | 1,102,392 | 1,289,394 |
| Net Income | 1,171,229 | 1,150,725 | 985,649 | 895,467 | 849,592 |

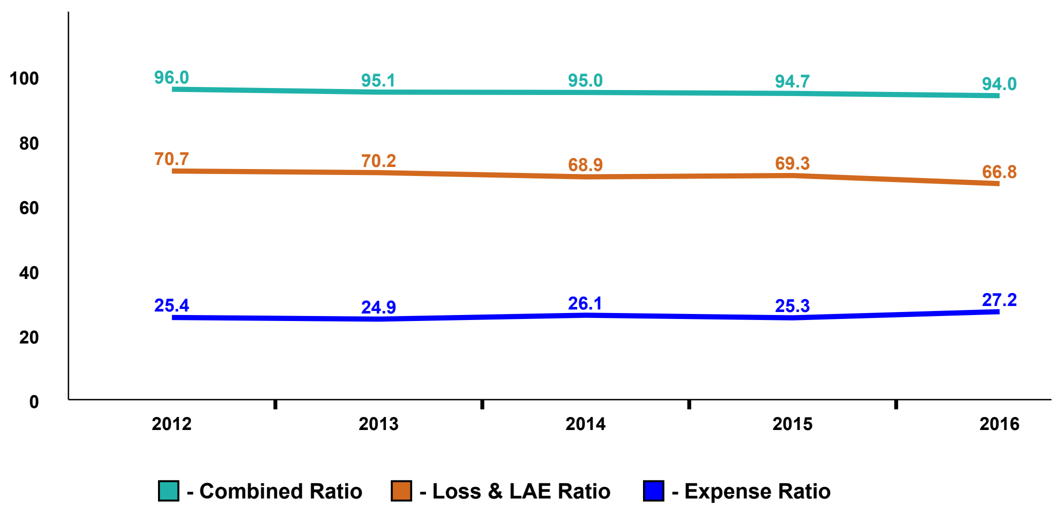
Source: Bestlink - Best's Statement File - Global
Local Currency: Euro
US $ per Local Currency Unit 1.05373 = 1 Euro (EUR)

## A.M. Best Ratios (%)

| | Year End | | | | |
|---|---|---|---|---|---|
| | 2016 | 2015 | 2014 | 2013 | 2012 |
| Overall Performance: | | | | | |
| Return on Assets | 1.9 | 2.0 | 1.9 | 1.7 | 1.8 |
| Return on Equity | 13.7 | 14.7 | 14.7 | 15.0 | 15.4 |
| Non-Life Performance: | | | | | |
| Loss & LAE Ratio | 66.8 | 69.3 | 68.9 | 70.2 | 70.7 |
| Expense Ratio | 27.2 | 25.3 | 26.1 | 24.9 | 25.4 |
| Combined Ratio | 94.0 | 94.7 | 95.0 | 95.1 | 96.0 |
| Combined less Investment Ratio | 82.7 | 83.0 | 83.0 | 83.7 | 82.2 |

Source: Bestlink - Best's Statement File - Global

## Combined Ratio (%)




# Business Profile: Very Favorable

Hannover Re maintains a very favourable business profile as the third-largest composite reinsurer globally with GWP of EUR 16.4 billion at year-end 2016. 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 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 insurance 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 manoeuvre 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.

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. E+S Rueckversicherung AG's profile is further enhanced by its strong relationship with some mutual insurers in the market that are also its shareholders.

In addition to its reinsurance portfolio, Hannover Re underwrites a small amount of complementary primary business primarily through its subsidiary, International Insurance Company of Hannover SE. This involves defined portfolios of niche and non-standard business segments. The majority of the direct business is written on the London market and through Hannover Re's Swedish branch, although there are rising contributions from Canada, Australia and Germany. Additionally, Hannover Re's South African-based subsidiary, Compass Insurance Company Limited, derives direct business from South Africa, which is generated through underwriting management agencies (UMAs) there.

The direct operations benefit from solid profiles of Hannover Re's subsidiaries and branches in their respective markets. Primary business represents a minor share of the portfolio and accounts for less than 5% of Hannover Re's consolidated GWP.

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

Non-life Reinsurance:

The non-life portfolio (representing approximately 56% of consolidated GWP) is highly diversified by line of business and territory.

Hannover Re operates through three market segments: target markets comprising the markets of North America and Continental Europe (approximately 32.5% of non-life GWP at year-end 2016); specialty lines (29.0%), which consist of marine, aviation, credit surety and political risks, the UK, Ireland and London markets, and facultative reinsurance; and global reinsurance (38.5%), which encompasses all other segments worldwide including catastrophe reinsurance (primarily written out of Bermuda), agricultural risks, retakaful business, structured reinsurance and insurance-linked securities (ILS). Hannover Re demonstrates a low appetite for natural catastrophe business in view of the intense competition for this segment.

Geographically, GWP sourced from the non-life portfolio is derived from North America (35.0%), rest of Europe (19.0%), Asia (14.6%), Germany (10.9%), UK (9.0%), Latin America (6.4%), Africa (2.6%) and Australia (2.5%). Outside of its domestic market, the majority of its business is sourced through brokers, especially for non-proportional business, which accounts for approximately 36% of non-life GWP.

The non-life portfolio has achieved a good growth over the past five years (2012-2016), as demonstrated by a CAGR of 6.2%. However, growth has been subject to fluctuations, ranging between -1.4% and 18.2% over the period, which has been partially attributable to foreign exchange rate fluctuations. The 18.2% (8.1% on a constant currency basis) rise in GWP in 2015 was largely driven by a number of sizeable individual contracts, particularly for treaties written in Asia, the US and agriculture.

Hannover Re continued 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, as well as strengthening macroeconomic conditions in the US.

Life and Health Reinsurance:

The life and health portfolio (representing approximately 44% of consolidated GWP) has been a growth story for Hannover Re overall, supported both organically and through acquisitions. 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, becoming one of the leading life reinsurers.

Hannover Re operates its life and health business through two categories, namely financial solutions (approximately 13% of life and health GWP at year-end 2016) and risk solutions, which consists of mortality (43%), morbidity (23%) and longevity (21%) business. 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 and the UK are Hannover Re's largest life markets representing 29.6% and 23.9% of life and health GWP, respectively, at year-end 2016, followed by Asia (15.0%), rest of Europe (11.4%), Australia and New Zealand (9.5%), Latin America (4.3%), Germany (3.3%) and Africa (3.0%). 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 also been subject to significant fluctuations over the past five years (2012-2016) as demonstrated by the CAGR for the segment of 6.3%, with GWP development fluctuating between a decline of 7.5% and a growth of 19.7% over the period. In addition to the group's acquisitive expansion in the period, the movement in premium volumes has been affected by the prevailing strong competitive conditions, particularly in Europe; demand for capital relief offerings, especially in regions moving to a risk-based insurance regulatory approach; and the strong economic activity of the emerging markets.

At year-end 2016, life and health GWP declined by 7.5% (4.3% on a constant currency basis). The reduction in premiums in 2016 was a reflection of an exceptional growth of the life and health book a year earlier (of 19.7%) which was boosted by growth of the financial solutions portfolio in North America and Asia, as well as the provision of niche insurance products.

Growth Prospects:

For the first nine months of 2017, the group reported a rise in its GWP (combined life and non-life) of 8.3%, to EUR 13.5 billion, driven primarily by new business generation from structured reinsurance solutions, as well as diversified growth in other areas. Going forward, A.M. Best expects Hannover Re to achieve single-digit annual GWP growth, although the pace of growth will be highly dependent on the pricing environment in the global reinsurance market following the series of natural catastrophe events in the third quarter of 2017.

Growth of Hannover Re's portfolio is expected to be supported by Hannover Re's acquisition of the Lloyd's syndicate, Argenta, in 2017, which gives the group additional access to international and London market business. Hannover Re's international branches and offices are likely to continue enable Hannover Re maintain its profile as a highly diversified global player providing innovative and niche (re)insurance offerings.

As one of the two largest providers of structured reinsurance in the world, Hannover Re is likely to benefit from the strong demand from companies seeking solvency relief, particularly due to the increasingly onerous capital requirements of regulators both in the mature and emerging markets.

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.

With the disposal of Praetorian Financial Group Inc. (Praetorian) in 2007, Hannover Re decided to concentrate on its core business of non-life and life and health reinsurance. Based in New York, Praetorian is a primary specialty insurer, established in 2005 to take over the in-force business of Clarendon Insurance Group, Inc. (Clarendon). Hannover Re acquired Clarendon in 1999 providing the group with access to US programmes via the specialty segment of the market. In 2010, an agreement was reached to sell the run-off business of Clarendon, which was undertaken in 2011.

In 2009, Hannover Re acquired the ING US individual life reinsurance business from Scottish Re Group Limited. With this transaction, Hannover Re became one of the top five traditional market participants in the United States.

In 2013, Hannover Re completed its conversion to become a European Company, Societas Europaea. The company's registered office remains in Hannover, Germany.

Company Affiliations:

Hannover Re is the intermediate operating holding company of the Hannover Re group of companies. The reinsurer is indirectly owned by Talanx AG (which held a 50.2% share of the group in 2016), institutional investors (42.0%) and private investors (7.8%). Hannover Re became a Societas Europea (SE) (a European public limited company) in March 2013.

Talanx AG is the intermediate non-operating holding company of the Talanx group of companies, a leading multi-brand insurance holding group in Europe. 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. A.M. 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.

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 79% stake in Talanx AG. HDI V.a.G. is a mutual holding company and its stake in Talanx remained relatively unchanged at year-end 2016. Less than 5% of the company is held by Meiji Yasuda Life Insurance Company, with the remainder being free float.

### Geographical Breakdown ($000)

| | Year End - December 31 | | | | |
|---|---|---|---|---|---|
| | 2016 | 2015 | 2014 | 2013 | 2012 |
| Other Africa | 454,514 | 503,754 | 451,265 | 476,183 | 498,647 |
| Total Africa | 454,514 | 503,754 | 451,265 | 476,183 | 498,647 |
| Other Asia | 2,416,250 | 2,950,202 | 2,214,766 | 1,637,028 | 1,545,192 |
| Total Asia | 2,416,250 | 2,950,202 | 2,214,766 | 1,637,028 | 1,545,192 |
| France | 682,894 | 701,380 | 666,892 | 565,698 | 563,459 |
| Germany | 1,241,991 | 1,368,419 | 1,225,113 | 1,264,120 | 1,151,510 |
| Other Europe | 1,880,892 | 1,776,980 | 1,626,667 | 1,726,952 | 1,798,392 |
| United Kingdom | 2,532,399 | 2,759,809 | 2,489,788 | 2,619,728 | 2,765,958 |
| Total Europe | 6,338,176 | 6,606,588 | 6,008,460 | 6,176,498 | 6,279,319 |
| United States | 5,332,901 | 5,089,930 | 3,935,986 | 4,043,677 | 3,846,706 |
| Total North America | 5,332,901 | 5,089,930 | 3,935,986 | 4,043,677 | 3,846,706 |
| Australia | 913,780 | 1,008,059 | 921,279 | 776,991 | 791,760 |
| Other World-Wide | 898,001 | 910,130 | 830,045 | 853,032 | 812,620 |
| Total | 16,353,622 | 17,068,663 | 14,361,801 | 13,963,409 | 13,774,244 |

Source: Bestlink - Best's Statement File - Global
Local Currency: Euro
US $ per Local Currency Unit 1.05373 = 1 Euro (EUR)

## Enterprise Risk Management: Very Strong

Hannover Re's enterprise risk management (ERM) framework supports its complex globally diversified operations. The group has demonstrated use of its internal capital model and sophisticated risk management tools to implement its strategic plan and effectively manage risks in line with changing market conditions. As a result, Hannover Re's ERM has successfully contributed to the group's strong earnings profile over the past several years, a period marked by significant volatility associated with major loss events and the crisis in the financial markets.

A strong risk culture is evident across the organisation underpinned by a robust governance structure and a strong and highly experienced management team, dedicated to effective risk management. Hannover Re undertakes a centralised approach in the identification, monitoring and mitigation of risks, supporting a consistent framework in the management of the group's exposures.

Key to Hannover Re's risk management framework is its economic capital model, which has been in operation since 2000. The internal model continues to be a vital tool with which the group manages its risk exposures in order to achieve a positive IFRS net income with a probability of at least 90% and ensure the probability of a loss of the economic and IFRS shareholders' equity does not exceed 0.03% per annum.

Special attention is given to emerging risks, whose hazard potential is not yet reliably known. With this regard, Hannover Re has established a working group Emerging Risks and Scientific Affairs, which identifies, evaluates and monitors emerging risks.

Hannover Re 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, thereby deriving value for its shareholders. Where the business segment fails to meet the IVC metric, the group is proactive in its response of applying corrective measures. Hannover Re's use of the IVC concept has resulted in better and more stable performance since 2008 relative to the previous five-year period.

Catastrophe Exposure & Management:

Hannover Re demonstrates a conservative framework in place to support its catastrophe risk management. This process begins with the implementation of the group's potential 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.

Constant monitoring is undertaken of Hannover Re's exposures 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 A.M. 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 scenarios 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.

# Financial Statements:

## Balance Sheet:

### Balance Sheet:

| Assets | 12/31/2016 EUR(000) | 12/31/2016 % of total | 12/31/2016 USD(000) |
|---|---|---|---|
| Cash & deposits with credit institutions | 1,687,654 | 2.7 | 1,778,332 |
| Bonds & other fixed interest securities | 35,470,639 | 55.8 | 37,376,476 |
| Shares & other variable interest instruments | 905,307 | 1.4 | 953,949 |
| Liquid assets | 38,063,600 | 59.9 | 40,108,757 |
| Real Estate | 1,792,919 | 2.8 | 1,889,253 |
| Real estate for own use | 67,171 | 0.1 | 70,780 |
| Inter-company investments | 114,633 | 0.2 | 120,792 |
| Other investments | 1,822,343 | 2.9 | 1,920,257 |
| Total investments | 41,860,666 | 65.9 | 44,109,840 |
| Reinsurers' share of technical reserves - unearned premiums | 133,858 | 0.2 | 141,050 |
| Reinsurers' share of technical reserves - claims | 1,254,166 | 2.0 | 1,321,552 |
| Reinsurers' share of technical reserves - life | 1,454,846 | 2.3 | 1,533,015 |
| Total reinsurers share of technical reserves | 2,842,870 | 4.5 | 2,995,617 |
| Deposits with ceding companies | 11,673,259 | 18.4 | 12,300,463 |
| Other debtors | 3,915,585 | 6.2 | 4,125,969 |
| Total debtors | 3,915,585 | 6.2 | 4,125,969 |
| Fixed assets | 27,234 | ... | 28,697 |
| Prepayments & accrued income | 2,616,359 | 4.1 | 2,756,936 |
| Other assets | 528,020 | 0.8 | 556,391 |
| Goodwill | 64,609 | 0.1 | 68,080 |
| Total assets | 63,528,602 | 100.0 | 66,941,994 |

## Balance Sheet: (Continued...)

## Balance Sheet: (Continued...)

| Liabilities | 12/31/2016 EUR(000) | 12/31/2016 % of total | 12/31/2016 USD(000) |
|---|---|---|---|
| Capital | 120,597 | 0.2 | 127,077 |
| Paid-up capital | 120,597 | 0.2 | 127,077 |
| Non-distributable reserves | 2,308,840 | 3.6 | 2,432,894 |
| Other reserves | -60,481 | -0.1 | -63,731 |
| Retained earnings | 6,628,274 | 10.4 | 6,984,411 |
| Capital & surplus | 8,997,230 | 14.2 | 9,480,651 |
| Minority interests | 743,317 | 1.2 | 783,255 |
| Gross provision for unearned premiums | 3,171,056 | 5.0 | 3,341,437 |
| Gross provision for outstanding claims | 24,138,038 | 38.0 | 25,434,975 |
| Gross provision for outstanding claims - life | 4,353,770 | 6.9 | 4,587,698 |
| Gross provision for long term business - life | 10,459,449 | 16.5 | 11,021,435 |
| Total gross technical reserves | 42,122,313 | 66.3 | 44,385,545 |
| Long term borrowings | 313,377 | 0.5 | 330,215 |
| Other borrowings | 1,490,841 | 2.3 | 1,570,944 |
| External borrowings | 1,804,218 | 2.8 | 1,901,159 |
| Deposits received from reinsurers | 1,234,073 | 1.9 | 1,300,380 |
| Insurance/reinsurance creditors | 1,216,036 | 1.9 | 1,281,374 |
| Other creditors | 4,707,366 | 7.4 | 4,960,293 |
| Total creditors | 5,923,402 | 9.3 | 6,241,666 |
| Accruals & deferred income | 1,875,552 | 3.0 | 1,976,325 |
| Other liabilities | 828,497 | 1.3 | 873,012 |
| Total liabilities & surplus | 63,528,602 | 100.0 | 66,941,994 |

Source: Bestlink - Best's Statement File - Global
Local Currency: Euro
US $ per Local Currency Unit 1.05373 = 1 Euro (EUR)

## Summary of Operations:

### Statement of Income (000)

**General technical account:**

| | 12/31/2016 EUR(000) | 12/31/2016 USD(000) |
|---|---|---|
| Reinsurance premiums assumed | 9,204,554 | 9,699,115 |
| Gross premiums written | 9,204,554 | 9,699,115 |
| Reinsurance ceded | 1,219,507 | 1,285,031 |
| Net premiums written | 7,985,047 | 8,414,084 |
| Net premiums earned | 7,985,047 | 8,414,084 |
| Total underwriting income | 7,985,047 | 8,414,084 |
| Net claims paid | 5,330,662 | 5,617,078 |
| Net claims incurred | 5,330,662 | 5,617,078 |
| Management expenses | 199,380 | 210,093 |
| Acquisition expenses | 1,975,912 | 2,082,078 |
| Net operating expenses | 2,175,292 | 2,292,170 |
| Total underwriting expenses | 7,505,954 | 7,909,249 |
| Balance on general technical account | 479,093 | 504,835 |

Source: Bestlink - Best's Statement File - Global
Local Currency: Euro
US $ per Local Currency Unit 1.05373 = 1 Euro (EUR)

**Life technical account:**

| | 12/31/2016 EUR(000) | 12/31/2016 USD(000) |
|---|---|---|
| Reinsurance premiums assumed | 7,149,023 | 7,533,140 |
| Gross premiums written | 7,149,023 | 7,533,140 |
| Reinsurance ceded | 716,636 | 755,141 |
| Net premiums written | 6,432,387 | 6,777,999 |
| Net premiums earned | 6,432,387 | 6,777,999 |
| Net investment income | 638,898 | 673,226 |
| Total revenue | 7,071,285 | 7,451,225 |
| Net claims paid | 5,480,293 | 5,774,749 |
| Net claims incurred | 5,480,293 | 5,774,749 |
| Net increase/(decrease) in long term business provision | 80,490 | 84,815 |
| Management expenses | 201,973 | 212,825 |
| Acquisition expenses | 1,032,384 | 1,087,854 |
| Net operating expenses | 1,234,357 | 1,300,679 |
| Total expenses | 6,795,140 | 7,160,243 |
| Balance on long-term technical account | 276,145 | 290,982 |

Source: Bestlink - Best's Statement File - Global
Local Currency: Euro
US $ per Local Currency Unit 1.05373 = 1 Euro (EUR)

## Summary of Operations: (Continued...)

### Statement of Income (000) (Continued...)

**Combined technical account:**

| | 12/31/2016 EUR(000) | 12/31/2016 USD(000) |
|---|---|---|
| Reinsurance premiums assumed | 16,353,622 | 17,232,302 |
| Gross premiums written | 16,353,622 | 17,232,302 |
| Reinsurance ceded | 1,749,624 | 1,843,631 |
| Net premiums written | 14,603,998 | 15,388,671 |
| Increase/(decrease) in gross unearned premiums | 156,575 | 164,988 |
| Increase/(decrease) in reinsurers share unearned premiums | -29,808 | -31,410 |
| Net premiums earned | 14,417,615 | 15,192,273 |
| Net investment income | 649,501 | 684,399 |
| Other technical income | 470 | 495 |
| Total revenue | 15,067,586 | 15,877,167 |
| Net claims paid | 9,688,056 | 10,208,595 |
| Net increase/(decrease) in claims provision | 1,123,269 | 1,183,622 |
| Net claims incurred | 10,811,325 | 11,392,217 |
| Net increase/(decrease) in long term business provision | 80,512 | 84,838 |
| Management expenses | 401,545 | 423,120 |
| Acquisition expenses | 3,004,771 | 3,166,217 |
| Net operating expenses | 3,406,316 | 3,589,337 |
| Other technical expenses | 3,997 | 4,212 |
| Total underwriting expenses | 14,302,150 | 15,070,605 |
| Balance on combined technical account | 765,436 | 806,563 |

Source: Bestlink - Best's Statement File - Global
Local Currency: Euro
US $ per Local Currency Unit 1.05373 = 1 Euro (EUR)

**Non-technical account:**

| | 12/31/2016 EUR(000) | 12/31/2016 USD(000) |
|---|---|---|
| Net investment income | 900,919 | 949,325 |
| Other income/(expense) | -48,700 | -51,317 |
| Profit/(loss) before tax | 1,617,655 | 1,704,572 |
| Taxation | 391,229 | 412,250 |
| Profit/(loss) after tax | 1,226,426 | 1,292,322 |
| Dividend to shareholders | 572,836 | 603,614 |
| Exceptional income/(expense) | -9,902 | -10,434 |
| Minority interests | 55,197 | 58,163 |
| Retained Profit/(loss) for the financial year | 588,491 | 620,111 |
| Retained Profit/(loss) brought forward | 6,039,783 | 6,364,301 |
| Retained Profit/(loss) carried forward | 6,628,274 | 6,984,411 |

Source: Bestlink - Best's Statement File - Global
Local Currency: Euro
US $ per Local Currency Unit 1.05373 = 1 Euro (EUR)

# Hannover Rück SE

**Report Revision Date:**
January 25, 2018

## Company Attributes:

| | |
|---|---|
| **Industry:** | Insurance |
| **Business Type:** | Composite |
| **Entity Type:** | Operating Company |
| **Organization Type:** | Stock |
| **Business Status:** | In Business - Actively Underwriting |
| **Marketing Type:** | Direct Response |

## Company History:

**Date Incorporated:** N/A **Date Commenced:** N/A **Domicile:** Germany

## Company Operations:

| 2016 Rank | Top 5 Lines of Business by NPW |
|---|---|

Source: Bestlink - Best's Statement File - Global

| 2016 Rank | Top 5 Geographic Distribution by DPW | |
|---|---|---|
| 1 | Total Europe | 38.8% |
| 2 | Total North America | 32.6% |
| 3 | Total Asia | 14.8% |
| 4 | Total Africa | 2.8% |

## Regulatory:

**Auditor:** KPMG AG Wirtschaftsprüfungsgesellschaft

An independent audit of the company's affairs through December 31, 2016, was conducted by KPMG AG Wirtschaftsprüfungsgesellschaft.

Best's Credit Rating Methodology | Disclaimer | Best's Credit Rating Guide