somewhat different

Hannover Re (Ireland) Designated Activity Company

2018

Solvency and Financial Condition Report

hannover re®

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Executive Summary

Key figures

in USD 000's	2018	2017
Solvency II Balance Sheet		
Assets	3,468,295	6,654,400
Technical Provisions	1,920,518	4,421,277
Other Liabilities	664,560	693,418
Excess of Assets over Liabilities	883,217	1,539,706
Eligible Own Funds to meet the Solvency Capital Requirement (SCR)		
Tier 1 Basic Own Funds	621,573	1,538,990
Tier 2 Basic Own Funds	97,926	346,823
Tier 3 Ancillary Own Funds	51,921	169,219
Total Eligible Own Funds (SCR)	771,420	2,055,032
Eligible Own Funds to meet the Minimum Capital Requirement (MCR)		
Tier 1 Basic Own Funds	621,573	1,538,990
Tier 2 Basic Own Funds	31,153	101,531
Total Eligible Own Funds (MCR)	652,726	1,640,521
Capital Requirements		
Solvency Capital Requirement	346,141	1,128,124
Minimum Capital Requirement	155,764	507,656
Coverage Ratio		
Ratio of Eligible Own Funds to SCR	223%	182%
Ratio of Eligible Own Funds to MCR	419%	323%

A. Business and Performance

Hannover Re (Ireland) Designated Activity Company (hereinafter referred to as “HRI” or “the Company”) is an Irish regulated entity authorised by the Central Bank of Ireland to carry on both non-life and life reinsurance business. HRI is part of the Hannover Re Group. Hannover Re, with gross premium of more than EUR 19 billion, is the fourth-largest reinsurer in the world. The Hannover Re Group today has a network of more than 170 subsidiaries, branches and representative offices worldwide.

HRI plays a pivotal role within this network and is one of the core risk carriers for Hannover Re. We offer reinsurance solutions to leverage our significant capital base for the benefit of clients worldwide as well as other Hannover Re Group entities.

The result for the year as set in Section A Business and Performance have been prepared in accordance with International Financial Reporting Standards (“IFRS”) as adopted by the European Union (“EU”). The HRI profit before tax for the financial year 2018 was USD 78.0m (2017 Loss of USD 260.3m). Overall the result for the financial year 2018 was satisfactory. Both business segments (“P&C” and “L&H”) contributed to a positive underwriting result and the investment result was satisfactory given the challenging market conditions.

HRI recorded an underwriting profit of USD 55.3m (2017 Loss of USD 330.0m), an investment result of USD 25.7m (2017: 32.3m) and other income and expenses not related to the underwriting or investment result amounted to USD (3.0m) (2017: 37.4m).

Details on the Business and Performance can be found in Section A.

B. System of Governance

The Company recognises the importance of a strong System of Governance. In our governance system the central functions are closely interlinked with one another and the roles, tasks and reporting lines are both clearly defined and documented in the context of the so-called “three lines of defence” model.

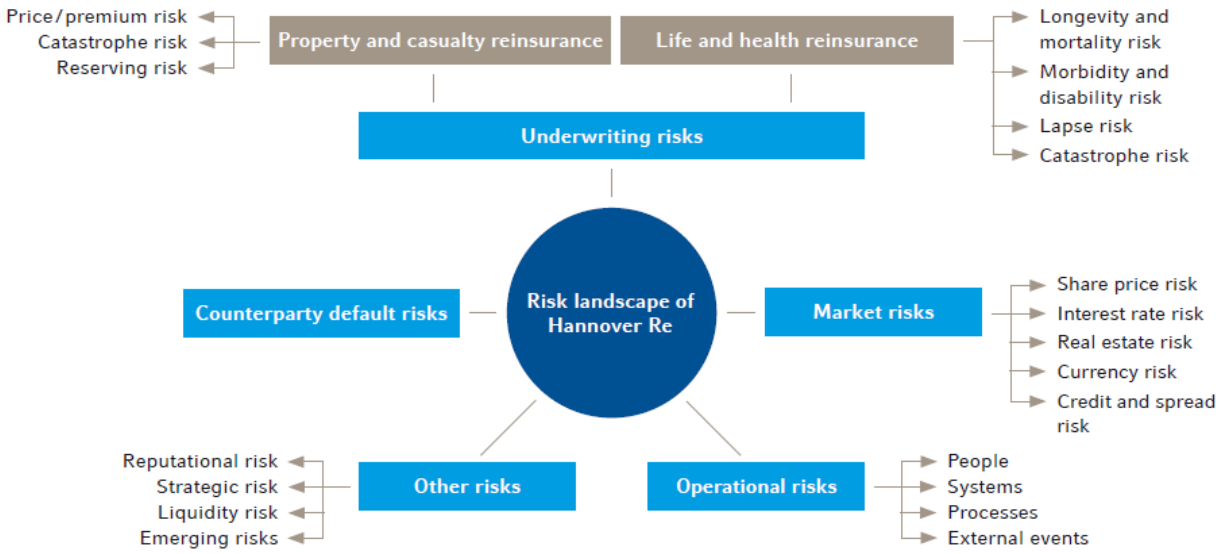
The first line of defence consists of operational management of the risks and controls on a day-to-day basis. The risk management function ensures the second line of defence - risk monitoring. It also receives support from the actuarial function and the compliance function. The third line of defence consists of process-independent monitoring executed by the internal audit function.

All key functions are equipped with appropriate resources and skills. The reporting lines to one another and to the Board Member responsible have been clearly defined. The governance structure of the Company has not materially changed in the year to 31 December 2018.

The individual elements of the System of Governance of the Company are explained in Section B.

C. Risk Profile

In the context of its business operations HRI enters into a broad variety of risks. These risks are deliberately accepted, steered and monitored. They specifically concern underwriting risks pertaining to Property & Casualty, Life & Health, as well as capital market risks, liquidity risks and counterparty default risks. Operational, strategic and reputational risks also arise in the course of business operations. Further details on the Company Risk Profile are included in Section C.



Hannover Re quantifies risks using the internal capital model. For the purposes of calculating the Solvency Capital Requirement, Hannover Re has approval to use a full internal model. The Solvency Capital Requirement as of December 31, 2018 is presented in the following table.

In USD 000's	2018	2017
Underwriting risk - Property & Casualty	293,478	421,699
Underwriting risk - Life & Health	107,513	817,090
Market risk	176,340	417,924
Counterparty default risk	39,564	84,484
Operational risk	104,151	290,572
Diversification	325,689	750,517
Total risk (pre-tax)	**395,356**	**1,281,251**
Deferred tax	49,215	153,127
Total risk (post-tax)	**346,141**	**1,128,124**

D. Valuation for Solvency Purposes

For the purposes of calculating the eligible own funds, HRI values the assets and liabilities pursuant to the provisions of S.I. No. 485/2015 European Union (Insurance and Reinsurance) Regulations 2015.

The valuation for Solvency II purposes is set in principle at the fair value (market value). Insofar as IFRS values appropriately reflect the fair value, these values are applied to Solvency II. HRI has been granted approval by the CBI to use volatility adjustments to value the Best Estimate Liability ("BEL") beginning with 31 December 2018.

The calculation of technical provisions can differ significantly under Solvency II and IFRS. The IFRS technical provisions are grounded in US GAAP and use locked in assumptions for long duration contracts. The Solvency II technical provisions consist of best estimate liability which is based on probabilistic best estimate cashflows with a risk margin derived from our internal capital model.

An analysis of the valuation of the assets and liabilities per the Solvency II balance sheet can be found in Section D.

E. Capital Management

The Ratio of Eligible Own Funds to SCR at 31 December 2018 was 223% (2017: 182%). Own funds in the Solvency II balance sheet consist of basic own funds, which comprise the excess of assets over liabilities (Tier 1 capital) and subordinated loans (Tier 2 capital). Within the Tier 3 own funds is included an Ancillary Own Funds ("AOF") item approved by the Central Bank of Ireland on 14 December 2015.

Further details on capital management are included in Chapter E.

A. Business and Performance

A.1 Business

A.1.1 Business Model

The principal activity of the Company is the transaction of international life & health reassurance and property & casualty reinsurance business.

Life & Health

As one of the largest, internationally operating and established life and health reinsurers, Hannover Re Group offers clients worldwide reinsurance protection in all lines of life and health insurance. With 25 Life & Health offices on all continents, Hannover Re Group has an outstanding international network at its disposal.

We seek to use our global mandate to offer reinsurance solutions to leverage our significant capital base for the benefit of life and health clients worldwide. Our focus is to combine our in-house skills with the considerable resources of the network to develop solutions which can be written, either as retrocession for our sister companies or directly with life insurance companies.

The Company has significant experience in developing Financial Solutions for clients which cover all treaties in which the primary emphasis is on financing or capital management components. Our in-house expertise in this area means that we have the tools to implement effective solutions in a short space of time. A strong and liquid capital base allows us to provide both cash and non-cash financing solutions to service our clients' needs.

Our Risk Solutions business is focused on reinsurance of mortality business. Our clients are highly rated entities located throughout the world.

The Tax Cuts and Jobs Act ("Tax Reform") came into effect in the United States on 1 January 2018. This put in place new tax regulations including a base erosion and anti-abuse tax ("BEAT") in the form of a disadvantageous tax on payments under Group affiliated internal retrocession arrangements with entities considered foreign from a US perspective. The Tax Reform promoted market players to make adjustments to cession strategies and corporate structures. A significant part of the US life reinsurance business previously written by HRI was therefore transferred to a Bermuda based subsidiary. The Company retains a global mandate and will focus on supporting the worldwide L&H network outside of the United States going forward.

The Company also operates a Life branch in Canada.

Property & Casualty

Hannover Re is also one of the largest international property and casualty reinsurers. Through its network of 19 locations, Hannover Re writes business in most property and casualty lines of business.

Within this network the Company plays an important role as one of the major risk carriers. The Company uses both its significant capital base and in-house expertise to provide solutions to other Hannover Re Group entities worldwide as well as reinsurance solutions to insurance companies mainly in North America and the United Kingdom. The Company has increased its focus on the provision of solutions to other Hannover Re Group entities in recent years while continuing to manage its existing book of business and existing client relationships.

The Company writes reinsurance transactions where structured elements may be incorporated to enable the coverage to be tailored to the individual needs of our clients. The appropriate pricing for the actual risks transferred is a crucial element of the considerations. Our risk management and aggregation control tools are consistent with those applied within the property/casualty reinsurance business group of Hannover Re.

Our major lines of business include general and automobile liability, professional indemnity, workers compensation and property. With respect to the latter we endeavour to avoid huge aggregate exposures from major natural catastrophe perils.

Structured features will remain a cornerstone of our product offerings, thereby reducing the volatility of our transactions and hence the capital requirements for our overall book of business.

Our transactions generally cover all or most lines of business written by our clients. The form of these covers will depend on the requirements of our clients as we seek to provide solutions which are tailored to these particular requirements. The majority of our business is written in the form of quota share or aggregate excess of loss reinsurance.

With our considerable experience in assessing risks and our expertise in structuring transactions, combined with the financial strength of the Company and the extensive Hannover Re Group network we are very well positioned and look forward to further successful and profitable years ahead of us.

A.1.2 Results of Operations

The Profit after tax for 2018 was USD 68.2m (2017: Loss of USD -228.4m).

Net premium written increased by 1.1% to USD 2,909.1m (2017: USD 2,878.1m). Net premium earned decreased by 0.9% to USD 2,890.4m (2017: USD 2,915.9m).

The underwriting result for the year was USD 55.3m (2017: Loss of USD -330.0m) of which the P&C underwriting result for the year was USD 39.3m (2017: USD 14.1m) and the L&H underwriting result for the year was USD 16.0m (2017: USD -344.0m). The P&C segment performed strongly both in business assumed from other Hannover Re Group entities as well as the Third Party Portfolio.

The investment result for the year was USD 25.7m (2017: USD 32.3m). There were higher realised losses in 2018 on assets primarily consisting of fixed income securities. There was an increase in interest income on the portfolio of 7% compared with 2017.

The Other Activities result for the year was USD -3.0m (2017: USD 37.4m). There was an unrealised loss on the embedded credit derivative of USD -0.8m in 2018 (2017: unrealised gains on the embedded credit derivative of USD 41.4m).

A.1.3 Headquarters, supervisors and auditors

HRI is an Irish Designated Activity Company.

Registered office of HRI
4 Custom House Plaza
Harbourmaster Place
International Financial Services Centre
Dublin 1
Republic of Ireland

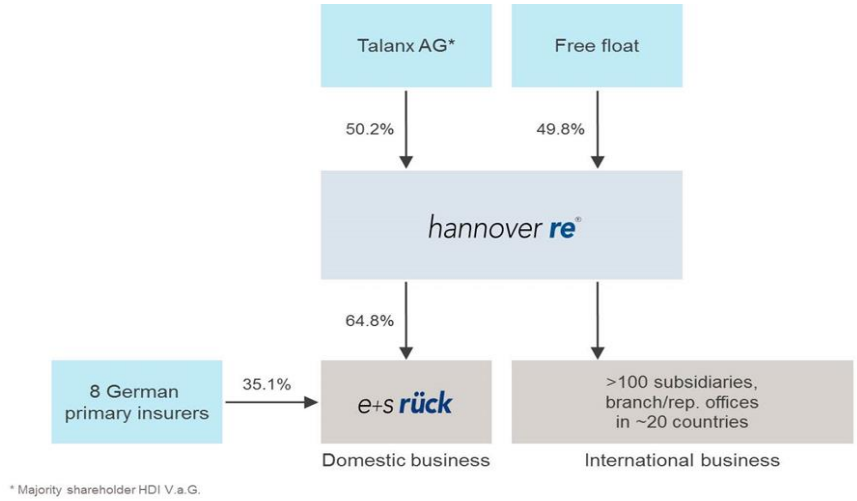
The Company's ultimate parent undertaking is HDI Haftpflichtverband der Deutschen Industrie V.a.G., a company incorporated and operating in Germany. The largest group in which the results of the Company are consolidated is that headed by HDI Haftpflichtverband der Deutschen Industrie V.a.G.

The smallest group in which the results of the Company are consolidated is that headed by Hannover Rück SE. Hannover Rück SE is a European stock corporation, Societas Europaea (SE) has been entered in the Commercial Register of the District Court of Hannover under the number HR Hannover B 6778.

Headquarters address
Karl-Wiechert-Allee 50
30625 Hannover
Germany

A rounded 50.2% of Hannover Rück SE shares are held by Talanx AG. HDI Haftpflichtverband der Deutschen Industrie V.a.G. ("HDI") in turn holds a stake of 79% in Talanx AG.

Hannover Re as a sub-group of the Talanx Group



HRI is subject to supervision by the Central Bank of Ireland ("CBI").

Hannover Rück SE as well as Talanx and HDI are subject to supervision by the Federal Financial Supervisory Authority ("BaFin").

Name of the supervisory authority	Contact details
Central Bank of Ireland ("CBI")	Insurance Supervision Division Central Bank of Ireland New Wapping Street North Wall Quay Dublin 1 D01 F7X3
Federal Financial Supervisory Authority ("BaFin"),	Graurheindorfer Straße 108 53117 Bonn Germany Postbox 1253 53002 Bonn Germany

The auditor appointed for HRI and the Group auditor are as follows:

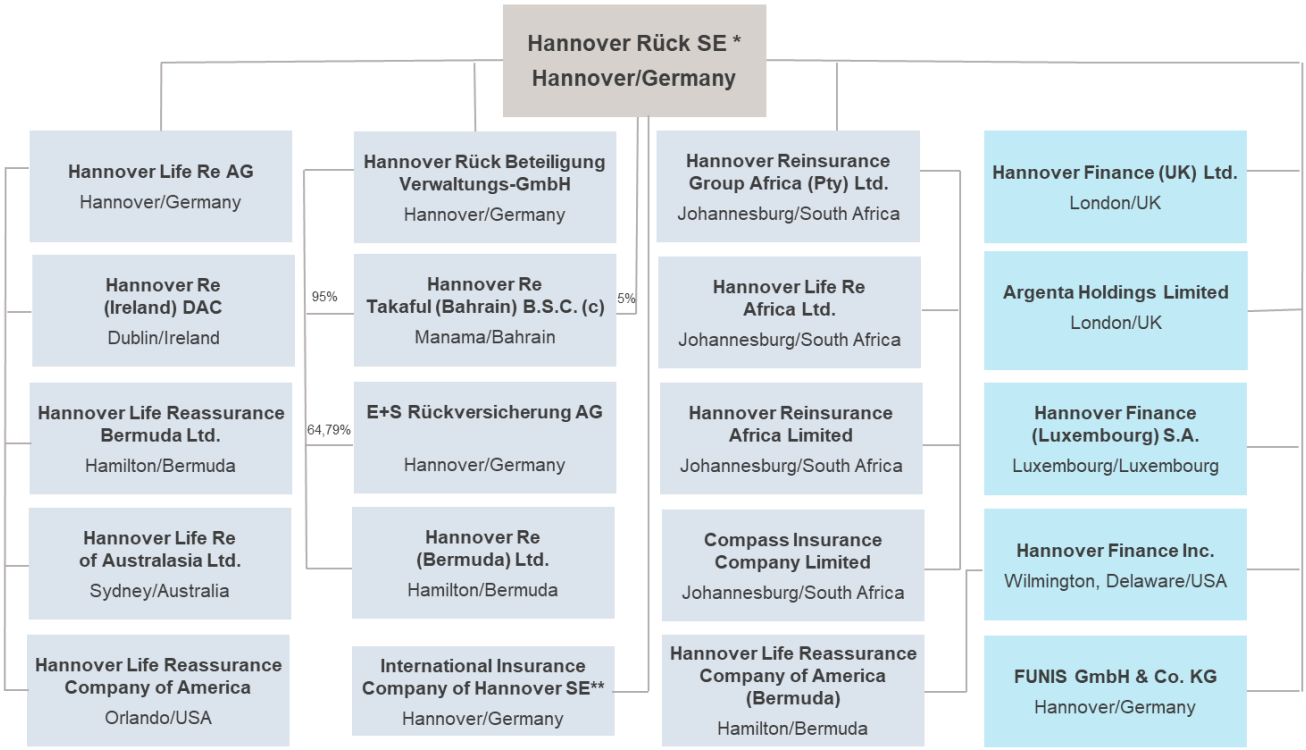
Auditors for HRI and Group	Contact details
HRI	Price Waterhouse Coopers Spencer Dock North Wall Quay North Wall Dublin 1
Hannover Re Group	PricewaterhouseCoopers GmbH Wirtschaftsprüfungsgesellschaft Fuhrberger Straße 5 30625 Hannover

A.1.4 Group structure

Hannover Rück SE and its subsidiaries (collectively referred to as the “Hannover Re Group” or “Hannover Re”) transact all lines of Property & Casualty and Life & Health reinsurance. The Group is present on all continents.

The Group consists of more than 170 subsidiaries, branches and representative offices worldwide with a total workforce of 3,317.

Subsidiaries of Hannover Rück SE at 31 December 2018



*Unless otherwise stated the shareholding is 100%.

** Hannover Rück SE sold 50.22% of the shares of International Insurance Company of Hannover SE to HDI Global SE effective 1. January 2019. Effective with the same date the company´s name changed from International Insurance Company of Hannover SE to HDI Global Specialty SE.

Insurance companies
Non-insurance companies

A.1.5 Significant events

There were no significant events during the reporting period.

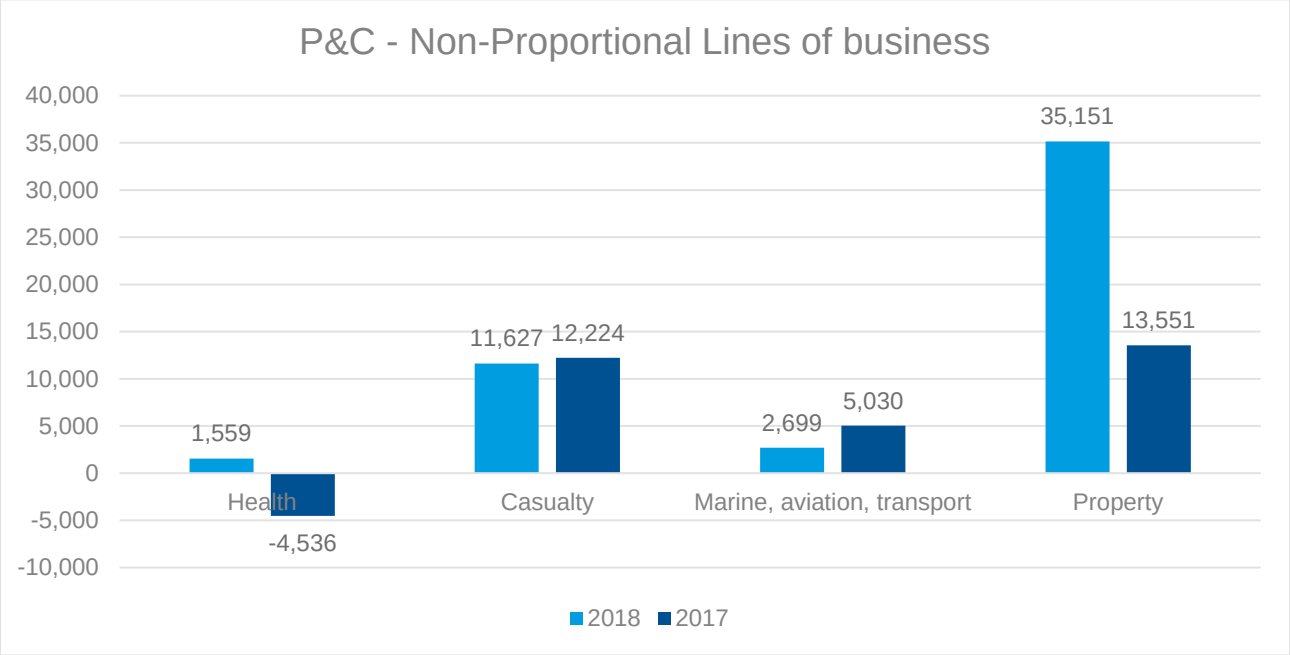
A.2 Underwriting Performance

HRI made an underwriting profit of USD 55.3m during the financial year 2018 (2017: Loss of USD -330.0m), with net earned premiums in the amount of USD 2,890.4m (2017: USD 2,915.9m), net claims incurred in the amount of USD 2,008.1m (2017: 2,952.1m) as well as other income and expenses attributable to the underwriting performance in the amount of USD 827.0m (2017: USD 293.8m).

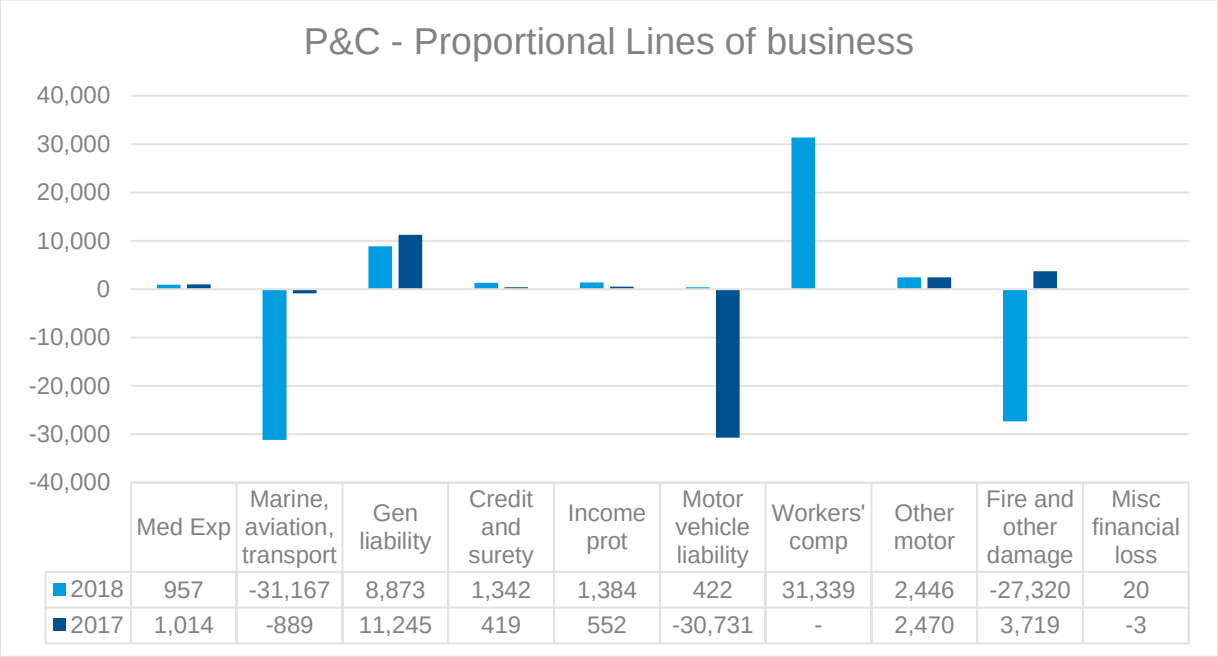
Property & Casualty – Line of business

HRI made an underwriting profit of USD 39.3m for the P&C lines of business (2017: Profit of USD 14.1m).

The underwriting result analysed by Solvency II for the P&C non-proportional lines of business is as follows (in USD 000's):



The underwriting result analysed by Solvency II for the P&C proportional lines of business is as follows (in USD 000's):



	Med Exp	Marine, aviation, transport	Gen liability	Credit and surety	Income prot	Motor vehicle liability	Workers' comp	Other motor	Fire and other damage	Misc financial loss
2018	957	-31,167	8,873	1,342	1,384	422	31,339	2,446	-27,320	20
2017	1,014	-889	11,245	419	552	-30,731	-	2,470	3,719	-3

The significant drivers of the underwriting result in the financial year 2018 were the Non-Proportional Property USD 35.2m, Proportional Workers' Compensation USD 31.3m, Non-Proportional Casualty USD 11.6m, Proportional General Liability USD 8.9m, Non-Proportional Marine, Aviation and Transport USD 2.7m and the Proportional Other Motor USD 2.4m lines of business.

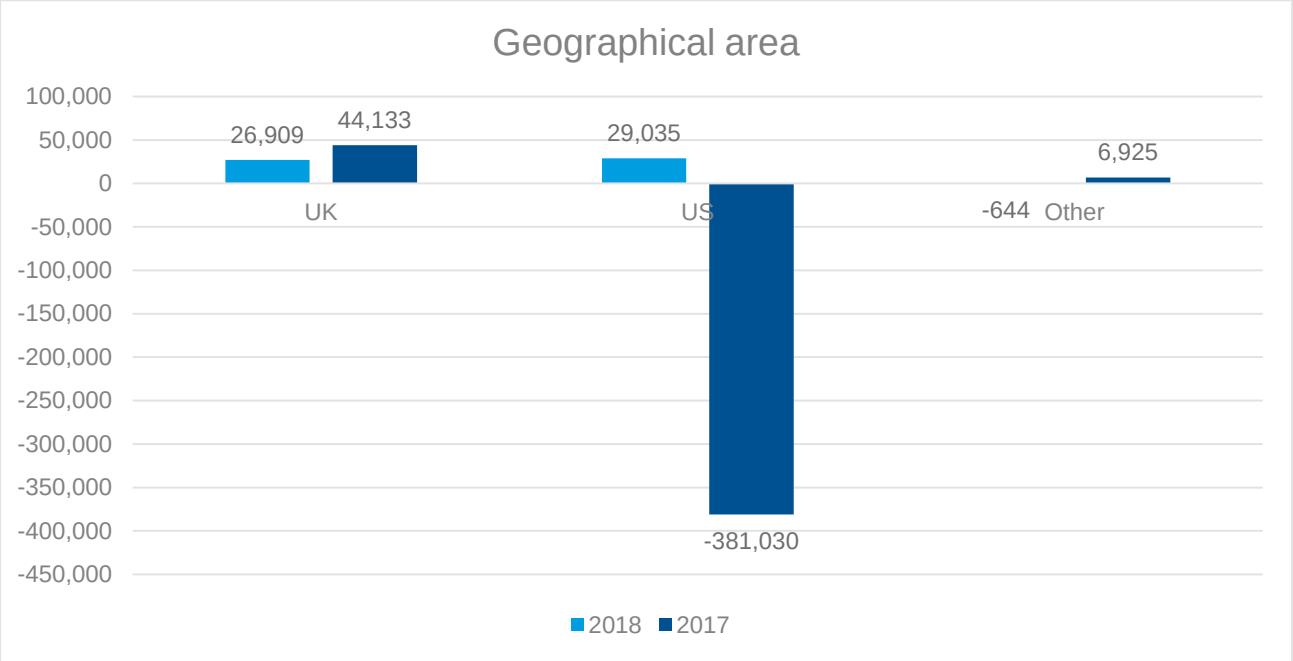
These lines of business, together with the Proportional Marine, Aviation and Transport USD -31.2m and Proportional Fire and Other Damage to Property USD -27.3m, account for 86% of the overall P&C underwriting result.

Life & Health – Line of business

HRI made an underwriting profit of USD 16.0m for the L&H lines of business (2017: Loss of USD -344.0m). The segment returned to profitability in the financial year 2018 following the losses made in the financial year 2017 on transactions related to US Tax Reform as described in section A.1.1 Business Model. The 2018 underwriting result was primarily attributable to the UK portfolio and the remaining US business.

Geographical area

The underwriting result analysed by geographical area is as follows (in USD 000's):



The UK and the US are the most material geographical areas where the Company carries out business. In 2018, the UK and US geographical areas accounted for 81% of total net earned premium (2017: 79%).

A.3 Investment Performance

The Company recorded an investment result of USD 25.7m in 2018 (2017: USD 32.3m). The investment income and expenses are analysed by Solvency II asset classes in the overview below.

Investment income

	2018		2017	
in USD 000's	Ordinary income	Realised gains	Ordinary income	Realised gains
Government Bonds	28,967	501	29,282	19,984
Corporate Bonds	33,516	1,282	28,491	5,197
Collateralised securities	5,806	676	5,484	-
Collective Investment Undertakings	1,725	150	1,451	193
Derivatives	-	288	-	3,516
Deposits other than cash equivalents	437	-	479	-
Other investments	3,587	2,013	5,042	-
Cash and cash equivalents	11	-	20	-
Investment income attributable to underwriting result :				
Net funds transferred interest	-16,947	-227	-16,928	-22,899
Total	**57,102**	**4,683**	**53,321**	**5,991**

Investment expenses

in USD 000's	Realised losses	Other expenses	Realised losses	Other expenses
Government Bonds	-8,471	-	-3,478	-
Corporate Bonds	-2,405	-	-85	-
Collateralised securities	-1	-	0	-
Derivatives	-3,093	-	-2,344	-
Other investments	-433	-1,387	-24	-1,360
Investment management expenses	-	-3,291	-	-3,299
Custody fees and other interest expenses	-	-88	-	-155
Finance costs	-	-16,936	-	-16,984
Investment expenses attributable to underwriting result :				
Loan interest	-	-	-	570
Total	**-14,403**	**-21,702**	**-5,930**	**-21,228**

Certain investments are held to back the technical provisions. The income from these investments ("funds transferred interest") is reallocated from the investment result to the underwriting result.

HRI has invested in securitised assets in the form of Collateralised Debt Obligations ("CDOs"). These assets are recorded on HRI's Solvency II balance sheet as "R0170 – Collateralised securities". The resulting income and expenses can be taken from the above table. CDOs are asset backed financial instruments which consist of a portfolio of fixed income securities divided into several tranches. In principle, high rates of interest are to be viewed as the compensation for increasing probabilities of default, according to which the individual tranches are differentiated from one another.

Collateralised Debt Obligations

in USD 000's	2018	2017
Collateralised Debt Obligations	72,382	82,182
Total	**72,382**	**82,182**

The "available-for-sale" reserve in the Equity section of the HRI balance sheet is given below:

Available-for-sale reserve

in USD 000's	2018	2017
Available-for-sale reserve	8,185	49,666
Total	**8,185**	**49,666**

A.4 Performance of Other Activities

A.4.1 Other income and expenses

The following table displays IFRS other income and expenses not included in the underwriting or the investment result:

Other income

in USD 000's	2018	2017
Other various income	2,468	280
Unrealised gain on life settlements yield collar	1,049	487
Unrealised gain on foreign currency swap	429	144
Unrealised gain on embedded derivative	-	41,365
Net gain on foreign exchange translation	-	2,133
Total	**3,946**	**44,409**

Other expenses

In USD 000's	2018	2017
Other expenses	-3,761	-4,031
Net loss on foreign exchange translation	-896	-
Unrealised loss on embedded derivative	-837	-
Auditor's remuneration (including non-audit services)	-687	-1,304
Unrealised loss on foreign currency swap	-528	-1,364
Depreciation	-235	-195
Unrealised loss on life settlement yield collar	-	-39
Total	**-6,944**	**-6,933**

Other expenses

Other expenses is the material driver of the performance of Other Activities in 2018. Other expenses refers to expenses that are attributable to neither the underwriting result nor the investment result such as the Ancillary Own Funds fee.

Unrealised loss on embedded derivative

There was an unrealised loss on embedded derivative of USD -0.8m in 2018 (2017: Unrealised gain of USD 41.4m). The majority of the embedded derivative related to funds withheld which was subject to a recapture/retrocession effective 1 January 2018. There is very limited residual market risk in 2018.

A.4.2 Significant leasing agreements

There are no significant operating or finance lease agreements.

A.5 Any other information

There is no other material information regarding business and performance.

B. System of Governance

B.1 General information on the System of Governance

B.1.1 Governance structure

B.1.1.1 Our Administrative, Management or Supervisory Body

HRI has an effective system of governance in place which provides for sound and prudent management. The elements of the System of Governance are described in the following chapter.

Board of Directors

The Board of Directors has ultimate responsibility for the strategy, management and operations of HRI. The Board is collectively responsible for promoting the success of HRI by directing, effectively supervising and overseeing its affairs in a prudent and ethical manner. The Board sets and upholds the values and standards necessary to ensure that HRI's obligations to shareholders and other stakeholders, including clients, employees, regulators and creditors, are met.

The Board sets the direction and mission for HRI and ensures it meets its strategic objectives. The strategic objectives are set in recognition of the Hannover Re Group ("Group") strategy.

The Board has reserved a number of matters for its decision, in accordance with the schedule set out in the Board Charter. These can be summarised as follows:

- Board and Management – comprising matters relating to appointment, endorsement and/ or removal of Board Members, Managing Directors, General Managers and other individuals who may have a material impact on the risk profile of the Company, establishment of the Board Sub-Committees (appointment of members and Chairperson) and delegating appropriate powers to each of the Committees;
- Corporate Governance – including responsibility to define the corporate governance system, effective and clear structures and reporting arrangements, oversight over the senior management and ensure that an effective Internal Control Framework and the control functions are appropriately established;
- Risk Management, including ORSA – comprising matters relating to the approval of the Risk Management Strategy & Framework including Risk Appetite Statements, discharging the responsibility for HRI's risk management, establishing and monitoring the effectiveness of the Risk Committee and Own Risk and Solvency Assessment ("ORSA") process;
- Solvency and Capital Management – focussing on matters relating to roles and responsibilities for internal model governance and its strategic direction, ultimately ensuring the solvency and capitalisation of HRI remain adequate and appropriate at all times;
- Corporate Issues – including decisions, in conjunction with Group, on material changes in the legal structure or the nature of business undertaken by the Company (i.e. major reorganisations, matters of acquisitions, sale, modification of interests in other companies of strategic relevance), formulation and amendment of strategic principles for HRI, and other corporate issues derived from Company law;
- Operational Matters – ensuring appropriate strategy and processes are defined in relation to succession plan, contingency arrangements and outsourcing;
- Financial Matters, Transactions and Expenditure – comprising of matters such as approval of the annual financial and business plan based on the agreed strategy and risk appetite of HRI,

approval of annual regulatory returns, dividend payments, securities, guarantees or similar liabilities for third party payables outside the normal course of business, approval of any significant changes in accounting policies or practices, review of the Five Year Plan, the appointment and removal of auditors;

- Investment Activity – comprising matters such as approval of the investment strategy and guidelines, approval of the acquisition, disposal or mortgage of real estate or similar, including the construction and improvement of buildings. Approval of the appointment or dismissal of outside portfolio managers;
- Remuneration Matters – including, but not limited to annual review of the performance of the Board and individual directors, relative to the Board's objectives.

Committees of the Board

The Board has delegated other matters for decision to the Committees of the Board, as contained in their respective documented terms of reference.

Those Committees are: the Audit Committee, Risk Committee, Investment Advisory Council, Compensation Committee and Canada Branch Steering Committee.

Day-to-day Management

The Board has delegated responsibility for day-to-day management of the business in accordance with the strategy, objectives and policies set by the Board to the CEO and Deputy CEO. Day to day management is defined within the Board Charter as all matters not specifically reserved for approval by the Board or delegated to a Committee. An Operational Council, comprising members of senior management of the Company, assists the CEO and Deputy CEO in the exercise of their functions.

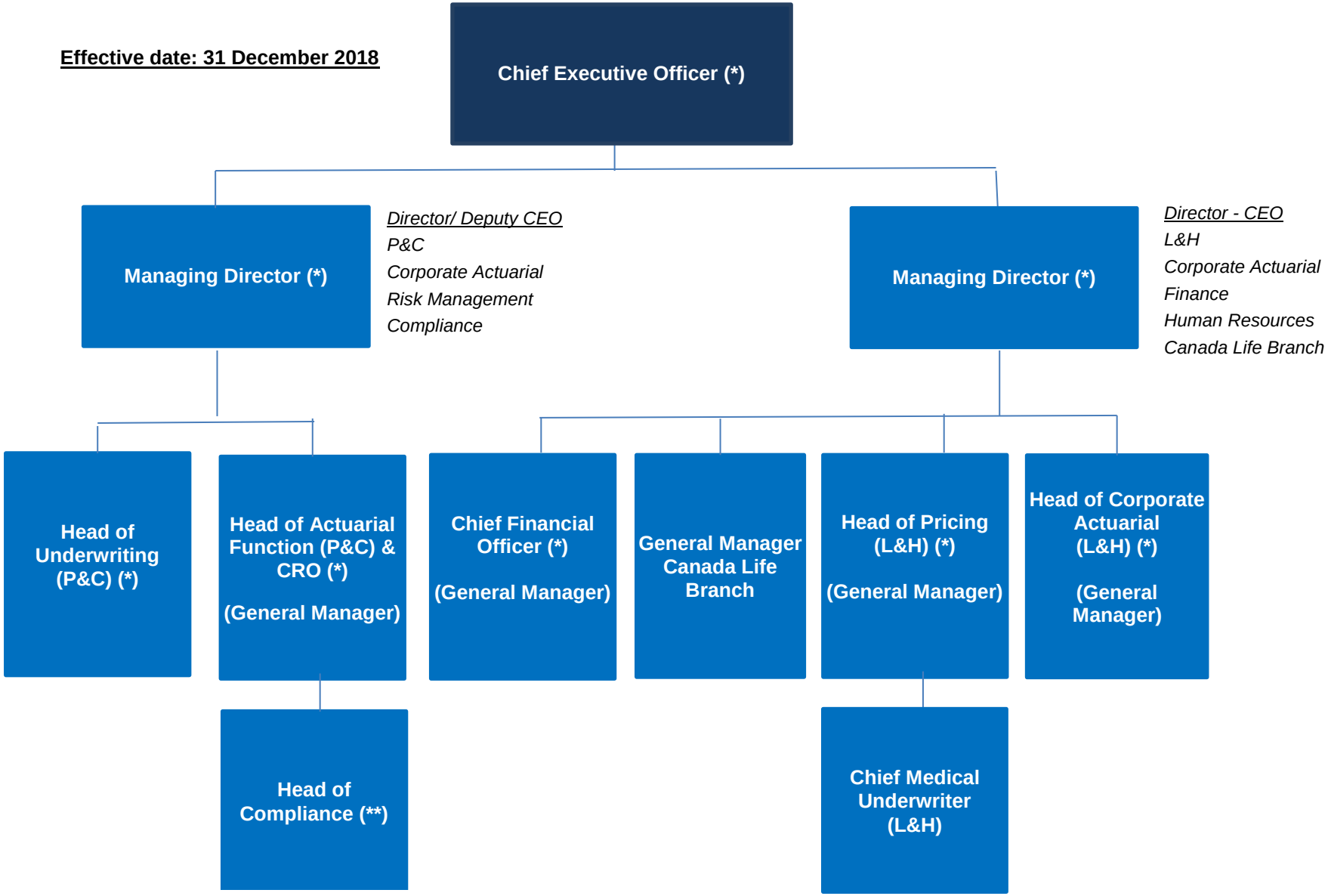
Underwriting authority is delegated in accordance with the Special Underwriting Guidelines – Life and Health, and the Special Underwriting Guidelines – ASI, approved by the Board.

Investments are managed in accordance with the HRI Investment Guidelines.

A high level organization chart, setting out the reporting lines within HRI, is attached behind:

hannover re®

Effective date: 31 December 2018



(*) Member of the Operational Council
(**) Permanent guest of the Operational Council

The organisation and collective effort of individual functions are decisive for our internal risk management and control system. In our system the central functions are closely interlinked with one another and the roles, tasks and reporting lines are both clearly defined and documented in the context of the so-called three lines of defence. The first line of defence consists of risk control and the original responsibility for risk at divisional level. The risk management function ensures the second line of defence - risk monitoring. It also receives support from the actuarial function and the compliance function. The third line of defence consists of process-independent monitoring executed by the internal audit function.

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

B.1.2 Material Changes in the System of Governance

There was a change to the Reporting Line for the Head of Compliance during the year. Since October 2018, the Head of Compliance has reported to the Chief Risk Officer (“CRO”).

B.1.3 Recruitment and Remuneration policy

B.1.3.1 Principles of the Recruitment and Remuneration Policy

The Board of Directors in conjunction with the Compensation Committee assesses remuneration packages in an effort to discourage imprudent risk taking. HRI's Recruitment and Remuneration Policy ("the Policy"), in conjunction with the Corporate HRM Principles: Executive and Senior Management Compensation and Benefits, reflects HRI's objectives in respect of corporate governance as well as sustained and long term value for stakeholders. It also provides for an appropriate level of transparency.

The Policy seeks to ensure that employees of HRI are compensated with appropriate incentives in an effort to recognise and encourage enhanced performance in a fair and responsible manner for their individual contributions to the success of HRI. In doing so HRI reviews its remuneration with that of comparable organisations and comparable roles within those organisations.

The Policy also ensures that the duty to mitigate loss is fully recognised.

HRI is committed to ensuring that its remuneration practices enable it to:

- Appropriately compensate employees for the services they provide to the Company;
- Attract and retain employees with skills required to effectively manage the operations and intended future direction of the business;
- Motivate employees to perform in the best interests of HRI and its stakeholders;

HRI does not permit risk-taking that falls outside of HRI's risk appetite policies and guidelines.

This is achieved by ensuring compliance with strict policies and guidelines on recruitment and compensation and appropriate action in the event of non-compliance.

The Board is responsible for monitoring the ongoing performance of Senior Management at General Manager level and above.

B.1.3.2 Information on the individual and collective performance criteria on which any entitlement to share options, shares or variable components of remuneration is based

Employees

HRI seeks to ensure that its employees are provided with appropriate incentives to encourage enhanced performance and are rewarded in a fair and responsible manner. The HRI Bonus Scheme ("the Scheme") governs this process in Ireland and Canada and ensures that the duty to mitigate loss is fully recognised.

Bonus payments are paid to all eligible employees based on individual performance over the previous 12 months and the financial results of the Group for the preceding financial year.

Executive and Senior Management

The HRM Corporate Principles: Executive and Senior Management Compensation & Benefits provide clear guidelines for Executive and Senior Management remuneration which recognise the long term interests of the Hannover Re Group, its shareholders and employees.

Total compensation for Executive and Senior Management is highly geared towards performance with the proportion of “at risk” pay increasing/decreasing according to:

a) Group net income,

b) Business Group targets achievement (only for executives with business responsibility)

c) Individual target achievement

The Hannover Re Executive Board in cooperation with the Board of Directors of each Group operation conducts risk assessments of pay packages to ensure that they do not encourage imprudent risk-taking.

B.1.3.3 A description of the main characteristics of supplementary pension or early retirement schemes for the members of the administrative, management or supervisory body and other key function holders

Retirement

The Company operates a pension plan on a defined contribution basis which means retirement benefits will depend on the total amount contributed by both the Company and individual together with investment income earned. At the time of retirement, the accumulated fund will be available to provide the individual with a range of benefits within approved Revenue limits.

B.1.4 Related party transactions

A capital repatriation of USD 650m was completed during the year, following approval from the CBI. The Company has received approval from the CBI for a further capital repatriation of USD 260m and the repayment of two subordinated loans with Hannover Ruck SE of EUR 100m and USD 109m respectively in 2019. The Company expects the repayment to occur in the first half of 2019.

B.2 Fit and proper requirements

Under the applicable F&P standards, the HRI CEO, on behalf of the Company, is required to satisfy herself on an ongoing basis that those individuals performing Pre-Approval Control Functions ("PCFs") and Control Functions ("CFs") roles comply with the standards set out in the legislation and guidance. In order to comply with the above requirements, the F&P process at HRI is performed in two phases:

- Due diligence performed for new CF/ PCF roles; and
- Ongoing due diligence conducted for existing CF/ PCFs, at least annually.

The purpose of the assessment is to ensure that PCFs and CFs have the relevant qualifications, experience and other necessary qualities and skills appropriate to the function they perform. The person must be able to demonstrate that they have:

- Professional qualifications and capability appropriate to the relevant function;
- Competence and skills appropriate to the relevant function, whether gained through training or professional experience;
- Competence and proficiency through past performance in previous functions;
- Sound knowledge of the business and their new role;
- Clear and comprehensive understanding of regulatory and legal environment, appropriate to their function;
- Have no concurrent responsibilities or conflicts of interest which would impair their ability to discharge their duties;
- Act honestly, ethically and with integrity, and
- Are financially sound.

Initial Due Diligence for PCF and CF roles

The initial due diligence process commences as soon as an offer for new role is accepted by the internal/external candidate. Offers for relevant roles are conditional upon the individual successfully completing F&P assessment and obtaining CBI approval, where applicable.

Annual re-assessment PCF and CF F&P compliance

Subsequent to initial due diligence, the Compliance Function conducts an annual re-assessment process for all PCF and CF roles, to ensure evidence of continuous compliance exists and declarations of compliance are renewed.

B.3 Risk Management System including the Own Risk and Solvency Assessment

B.3.1 Risk management system

The risk management system of HRI is articulated through a number of policies and frameworks, the key ones being the Risk Strategy, the Risk Management Framework and the System of Limits and Thresholds. The Risk Strategy describes the overall approach to risk and includes the Risk Appetite Statements. The Risk Management Framework sets out how the risk management system is structured in practice, the roles and responsibilities of the stakeholders in the process, and the risk assessment approach. The System of Limits and Thresholds provides the link between the internal model and its use in the risk management of HRI.

A risk register is used as the primary tool for identifying, measuring, monitoring, assessing and recording the risks faced by the business. The risks are identified, analysed and rated by the risk owner, with the support of the Risk Management function. The risk register covers both risks that the Company is currently exposed to and emerging risks.

A risk report is prepared by the Risk Management function for review and approval by the Risk Committee at each meeting. The report includes amongst other things a summary of the risk register and an assessment of the identified risks, the System of Limits and Thresholds report and an update on whether any of the Risk Appetite Statements have been breached. A summary of the risk position is also provided to the Board on a quarterly basis.

The ORSA process is conducted on an ongoing basis throughout the year and provides the link between the risk management system and the decision-making processes of the Company. The process is summarised into the ORSA Report, which is prepared by the Risk Management function with input from the other key functions, and is reviewed and approved by the Board at least annually.

B.3.2 Risk management function

The Risk Management function, led by the Chief Risk Officer, is responsible for ensuring the development and ongoing maintenance of an effective risk management system within HRI. The activities of the Risk Management function are overseen by the HRI Risk Committee.

The Risk Management function's responsibilities and authority are documented in detail within the Risk Management Framework and are subject to annual review by the Risk Committee and the Board. The Risk Committee's duties and responsibilities are detailed in the Terms of Reference, which are also subject to annual review by the Board.

The Board has ultimate responsibility for the governance of the internal model in accordance with regulatory requirements, including approval of any major changes or extensions, review and approval of the policies governing the internal model and review of the validation of the model results. The Risk Committee is authorised by the Board to provide support in this respect by providing advice to the Board. This governance structure has been established for several years.

An internal model validation policy is in place that is approved by the Board and requires a validation exercise to be performed at least annually. The validation policy discusses the approach to the validation process, including the tools used.

B.3.3 Own Risk and Solvency Assessment (ORSA)

As mentioned earlier, the ORSA process is conducted on an ongoing basis throughout the year. The process and its results are summarised into the ORSA Report, which is prepared by the Risk Management function with input from the other key functions, and is reviewed and approved by the Board at least annually.

As part of the ORSA process, the risks faced by the Company are considered and the capital position of the Company is projected in line with the business plan to ensure that the capital position supports the business plan and the development of the risks faced. It also analyses the quality of the capital held and assesses the capital position under alternative scenarios. A number of qualitative and quantitative processes are utilised to assess the risks to which the Company is exposed. A range of stress and scenario tests is also employed to test the Company's exposure in stressed conditions.

The ORSA process is integrated into the decision-making processes of the Company through risk management actions taken as a result of the risk assessment processes, analysis of capital management options, analysis of large new business transactions and the selection of risk mitigation techniques.

B.4 Internal Control System

B.4.1 Elements of the internal control system

HRI implements effective internal controls that provide the Board and management with reasonable assurance in respect of the following:

- The Board and management have an understanding of the extent to which the objectives of HRI's operations are being achieved,
- Published financial statements are reliable, and
- Applicable laws and regulations are complied with at all times.

The Internal Control system consists of systematically designed organisational and technical measures and checks within the Company. It ensures that guidelines are followed and risks are managed so that the Company's strategy can be fully implemented. HRI formalises its Internal Control framework within the Internal Control Policy, further supplemented with the Hannover Re Internal Control System Guideline.

HRI Internal Control ("IC") employs fundamental control principles applied consistently across HRI business (including its branches), as follows:

- Segregation of duties across the business and the key processes
- Clearly documented delegated authorities, reporting lines, roles & responsibilities
- Documented policies and procedures
- Documented key processes, subject to regular review:
- Four Eyes review of all key reports/outputs.

B.4.2 Internal control framework

The HRI Internal Control framework incorporates the following components, which are set out in detail below:

- HRI Operations – the internal controls in place at Board and Senior Management level and across HRI's operations;
- Financial & Regulatory Reporting – the internal controls in place in relation to the production of accurate and reliable financial statements and regulatory reporting, and in particular the role(s) of the Chief Financial Officer and respective Heads of Actuarial Function/ Corporate Actuarial;
- Compliance with Laws and Regulations – including, but not limited to, the role of the Second Line of Defence Control Functions: Compliance, Risk Management and Actuarial Function;
- The Role of Internal and External Audit in providing an independent assessment on the effectiveness of internal controls.

B.4.3 Compliance function

The Board of Directors is responsible for maintaining a permanent Compliance Function within HRI. For this purpose, HRI formally appoints the Head of Compliance, who is supported by the Compliance Executive.

The Head of Compliance has a formal regular reporting line to the CRO. In addition, the Head of Compliance has a dotted reporting line to the Head of Group Legal Services in Germany, who acts as Chief Compliance Officer for the Hannover Re Group. The Compliance Function reports to the each Risk Committee and to the Board.

The Compliance Function is implemented via the Compliance Charter, which has been approved by the HRI Board. The Charter provides for the independence of the Compliance Function from business activities and sets out the management reporting line to the CRO of HRI and the governance reporting lines into the Risk Committee and the Board of HRI.

The Head of Compliance has overall responsibility for co-ordinating the management of compliance risk, implementation of a robust compliance framework and for the delivery of the Annual Compliance Plan.

The Head of Compliance is responsible for assisting the business in identifying the procedures and controls necessary to meet legal and regulatory obligations and for ensuring that these are consistent with the Compliance Framework. The Compliance Executive supports the Head of Compliance in maintaining a strong compliance culture within HRI, co-ordinating the management of compliance risk and the delivery of the Annual Compliance Plan.

The roles, responsibilities and authority of the Compliance Function, as well as the overview of HRI Compliance framework is documented within the Compliance Charter.

B.5 Internal Audit Function

Hannover Re Group Auditing performs the Internal Audit Function for HRI. The provision of Internal Audit Services is governed by an SLA with Group Auditing, which is approved by the Audit Committee. The SLA is based on a three year rolling Internal Audit Plan ("the Audit Plan").

There is an established Internal Audit Policy, outlining roles and responsibilities of the Internal Audit Function, as well as the roles and responsibilities of the Board, Audit Committee and HRI Management and employees in relation to the Internal Audit process. The key role of the Internal Audit Function is to assess the adequacy and effectiveness of the Internal Controls system and other elements of the HRI system of governance, in line with a risk based approach.

An Audit Plan is agreed as part of the SLA and comprises a three year Audit Cycle. This Cycle is designed to prioritise risk in the HRI Audit Universe. The Audit Cycle sets out the areas of the business that Group Auditing will review as part of the internal audit process and the timelines for the performance of such a review. The Audit Plan is approved by the HRI Audit Committee. The Audit Plan can be amended as required with agreement from the Audit Committee. The Audit Plan is drafted based upon an assessment of the risks facing HRI and the activities carried out by HRI. Management's goals and objectives, together with its perceptions of risks and exposures, will also form a key input to Internal Audit's strategic and operational planning process.

The Audit Plan identifies the business areas to be reviewed as part of the audit process. The scope of the audit for each business area is developed by Group Auditing in conjunction with the Internal Audit Liaison, Senior Management and relevant area management, and is set out in an Audit Instruction.

Group Auditing is responsible for allocating resources to audits and in the event of a conflict of interest or independence requirements breaches, Group Auditing will immediately seek to resolve the matter as appropriate.

The HRI Internal Audit Policy clearly articulates that Group Auditing have the right to review all activities and processes relevant to the performance of the audit/investigation and have full, free and unrestricted access to all the functions, records, assets, property and personnel necessary for the proper discharge of its responsibilities.

The Head of Group Auditing is subject to F&P requirements from HRI's perspective, and for that purpose was designated as CF 2. An annual due-diligence process is conducted to ensure continuous compliance with F&P requirements. In addition, in line with Solvency II requirements for outsourced key control functions, an existing Non-Executive Director of HRI was appointed as the PCF responsible for outsourced Internal Audit Function (effective December 2015).

B.6 Actuarial Function

The responsibility for the Actuarial Function is delegated to the Head of Corporate Actuarial L&H, in respect of the Life & Health portfolio, and the Head of Corporate Actuarial P&C, in respect of the Property & Casualty portfolio, who have reporting lines to the CEO and Deputy CEO respectively. Formalised Actuarial Function Terms of Reference are in place, outlining roles and responsibilities of the Actuarial Function, key requirements applicable to its structure, independence and remit.

The Actuarial Function and specifically the respective Heads of the Actuarial Function have responsibilities under Solvency II and the CBI's Domestic Actuarial Regime and Related Governance Requirements under Solvency II. These responsibilities cover the following key areas:

- Co-ordination of the calculation of the Technical Provisions under Solvency II
- Assess the consistency of the data used in the calculation of the Technical Provisions
- Actuarial Opinion on the Technical Provisions
- Actuarial Opinions on the Underwriting policy and Retrocession policy
- Actuarial Opinion on the ORSA process
- Annual Actuarial Function report to the Board including the Actuarial Report on Technical Provisions

The Board of Directors is responsible for maintaining a permanent Actuarial Function within the organisation. For this purpose, HRI formally appoints a Head of Actuarial Function - L&H and a Head of Actuarial Function - P&C, and grants sufficient human and technical resources to achieve the defined objectives. The appointment of the Heads of Actuarial Function is subject to pre-approval by the Central Bank of Ireland in accordance with Fitness and Probity Regulations. The removal of either Head of Actuarial Function must be approved by the Board of Directors, in accordance with the CBI Corporate Governance Requirements.

B.7 Outsourcing

HRI has an Outsourcing Policy is in place which is reviewed annually by the Risk Committee and approved by the Board. Under the Outsourcing Policy, documented Service Level Agreements ("SLA"s) are required for each outsourced relationship and must set out service standards to be adhered to. The Head of Compliance acts as Outsourcing Coordinator and oversees compliance with the policy.

The outsourcing management process consists of the following six steps:

- Planning and classification
- Risk assessment and due diligence
- Contract management
- Notification to CBI of proposed outsourced relationship
- Steering and monitoring
- Renewal and/or termination.

The Compliance Function maintains a register of all critical or important outsourcing arrangements which HRI is party to. The outsourcing risk, associated key controls and their effectiveness are monitored and assessed on regular basis as part of risk register cycle coordinated by the Risk Management Function.

In all cases, HRI benefits from the infrastructure, process and resources established within respective Group entities in executing relevant services outlined above.

Appropriate due diligence is conducted on an annual basis to ensure that outsourced arrangements remain adequate and effective. An agreed annual review and reporting process is executed by responsible SLA Relationship Managers for each outsourced agreement, to ensure regular review against agreed service standards is carried out, documented and reported to Operational Council, and any issues escalated in a timely manner.

B.8 Any other information

B.8.1 Evaluating the appropriateness of the system of governance

The system of governance is considered to be appropriate for the Company, taking into account the nature, scale and complexity of the risks inherent in the business.

B.8.2 Other information

There is no other material information regarding the system of governance.

C. Risk Profile

In the context of its business operations HRI enters into a broad variety of risks. These risks are deliberately accepted, steered and monitored in order to be able to act on the associated opportunities. The parameters and decisions of the Board with respect to the risk appetite of HRI are based on the calculations of risk-bearing capacity and are fundamental to the acceptance of risks.

The risk profile of HRI reflects the Risk Strategy, which is to actively assume Life & Health and Property & Casualty underwriting risks, while accepting other risks including market, counterparty default and operational risks as a consequence of that strategy.

The risk profile materially changed during 2018 due to the impact of the US Tax Cuts and Jobs Act.

Prudent Person Principle

HRI's assets are invested in line with the Investment Guidelines. The Investment Guidelines are designed in accordance with the 'prudent person principle'.

Risk Concentrations

HRI monitors and sets limits on its exposure to various risk concentrations including natural catastrophe exposures, per life concentrations, geographic concentrations, asset concentrations and counterparty exposure concentration.

Risk Mitigation

The key technique used to mitigate risks is retrocession. While HRI has both internal and external retrocession arrangements in place, it does not typically rely heavily on internal or external retrocession. Results are available gross and net of retrocession in order to monitor the continued effectiveness of the arrangements in place.

HRI uses derivative financial instruments to a limited extent. HRI currently only utilises forward currency contracts and foreign currency swaps. The primary purpose of the derivatives is to hedge the non-USD net technical liabilities or the foreign dominated investments.

Stress tests and scenario analysis

HRI performs a wide range of stress tests and sensitivity analysis to test the resilience of the balance sheet under different circumstances. Those included in the most recent ORSA Report covered:

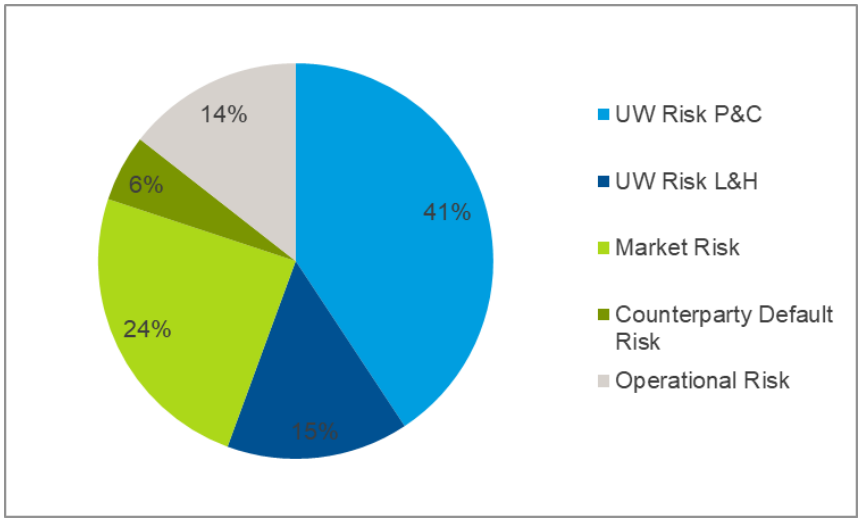
- Various biometric stresses on the key exposures in the Life & Health line of business.
- Tailored stresses on the key exposures in the Property & Casualty line of business.
- A number of economic stresses including an increase in credit spreads, an increase in interest rates and currency up/down movements.
- Other relevant scenarios tailored to HRI such as a significant operational risk event, a large increase in a certain line of Property & Casualty business, a reduction in Life & Health new business and a Brexit scenario.
- Relevant combined and reverse stress tests.

Off-balance sheet exposures

Within the Tier 3 own funds is included an Ancillary Own Funds ("AOF") item approved by the Central Bank of Ireland on 14 December 2015. The material terms and conditions of the Tier 3 Ancillary Own Funds are described further in Section E 1.2.2 Ancillary Own Funds. The counterparty for the AOF is Hannover Rück SE.

Quantitative information on Risk Exposures

The Solvency Capital Requirement split by individual risk categories as at 31 December 2018 is below.



C.1 Underwriting risk

C.1.1 Underwriting Risks Property/Casualty and Health Not Similar to Life Techniques

The Property & Casualty line of business expose HRI to the following types of P&C underwriting risk: premium risk, natural catastrophe risk, manmade catastrophe risk and reserving risk.

There has been no material change in Property & Casualty underwriting risk over the reporting period.

C.1.2 Underwriting Risks Life and Health Similar to Life Techniques

HRI's Life & Health business is primarily divided into two types of business, Financial Solutions and Risk Solutions.

Financial Solutions cover all treaties in which the primary emphasis is on financing or capital management components. These include providing both cash and non-cash financing solutions to service clients' needs.

The Risk Solutions business is focused on reinsurance of mortality business but does include other exposures such as morbidity, lapse and longevity. There is a strong focus on the United Kingdom and Asia.

The largest sources of risk in the Life & Health line are long-term mortality risk and short-term pandemic risk. This reflects HRI's risk profile and is expected due to the exposure to underlying life

assurance business. Due to the long term nature of this business, a relative increase in mortality rates in each future year has a significant impact in terms of the present value of this change.

There has been a material change in Life & Health underwriting risk over the reporting period due to the significant recapture of the vast majority of US-originated Life & Health treaties following US Tax Reform.

C.2 Market risk

HRI's market risk includes interest rate risks, currency risks, default and spread risks and equity risks.

HRI's asset portfolio currently consists in large part of fixed-income securities, and hence interest rate and credit spread risks account for the bulk of the market risk. HRI manages interest rate and currency risks through its asset liability matching program.

HRI is also exposed to changes in credit spreads, where an increase in credit spreads on its investments will reduce the market value of the assets without any corresponding change in the value of liabilities, which remain valued on a risk-free basis.

Currency risk is not a material risk for HRI as the currency of the majority of technical liabilities and own funds is matched to the currency of the assets. Some residual exposure to exchange rate volatility on the own funds remains due to non-USD denominated assets and business.

There has been a material change in market risk over the reporting period due to significant capital repatriations to Hannover Rück SE made during the year.

C.3 Credit risk

Credit risk or counterparty default risk consists primarily of the risk of complete or partial failure of a counterparty and the associated default on payment. Counterparty default risk is controlled through counterparty exposure limits. Retrocession partners and broker partners are carefully selected and monitored in respect of their creditworthiness in order to minimise counterparty default risk as much as possible. The creditworthiness of cedants and retrocessionaires is monitored through a quarterly review of credit ratings, as provided by external rating agencies. A group-wide Cession Limits system is also in place which must be used before any third party retrocession is placed. It assesses whether there is capacity available for the placement and the creditworthiness of the counterparty.

There has been a material change in credit risk over the reporting period due to the recapture of the vast majority of US-originated Life & Health treaties, which has led to a significant reduction in the number of reinsurance counterparties.

C.4 Liquidity risk

Liquidity risk refers to the risk of being unable to meet financial obligations as they fall due. Due to the nature of the business written by HRI, there is a risk that while HRI has sufficient capital, there could be a short or medium-term liquidity strain. To mitigate this risk, the liquidity position is assessed at least quarterly. The analysis considers the current liquidity position plus known liquidity requirements in the foreseeable future, such as cash financing transactions or loan maturities.

As at 31 December 2018, the expected profit included in future premiums ("EPIFP") is USD 173m. The majority of HRI's business has no surrender values and therefore the EPIFP is any negative BEL by Line of Business.

For the “total amount of the expected profit included in future premiums” required by Art. 295 (5) of the Delegated Regulation 2015/35 please refer to the Quantitative Reporting Template S.23.01.01., item R0790. We explicitly do not use this figure for our liquidity management.

There has been no material change in liquidity risk over the reporting period.

C.5 Operational risk

Operational risk is defined as the risk of loss arising from inadequate or failed internal processes, from personnel and systems, or from external events. Unlike underwriting risks which are deliberately entered into, exposure to operational risk is not desired but is unavoidable. HRI’s focus is therefore on minimising operational risk as much as possible.

The risk is strongly associated with human error, systems failure and inadequate controls and procedures. Operational risk, if unmitigated, may result in financial loss, unavailability of services, information deficiencies or loss, and damage to reputation. HRI maintains an Operational Risk Register, where the key areas of operational risk are defined, assigned to risk owners, monitored and assessed twice a year. The results of the assessment are reported to the Risk Committee. The key areas where operational risk has the potential to impact HRI’s business are as follows:

- Business continuity
- Business processes and data quality
- Compliance
- Fraud
- Human Resources
- IT
- Outsourcing

There has been a material change in HRI’s exposure to operational risk over the reporting period due to the recapture of the vast majority of US-originated Life & Health treaties and the operational risk associated therewith.

C.6 Other material risks

HRI is also exposed to other material risks that are not covered by the categories in the previous sections. These risks include reputational, strategic and emerging risk. These risks are all measured, monitored and rated through HRI’s risk register and are regularly reported on to the Risk Committee and/or Board, as appropriate. Group-wide frameworks for managing these risks have also been rolled out and adopted by HRI.

Reputational risk is defined as the risk that adverse publicity regarding HRI's business practices and associations, whether accurate or not, could cause a loss of confidence in the integrity of the company. The risk of loss of confidence relates to all stakeholders, which include existing and potential clients, brokers, suppliers and supervisors. It has the capacity to damage our existing business and our future potential.

Strategic risk refers to the risk of being unable to implement appropriate business plans and strategies, make decisions, allocate resources or adapt to changes in the business environment. It

can also arise due to external factors such as changes in the accounting rules, changes in taxation or regulatory changes. While the terms of the United Kingdom's withdrawal from the European Union have still not been determined, and HRI does have exposure to UK-based clients, the latest internal analysis indicates that the implications of Brexit will not be material for HRI.

Emerging risks are potential new future risks or evolving risks which are difficult to quantify and may have a high loss potential. Emerging risks are marked by a high degree of uncertainty.

C.7 Any Other Information

There is no other material information regarding the risk profile.

D. Valuation for Solvency Purposes

General valuation principles

The valuation of assets and liabilities pursuant to Solvency II is based on economic and market-consistent principles, and takes account of inherent risks.

In line with this concept the assets and liabilities are valued as follows:

- Assets should be valued according to the amount with which they could be exchanged between knowledgeable willing parties in an arm's length transaction.
- Liabilities should be valued according to the amount with which they could be exchanged between knowledgeable willing parties in an arm's length transaction.
- The fair value of money should be reflected, i.e. all cash flows have to be discounted.
- When valuing liabilities, no value adjustments are made in order to account for the creditworthiness of the insurance or reinsurance company.
- The valuation of assets and liabilities is based on the assumption that the company will continue its business activity ("going concern principle").
- Individual assets and liabilities are valued separately.
- Concepts of materiality shall apply. Absent or erroneous information pertaining to items shall be deemed significant if it could influence the individual or aggregated business decisions of the recipients.
- Simplifications may be applied when the method is deemed appropriate for the type, scope and complexity of the inherent risk.

The underlying principle used for determining the market values of assets and liabilities, with the exception of technical provisions, is the valuation principle pursuant to International Accounting Standards, as was adopted by the EU Commission pursuant to the Directive (EC) No. 1606/2002. For example, the guideline for determining fair values pursuant to IFRS 13 Fair Value Measurement, serves as a source of orientation.

The cash flow view plays a key role in the valuation of technical provisions:

- The value of technical provisions corresponds to the current amount insurance and reinsurance undertakings would have to pay if they were to transfer their insurance and reinsurance obligations immediately to another insurance or reinsurance undertaking.
- Technical provisions must be calculated in a prudent, reliable and objective manner.
- The value of technical provisions shall be equal to the sum of a best estimate and a risk margin
- The calculation of the best estimate (so-called "Best Estimate Liability" or "BEL") utilises cash flow projections, which reflect the settlement of insurance and reinsurance liabilities over the course of the term.
- The BEL is supplemented by a risk margin. The calculation of the risk margin is done using a Cost of Capital approach.

Any valuation methods used must always work in sync with Article 75, respectively Articles 77 to 82 and Article 86 of the Directive 2009/138/EC.

Assessing active markets

In the course of valuing assets, it is necessary to assess as to whether a market is either active or not. Only when a market is active may the current value be taken directly from these markets or derived from comparable assets traded there, in order to determine the market value of assets. If a market cannot be categorised as active, the market value is to be determined using valuation models. Whether or not a market can be viewed as an active market hinges on a discretionary decision regarding the type of financial instruments and local markets. At HRI this is, however, based on the following predetermined parameters.

- Business transactions occur with sufficient frequency and corresponding volume, so that price information is continuously available
- The products which are traded on the market are homogeneous
- Contractually willing buyers/sellers can, as a rule, be found at any time
- Prices are freely accessible to the public

An active market is deemed not to exist when, due to the complete and long-term decline in buyers and/or sellers, market liquidity is no longer established. Should transactions be verified as resulting exclusively from forced deals, compulsory liquidations or distressed sales, this is just as much an indicator for an inactive market as are high bid/ask spreads.

In the event that an inactive market has been verified, we use valuation models for the calculation of market values. Please refer to section “D.4 Alternative methods for valuation”.

Note

Due to computational reasons rounding errors of +/- one unit can occur in the tables.

Solvency II balance sheet as of 31 December 2018

The following two pages show the Solvency II and IFRS balance sheets as at 31 December 2018.

The valuation of these items is further described in subsections "D.1 Assets", “D.2 Technical Provisions”, "D.3 Other liabilities" and “D.4 Alternative methods for valuation”.

In USD 000's	Solvency II	IFRS
Assets		
Deferred acquisition costs	-	314,047
Deferred tax assets	10,539	8,887
Property, plant & equipment held for own use	233	732
Investments (other than assets held for index-linked and unit-linked contracts)	2,548,025	2,523,249
Property (other than for own use)	-	-
Holdings in related undertakings, including participations	50,000	50,000
Bonds	2,371,676	2,356,831
Government Bonds	1,342,886	1,461,214
Corporate Bonds	956,408	823,235
Structured notes	-	-
Collateralised securities	72,382	72,382
Collective Investments Undertakings	22,688	22,688
Derivatives	11,334	11,334
Deposits other than cash equivalents	9,931	-
Other investments	82,396	82,396
Assets held for index-linked and unit-linked contracts	-	-
Loans and mortgages	-	10,172
Loans on policies	-	-
Loans and mortgages to individuals	-	-
Other loans and mortgages	-	-
Reinsurance recoverables from:	407,851	992,208
Non-life and health similar to non-life	-19,316	610,633
Non-life excluding health	-19,316	610,633
Health similar to non-life	-	-
Life and health similar to life, excluding health and index-linked and unit-linked	427,167	381,576
Health similar to life	-	-
Life excluding health and index-linked and unit-linked	427,167	381,576
Life index-linked and unit-linked	-	-
Deposits to cedants	68,288	2,310,211
Insurance and intermediaries receivables	323,085	353,427
Reinsurance receivables	35,835	35,834
Receivables (trade, not insurance)	859	859
Cash and cash equivalents	68,869	78,800
Total assets	**3,463,584**	**6,628,427**

In USD 000's	Solvency II	IFRS
Liabilities		
Technical provisions – non-life	967,033	2,788,611
Technical provisions – non-life (excluding health)	887,000	-
TP calculated as a whole	-	-
Best Estimate	848,419	-
Risk margin	38,581	-
Technical provisions - health (similar to non-life)	80,033	-
TP calculated as a whole	-	-
Best Estimate	75,752	-
Risk margin	4,281	-
Technical provisions - life (excluding index-linked and unit-linked)	953,486	1,802,414
Technical provisions - health (similar to life)	66,323	-
TP calculated as a whole	-	-
Best Estimate	63,734	-
Risk margin	2,589	-
Technical provisions – life (excluding health and index-linked and unit-linked)	887,163	-
TP calculated as a whole	-	-
Best Estimate	843,849	-
Risk margin	43,314	-
Technical provisions – index-linked and unit-linked	-	-
TP calculated as a whole	-	-
Best Estimate	-	-
Risk margin	-	-
Provisions other than technical provisions	5,613	5,613
Deposits from reinsurers	-191	524,797
Deferred tax liabilities	8,895	3,566
Derivatives	1,089	1,298
Financial liabilities other than debts owed to credit institutions	428,928	527,285
Insurance & intermediaries payables	64,223	64,223
Reinsurance payables	53,362	53,361
Payables (trade, not insurance)	-	-
Subordinated liabilities	97,926	-
Subordinated liabilities not in BOF	-	-
Subordinated liabilities in BOF	97,926	-
Any other liabilities, not elsewhere shown	3	3
Total liabilities	**2,580,367**	**5,771,171**
Excess of assets over liabilities	**883,217**	**857,256**

D.1 Assets

D.1.1 Deferred Acquisition costs R0020

The valuation of Deferred Acquisition costs is described in Section D.2 Technical provisions.

D.1.2 Deferred tax assets R0040

in USD 000's	Solvency II	IFRS
Deferred tax assets	10,539	8,887

In the IFRS financial statements balance sheet deferred tax is provided in full in accordance with IAS 12 Income Taxes, using the balance sheet liability method, providing for temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for taxation purposes. The amount of deferred tax provided is based on the expected manner of realisation or settlement of the carrying amount of assets and liabilities, using tax rates enacted or substantially enacted at the Statement of Financial Position date. Deferred tax assets and liabilities are not discounted.

In the Solvency II balance sheet, deferred taxes may result from the following:

- Taxable / deductible temporary differences between the Solvency II balance sheet and the tax base (tax balance sheet); and
- Unused tax loss and tax credits that may be carried forward.

A deferred tax asset (under Solvency II and the statutory account valuations) is recognised only to the extent that it is probable that future tax profits will be available against which the asset can be utilised. Deferred tax assets are reduced to the extent that it is no longer probable that the related tax benefit will be realised.

Differences in valuation

The difference in valuation relates to the taxable / deductible temporary differences between the Solvency II balance sheet and the tax base (tax balance sheet).

D.1.3 Property, plant & equipment held for own use R0060

in USD 000's	Solvency II	IFRS
Property, plant & equipment held for own use	233	732

The market value of internally-used property is calculated as follows:

The market value of the leasehold improvements is Nil as it is assumed that the improvements will revert to the lessor at the expiration of the lease.

With regard to the fixtures, fittings and equipment the valuation base pursuant to the Solvency II balance sheet is seen as identical with the valuation base used for annual accounts in line with commercial law. A revaluation is not conducted for reasons of materiality.

Differences in valuation

The difference between the valuation bases found in the Solvency II balance sheet and the IFRS financial statements is attributable to the net book value of the leasehold improvements under IFRS.

D.1.4 Participations and related undertakings R0090

in USD 000's	Solvency II	IFRS
Participations and related undertakings	50,000	50,000

The investment was made towards the end of 2016 and during 2017 further shares were issued at the original cost therefore cost is considered to remain the best estimate of fair value.

D.1.5 Bonds R0130

in USD 000's	Solvency II	IFRS
Bonds	2,371,676	2,356,831

Government bonds, corporate bonds, structured notes and collateralised securities are predominantly valued on the basis of quoted prices, which have been realised on active markets. If no publicly available price quotations are available or the markets in which they originate are deemed to be inactive, the items are valued on a theoretical basis.

Market quotations are provided by selected price service agencies, trading information systems or intermediaries (brokers) deemed to be trustworthy. The potential sources of price information available are allocated a ranking within a hierarchy. As a rule, price quotations issued by price service agencies are allocated the highest priority, while those provided by intermediaries are allocated the lowest. Exceptions can occur, for example, for selected market segments / currency combinations.

Differences in valuation

The difference between the Solvency II valuation bases and the IFRS financial statements totalling USD 14.8m result from the reclassification of a surplus note investment with a related party, valued at USD 10.2m, which is classified as "Loans and mortgages" in the comparative IFRS balance sheet and corporate bonds under Solvency II.

The remaining difference of USD 4.6m between Solvency II and IFRS is attributable to the fixed income securities are acquired with the intent and ability to be held until maturity. Under IFRS they are initially recognised at fair value and directly attributable costs. Subsequent to the initial measurement they are measured at amortised cost. The corresponding premiums or discounts are recognised in profit or loss across the duration of the instruments using the effective interest rate method. For Solvency II these assets are valued at fair market value.

D.1.6 Collective Investment Undertakings R0180

in USD 000's	Solvency II	IFRS
Collective Investment Undertakings	22,688	22,688

Collective investment undertakings consist of High Yield Bond Funds and Debt Funds.

The High Yield Bond Funds are actively managed funds, focused on publicly traded bonds. These assets are predominantly valued on the basis of quoted prices, which have been realised on active markets. If not publicly available price quotations are available or the markets in which they originate are deemed to be inactive, the items are valued on a theoretical basis.

D.1.7 Derivatives R0190

in USD 000's	Solvency II	IFRS
Derivatives	11,334	11,334

Financial derivatives (e. g. options or forwards) are valued based on quoted market prices. If there are no market prices, the positions are evaluated theoretically.

Foreign exchange forward contracts, swaps and forward purchases can be evaluated by using the discounted cash flow method on the payoff profiles

The discount rates and the interest rate differentials are the two main factors used in calculating the valuation of the derivatives currently held by HRI.

To protect the Company's investment in Life Settlement products, the Company has entered into a reinsurance treaty with a fellow subsidiary which allows the Company to purchase cover on a policy-by-policy basis ("a yield collar"). The yield collars' unrealised value is the difference between the current market value and the cost of the policy where the market value is less than cost.

D.1.8 Deposits other than cash equivalents R0200

in USD 000's	Solvency II	IFRS
Deposits other than cash equivalents	9,931	-

The deposits other than cash equivalents are short-term highly liquid investments with less than 90 days' maturity from the date of acquisition. The funds are normally invested for periods of less than one month. They are carried at face value which is a reasonably approximate fair value at the reporting date.

Differences in valuation

The difference between the Solvency II value and the IFRS financial statements value result from the reclassification of short term bank deposits which are classified as cash and cash equivalents in the IFRS financial statements.

D.1.9 Other investments R0210

in USD 000's	Solvency II	IFRS
Other investments	82,396	82,396

Life settlements are valued on a policy-by-policy basis, using a discounted cash flow method. The fair value of a policy at the point of purchase is assumed to be equal to the purchase price. The fair-value at future dates is assumed to be the present value of expected future cash flows discounted at the risk-free term structure of spot rates (based on swaps) plus a policy-specific risk margin. The main risks associated with these instruments are mortality and interest rate risk. The yield collars, which are purchased and valued on a policy-by-policy basis, are calculated as the difference between the fair value of the underlying policy and that fair value capped at the annual rate implied in the contract. Yield collars mitigate downside risk but also cap potential gains. The yield collars are classified as derivatives on the Solvency II and IFRS balance sheet.

The secured notes are valued at fair value. The fair value of these notes is calculated using an internal model based on changes in interest rates and credit spreads. The main risks associated with these instruments are counterparty, lapse and mortality risk.

D.1.10 Loans and mortgages R0230

in USD 000's	Solvency II	IFRS
Loans and mortgages	-	10,172

The surplus note is with a related special purpose financial captive insurance company. The fair value is the principal balance with interest accrued to contract terms. The main risk associated with this investment is counterparty and credit risk.

Differences in valuation

The difference between the Solvency II valuation bases and the IFRS financial statements result from the reclassification of the surplus note investment which is classified as a bond on the Solvency II balance sheet.

D.1.11 Reinsurance recoverables R0270

The valuation of Reinsurance recoverables is described in Section D.2 Technical provisions.

D.1.12 Deposits to cedants R0350

in USD 000's	Solvency II	IFRS
Deposits to cedants	68,288	2,310,211

These assets primarily consist of funds held on certain contracts representing the collateral contractually withheld by our cedants to cover the technical liabilities HRI has reinsured. These assets are valued at market value using a mark-to-market method. These assets primarily consist of government, semi-government and corporate bonds. Such investments are typically held in trust and managed in accordance with approved investment guidelines.

Differences in valuation

There are three main reasons for the difference in valuation of Deposits to cedants.

Certain HRI treaties have "notional" funds withheld accounts. HRI does not bear investment risk on these assets and the actual cash flows received/paid are only settled after the depletion/utilisation of the funds withheld balance. Therefore the fair value of these notional funds withheld are deemed to be nil for the purposes of Solvency II as no cash flow takes place. There is an offsetting decrease to the best estimate liability and does not have a net impact on the balance sheet. This reduces the Deposit to cedants value under Solvency II of USD -2,247.7m. Other smaller adjustments are as follows:

- The Deposits to cedants are valued at fair value Solvency II whereas they are valued at amortized cost in the IFRS financial statements. This resulted in an increase in the asset under Solvency II of USD 1.9m.
- Under Solvency II the probability-weighted, expected margin is recognised on deposit accounted business, whereas for IFRS the full margin is recognised.
- For Solvency II future periods within the contract boundary are recognised, whereas under IFRS they are not.
- Contract deposits are included in the liabilities (see "Deposits from reinsurers") under IFRS.

These adjustments resulted in an increase in the reported Deposits to cedants asset under Solvency II of USD 3.9m.

D.1.13 Insurance and intermediaries receivables R0360

in USD 000's	Solvency II	IFRS
Insurance and intermediaries receivables	323,085	353,427

The carrying amount of Insurance and intermediary receivables is deemed to be a reasonable approximation of fair value. Balances receivable include actual account balances due plus an estimate of the amount due for the period for which accounts have not yet been received. The receivable balance is diversified among a range of cedants. The risk of non-payment by cedants is

mitigated by the use of offset clauses in the underlying contract. Following our review of the receivable balances, no impairment was necessary.

Differences in valuation

A certain HRI treaty has a “notional” receivable balance. The fair value of this balance is deemed to be nil for the purposes of Solvency II as no cash flow takes place. There is an offsetting decrease to the best estimate liability.

D.1.14 Reinsurance receivables R0370

in USD 000’s	Solvency II	IFRS
Reinsurance receivables	35,835	35,834

The carrying amount of Reinsurance receivables is deemed to be a reasonable approximation of fair value. Balances receivable include actual account balances due plus an estimate of the amount due for the period for which accounts have not yet been received. The receivable balance is diversified among a range of retrocessionaires. The risk of non-payment is mitigated by the use of offset clauses in the underlying contract. Following our review of the receivable balances, no impairment was necessary.

D.1.15 Receivables (trade, not insurance) R0380

in USD 000’s	Solvency II	IFRS
Receivables (trade, not insurance)	859	859

The carrying amount of Receivables (trade, not insurance) is deemed to be a reasonable approximation of fair value.

D.1.16 Cash and cash equivalents R0410

in USD 000’s	Solvency II	IFRS
Cash and cash equivalents	68,869	78,800

The Cash and cash equivalents are carried at face value and consist of cash at banks. They are carried at face value which is a reasonable approximation to fair value at the reporting date.

Differences in valuation

The difference between the Solvency II value and the IFRS financial statements value result from the reclassification of short term bank deposits which are classified as cash and cash equivalents in the IFRS financial statements.

D.2 Technical Provisions

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

Determining the TP, the risk-free yield curve including a volatility adjuster component in line with EIOPA requirements are used. A matching adjustment is not applied. Furthermore, the risk-free yield curve is not adjusted as set out in article 308c of the directives 2009/138/EC.

A temporary deduction according to article 308d of the directives 2009/138/EC is not applied.

The concept of calculating the TP "as a whole" is currently not applied to any business written.

HRI has been granted approval by the CBI to use volatility adjustments. This is intended to mitigate the effect of value fluctuations on the bond market. The volatility adjustment according to Article 77 d of the Directive 2009/138/EC was used for calculating the BEL. The following table shows the impact of a non-application of a volatility adjustment on the TP, the Solvency Capital Requirement ("SCR"), the Minimum Capital Requirement ("MCR"), the basic own funds and the amounts of own funds eligible to meet the MCR and the SCR.

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

Impact of non-application of a volatility adjustment

in USD 000's	Amount with Long Term Guarantee measures and transitionals	Impact of volatility adjustment set to zero
Technical provisions	1,920,518	22,921
Basic own funds	721,143	-10,229
Eligible own funds to meet Solvency Capital Requirement	770,211	-10,398
Solvency Capital Requirement	346,141	550
Eligible own funds to meet Minimum Capital Requirement	651,517	-10,431
Minimum Capital Requirement	155,764	241

For Solvency II purposes, all contracts have to be evaluated over the whole lifetime ("ultimate view"). In general, a contract boundary is set on that future date where at least one of the following criteria is met:

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

In case no contract boundaries exist, the projection is based on a look-through approach, i.e. the policies are projected until their natural expiry.

The BEL is shown on a gross basis in the following, i.e. before the reduction of reinsurance recoverables, and the RM is shown on a net basis, i.e. reflecting the risk mitigating effect of retrocessions. This is consistent with the methodology used in the Solvency II balance sheet.

Best Estimate Liability (BEL)

The calculation of the BEL is based on the projection of future cash in- and outflows like premiums, claims, and expenses. Best estimate assumptions are used in the calculation of the BEL. The expenses consist of direct administration expenses and costs of on-going operations.

As described in Section “Deposits to cedants R0350”, cash flows in connection with funds withheld (increase, decrease or interest on funds withheld) of the underlying business are usually netted against the liability cash flows. Exceptions from this rule are funds held with inherent capital market risk and funds withheld with insufficient offset possibilities (with the respective liabilities). The respective amounts are shown separately on the asset side of the balance sheet, if applicable. The netting of the deposits has no impact on the own funds.

For the Property & Casualty business there are not any material financial options and guarantees (“FOGs”). For the Life & Health business, there is an immaterial amount of FOGs for US business only. It is included in the BEL.

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

Risk Margin (RM)

According to article 37 (1) of the delegated acts (EU) 2015/35, a uniform cost-of-capital approach is used for calculating the risk margin.

The Cost of Capital (“CoC”) factor is 6%. The required capital is the SCR under Solvency II according to Hannover Re’s internal model (operational risk according to standard formula). The allocation of the SCR to the lines of business reflects the contribution to the SCR (Art. 37). The distributed capital is run off in future years using appropriate risk drivers for each line of business.

The following have not been used by HRI in the calculation of the Solvency II technical provisions:

- Matching adjustment
- Transitional risk-free interest rate term structure
- Transitional deduction.

D.2.1 Life & Health: Valuation Principles

S.12.01.02 Life and Health SLT Technical Provisions included in the “Quantitative Reporting Templates” section shows the technical provisions associated with each HRI Life & Health line of business.

Valuation Bases

In all cases the technical provisions have been calculated as the sum of the Best Estimate Liability and Risk Margin.

The Best Estimate Liability is calculated as the present value of future cashflows arising within the contract boundary using current best estimate assumptions and the relevant risk-free interest term structure including a volatility adjuster component. The cashflows projected include the following:

- Premiums
- Benefits

- Commissions
- Profit sharing payments
- Expenses

Included in the Best Estimate Liability is an estimation of incurred but not reported claims and outstanding claims where relevant.

The Risk Margin is calculated using the cost-of-capital approach as set out in Delegated Acts Solvency II Article 37. The approach used falls under Method 1 of the hierarchy of methods as set out in Guideline 62 of the EIOPA Guidelines on the Valuation of Technical Provisions (i.e. to approximate the individual risks or sub-risks within some or all modules and sub-modules to be used for the calculation of future Solvency Capital Requirements).

Life

Methods

This line of business covers a significant number of treaties, originating primarily in the UK, Asia and US as well as a small number of treaties coming from the rest of the world. The underlying business covers term, permanent and annuity business through traditional reinsurance arrangements, with and without financing, as well as through more structured financing reinsurance arrangements which are more risk remote.

A combination of seriatim data and model points is used to project the best estimate future cashflows using actuarial projection programmes.

The Best Estimate Liability also includes cashflows related to administration and overhead expenses generated within HRI.

Main Assumptions

The primary assumptions for the traditional risk reinsurance arrangements are mortality and lapse.

The base mortality for the UK originated business has been developed based on a UK industry mortality table, calibrated to recent experience. Mortality assumptions include assumptions for future mortality improvement, developed from UK population mortality improvements. The mortality assumption for the Asian business has also been developed based on industry mortality tables and there is no assumption for future mortality improvement.

Lapse assumptions are based on current best estimates, reflecting factors such as duration, issue age, product type, sales channel, risk classes and single/joint life.

The assumptions for the traditional financing are set based on original pricing and historical experience where credible. For the structured transactions, the experience assumptions are generally those developed at pricing but treaty performance relative to expected is monitored and updates made if required.

Valuation Differences

The following table shows the difference between the Solvency II technical provisions and the technical provisions reported in the financial statements:

SII & IFRS Technical provisions

In USD 000's

Line of Business	BEL	RM	TP	IFRS Technical Provisions*	Comparison SII and IFRS
Life	843,849	43,314	887,162	1,501,275	-614,113

*IFRS Technical Provision = Benefit reserve + IBNR + O/S claims reserve + UPR + Profit Commission Reserve- DAC

The IFRS reserves in the financial statements have been calculated under US GAAP principles.

For the traditional arrangements, the benefit reserve component is calculated using a Gross Premium Valuation approach for acquired business and a Net Premium Valuation approach otherwise. The benefit reserve component reflects the best estimate assumptions at the start of the contract with a provision for adverse deviation, whereas Solvency II reflects the current best estimate view of assumptions. The best estimate view of these assumptions has evolved over time arising from own emerging experience and industry studies.

The Solvency II technical provisions include a risk margin. The benefit reserve assumptions include a provision for adverse deviation but the IFRS technical provisions do not include a further explicit risk margin similar to the Solvency II methodology.

The Best Estimate Liability is calculated using current risk free interest rates whereas the benefit reserve is calculated using a valuation interest rate set at the start of the contract. The average valuation interest rate is higher than the current risk free rates.

There are large differences between the Solvency II and IFRS technical provisions related to where balances are shown on the respective balance sheets. The IFRS technical provision above does not include contract deposits of USD 46.1m whereas these form part of the Solvency II technical provision. On the other hand, for some treaties the structure is set such that the only actual cashflows that occur are the transfer of reinsurer's margin and the claims in excess of the funds withheld balance. The funds withheld accounts (USD 732.1m) do not create any cashflows between the insurance company and reinsurance company, with investment risk ultimately not borne by HRI on the assets, and therefore the BEL is set using the actual cashflows expected in each of the treaties.

For the structured transactions the IFRS reserves are zero. The corresponding Solvency II technical provisions are negative for these deals, representing the expectation of receipt of future fee income, with insignificant risk margins given the remoteness of the risk being provided for.

The Incurred but not reported and outstanding claims reserves are consistent between IFRS and Solvency II.

Health

Methods

This line of business comprises treaties where the material underlying risks relate to critical illness or disability products originating in Asia and UK. The Best Estimate Liability is calculated using actuarial models built in an actuarial modelling programme to project the future cashflows using model points (developed from seriatim data) or in aggregate at a treaty/plan level depending on the level of detail provided by clients.

Main Assumptions

The primary assumptions are morbidity, lapse and mortality.

Assumptions are set based on original pricing, client provided information, historical experience, and industry specific information.

Valuation Differences

The following table shows difference between the Solvency II technical provisions and the technical provisions reported in the financial statements:

SII & IFRS Technical provisions

In USD 000's

Line of Business	BEL	RM	TP	IFRS Technical Provisions*	Comparison SII and IFRS
Health	63,734	2,589	66,323	68,071	-1,748

The IFRS reserves have been calculated under USGAAP principles or in some cases set equal to the client reported US Statutory reserves. For those calculated under USGAAP the benefit reserve component reflects the best estimate assumptions at the start of the contract with a provision for adverse deviation, whereas Solvency II reflects the current best estimate view of assumptions. The best estimate view of these assumptions has evolved over time arising from own emerging experience and industry studies.

The Solvency II technical provisions include a risk margin. The benefit reserve assumptions include a provision for adverse deviation but the IFRS technical provisions do not include a further explicit risk margin similar to the Solvency II methodology.

The Best Estimate Liability is calculated using current risk free interest rates including a volatility adjuster component whereas the benefit reserve is calculated using a valuation interest rate set at the start of the contract. The average valuation interest rate is higher than the current risk free rates.

Allowing for future management actions

HRI makes no allowance for future management actions within the calculation of the L&H technical provisions.

Reinsurance Recoverable

The following table shows the reinsurance recoverable amount per line of business:

In USD 000's

Line of Business	Reinsurance recoverable - Solvency II	Ceded IFRS Technical provisions
Life	427,167	378,719
Health	-	-

* Ceded IFRS Technical Provision = Benefit reserve + IBNR + O/S claims reserve + UPR + Profit Commission Reserve- DAC

The reinsurance recoverable reflects retrocession in place, both internally within the Hannover Re Group and externally to third parties. Where appropriate, a default adjustment is included.

In general the same approach is used to calculate the reinsurance recoverable as for the calculating the gross Best Estimate Liability, with best estimate future cashflows projected in actuarial systems.

The technical provision included in the financial statements for retroceded business is USD 378.7m. Similar to the assumed technical provisions, there are differences in assumptions and the interest rates used in the calculations.

Material Changes in Assumptions

As part of the regular and ongoing review of all assumptions, updates were made on the UK traditional life reinsurance business is respect of base mortality and future mortality improvements as well as updates related to Asian morbidity business to reflect experience. There were also model developments implemented during the year. These changes resulted in an overall increase in the Best Estimate Liability.

Level of Uncertainty in the Technical Provisions

The main area of uncertainty around the level of the technical provisions relates to the potential deviation of actual experience from the underlying assumptions and the sensitivity of cash flows to changes in those assumptions.

The most material uncertainty comes from the traditional life and health risk business. Small changes in the mortality rates can have significant effects on the claim payments.

Changes in lapse rates are material for certain products as well. The directionality of the lapse effect is dependent on the treaty and type of reinsurance. In aggregate, the impact of an increase or decrease in lapse rates are both broadly neutral, with offsetting movements between treaties.

Given the risk remoteness of the deals, the structured transactions are a more limited source of uncertainty. The recapture rights of the cedants are an area of uncertainty. Given the risk remoteness of the deals, the structured transactions are a more limited source of uncertainty. The recapture rights of the cedants are an area of uncertainty.

D.2.2 Property & Casualty: Valuation Principles

S.17.01.02 Non-life Technical Provisions included in Section F Quantitative Reporting Templates shows the technical provisions associated with each HRI Property & Casualty line of business. For management reporting purposes underwriting performance is reviewed on a treaty-by-treaty basis as this is how the business is structured. Therefore the analysis below is performed strictly to meet the Solvency II narrative reporting requirements.

For the purposes of calculating the Technical Provisions the same approach is applied regardless of line of business, so the description below applies across all lines of business above.

Methodology

HRI calculate the best estimate liability (“BEL”) on a treaty by treaty basis. Because of the structured nature of the business written by HRI traditional actuarial techniques would not be appropriate, even at a Solvency II segment level, to calculate the best estimate liability at a portfolio level.

In general, the BEL is based on the IFRS reserve minus the expected margin to be earned on the treaty. The expected margin is the weighted average margin derived at the time of pricing, which reflects the present value of the full range of possible outcomes modelled. So the BEL also reflects the weighted average outcome rather than a median scenario. In addition for older treaties where the

margin has been recognised a portfolio level reserve is held to reflect the possibility of negative outcomes. However if a particular treaty is not performing as expected a treaty specific approach will be adopted.

Best Estimate Premium Provision

Premium provisions relate to claims events occurring after the valuation date and during the remaining in-force coverage period of policies. The cash flow projections comprise of all future claims payments and expected future premiums stemming from these events.

The best estimate includes all future cash flows associated with existing obligations. Premium provisions take account of expected profits during remaining periods on risk and of the time value of money over the period until settlement of relevant cash outflows. Thus, the best estimate may be negative.

Only premiums that relate to incepted business arising from ‘unearned exposure’ are taken into account in premium provisions, unless there is a material bound but unincepted treaty.

Best Estimate Claims Provision

All future payments as well as any future premium resulting from those losses which occurred up to the valuation date are taken into account so as to calculate a best estimate claims provision irrespective of loss reporting date. Thus, any cash flow includes also loss payments and premiums for losses which are incurred but not reported at the valuation date. The best estimate claim provision calculation does not include any implicit or explicit redundancy or deficiency of calculated reserves.

Given the payment information up to the due date an ultimate loss estimator and a respective payout pattern is calculated for each treaty so as to project a cash flow of outstanding claims until ultimate loss is achieved.

Current assumptions

There are a number of treaties with specific assumptions as to their ultimate loss position. These are updated as experience develops or circumstances change and documented appropriately.

For treaties where the margin has been recognised a portfolio wide reserve is held on a best estimate basis.

Some treaties written by HRI contain features, such as the start of maintenance fees for example, to encourage the cedant behaviour that was anticipated at the inception of the treaty, such as commutation at a certain point. The expected margin reflects these features and the probability of commutation or payment of additional premiums or fees. So expected cedant behaviour is reflected in the BEL and any exceptions due to poor performance for example are reflected accordingly as necessary.

Expenses

The technical provisions include all cash flows arising from expenses that will be incurred in serving all recognised reinsurance obligations over the lifetime. Furthermore, expenses used for the technical provision calculation include both, allocated and unallocated (overhead) expenses. Allocated expenses are those expenses, which could be directly allocated to individual claims. Overhead expenses include all other expenses, which the undertaking incurs to settle its obligations and which are not directly assignable to settling claims.

Treaty boundary

For the calculation of technical provisions all expected cash flows allocated to treaties have to be projected into the future. For HRI, all treaties are evaluated over the whole lifetime ("ultimate-view"). Therefore, for purposes of measurement, the boundary of a reinsurance treaty is the point at which HRI would no longer be required to provide coverage.

Renewals are treated as a new treaty when HRI is no longer required to provide coverage, or the existing treaty does not confer any substantive rights on the ceding company. Obligations that do not relate to premiums which have already been paid do not belong to the treaty, unless HRI can compel the ceding company to pay the future premium.

Allowing for future management actions

HRI makes no allowance for future management actions within the calculation of the P&C technical provisions.

Reinsurance Recoverables within technical provisions

The technical provisions held correspond to the probability-weighted average of all future cash flows including cash flows recoverable from reinsurance contracts. This takes account of the time value of money and the adjustment for the expected losses due to the default of the counterparty. The following table shows the reinsurance recoverables associated with each relevant HRI Property & Casualty line of business, in USD 000's:

Line of Business	Reinsurance recoverable
Motor vehicle liability	-72,089
Marine and transport	746
Fire and other damage to property	50,200
General liability	1,105
Non-proportional property	762
Total	**-19,316**

Risk-free interest rates

HRI does not use any transitional measures or the matching adjustment, but has been approved to use the volatility adjustment for USD, GBP, EUR and CAD so the liabilities are discounted at the risk-free rate with the volatility adjustment for those currencies. The relevant risk free discount rate will apply to each currency.

Risk margin

The Risk Margin is calculated using the cost-of-capital approach as set out in Delegated Acts Solvency II Article 37. The approach used falls under Method 1 of the hierarchy of methods as set out in Guideline 62 of the EIOPA Guidelines on the Valuation of Technical Provisions (i.e. to approximate the individual risks or sub-risks within some or all modules and sub-modules to be used for the calculation of future Solvency Capital Requirements).

Comparison of Net IFRS reserves to Net Solvency II Technical Provisions

The following table shows a comparison of the gross IFRS reserves versus the Solvency II Technical Provisions in USD 000's:

Net IFRS Reserves(1)	1,060,262
Adjustments to Solvency II basis(2)	-116,775
Best Estimate Liability	943,487
Risk margin	42,862
Total P&C Net Technical Provisions	**986,349**

(1) IFRS Reserves = Claims Reserves + IBNR + UPR +Contingent Commission Reserve – Funds Withheld – DAC

(2) Adjustments are the removal of prudence in the IFRS reserves and discounting

D.3 Other Liabilities

D.3.1 Provisions other than technical provisions R0750

in USD 000's	Solvency II	IFRS
Provisions other than technical provisions	5,613	5,613

The following items are listed in the Solvency II balance sheet under non-technical provisions:

- Bonuses
- Other various provisions
- Provision for share awards
- Provision for audit fees and annual report expenses
- Outstanding invoices
- Provision for stock appreciation rights

The carrying amount of other payables and accrued expenses is deemed to be a reasonable approximation to fair value.

D.3.2 Deposits from reinsurers R0770

in USD 000's	Solvency II	IFRS
Deposits from reinsurers	-191	524,797

Deposit from reinsurers consists of funds withheld and contract deposits due to/(from) reinsurers.

The funds withheld liabilities primarily consist of funds held on certain contracts representing the collateral contractually withheld by HRI to cover the technical liabilities that the retrocessionaires

have reinsured. These liabilities are valued at market value using a mark-to-market method. These liabilities primarily consist of government and corporate bonds. Such investments are typically held in trust and managed in accordance with approved investment guidelines.

Differences in valuation

There are three main reasons for the difference in valuation of Deposits from reinsurers.

Certain HRI treaties have “notional” ceded funds withheld accounts. The actual cash flows received/paid are only settled after the depletion/utilisation of the funds withheld balance. Therefore the fair value of these notional funds withheld are deemed to be nil for the purposes of Solvency II as no cash flow takes place. There is an offsetting decrease to the reinsurance recoverable.

The IFRS contract deposits liabilities for the majority of the L&H business are reclassified as the “Best-estimate liability” in the Solvency II balance sheet. The bases, methods and main assumptions used for their valuation are discussed in the technical provisions section (see section D.2).

Under IFRS a contract deposit liability is incurred for deposit accounted fee income that has been received but not yet “earned” in accordance with IFRS. There is no corresponding liability under Solvency II.

D.3.3 Deferred tax liabilities R0780

in USD 000’s	Solvency II	IFRS
Deferred tax liabilities	8,895	3,566

In the IFRS financial statements balance sheet deferred tax is provided in full in accordance with IAS 12 Income Taxes, using the balance sheet liability method, providing for temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for taxation purposes. The amount of deferred tax provided is based on the expected manner of realisation or settlement of the carrying amount of assets and liabilities, using tax rates enacted or substantially enacted at the balance sheet date. Deferred tax assets and liabilities are not discounted.

In the Solvency II balance sheet, deferred taxes may result from the following:

- Taxable / deductible temporary differences between the Solvency II balance sheet and the tax base (tax balance sheet); and
- Unused tax loss and tax credits that may be carried forward.

Differences in valuation

The difference in valuation relates to the taxable / deductible temporary differences between the Solvency II balance sheet and the tax base (tax balance sheet).

D.3.4 Derivatives R0790

in USD 000’s	Solvency II	IFRS
Derivatives	1,089	1,298

Recognition and valuation of obligations pertaining to derivatives are described in “D.1.6 Derivatives R0190”.

Differences in valuation

The embedded credit derivative is implicitly included within the value of Deposits to cedants valuation under Solvency II as these assets are valued at fair value. In the IFRS financial statements the embedded credit derivative is separately reported as a derivative. This resulted in a USD (0.2m) difference on the valuation of the derivative assets between Solvency II and the IFRS accounts.

D.3.5 Financial liabilities other than debts owed to credit institutions R0810

in USD 000’s	Solvency II	IFRS
Financial liabilities other than debts owed to credit institutions	428,928	527,285

Financial liabilities are valued using the expected cash value of future payment streams for the purposes of Solvency II. During the year HRI reclassified two subordinated two Subordinated liabilities to Financial liabilities other than debts owed to credit institutions after receiving approval for the repayment of these loans. These loans are expected to be repaid during 2019.

Differences in valuation

The main reason for the difference is a reclassification of a certain Tier 2 subordinated loan to R0870 Subordinated liabilities in Basic Own Funds for the purposes of Solvency II.

The remaining difference is due to loans and borrowings being measured at amortised cost using the effective interest method in the IFRS financial statements. The Solvency II value includes future interest payments and is discounted.

D.3.6 Insurance and intermediary payables R0820

in USD 000’s	Solvency II	IFRS
Insurance and intermediary payables	64,223	64,223

The carrying amount of Insurance and intermediary payables is deemed to be a reasonable approximation of fair value. Balances payable include actual account balances due plus an estimate of the amount due for the period for which accounts have not yet been received. The payable balance relates to a number of different cedants.

D.3.7 Reinsurance payables R0830

in USD 000’s	Solvency II	IFRS
Reinsurance payables	53,362	53,361

The carrying amount of Reinsurance payables is deemed to be a reasonable approximation of fair value. Balances payable include actual account balances due plus an estimate of the amount due

for the period for which accounts have not yet been received. The payable balance relates to a number of different retrocessionaires.

D.3.8 Subordinated liabilities R0870

in USD 000's	Solvency II	IFRS
Subordinated liabilities	97,926	-

Financial liabilities are valued using the expected cash value of future payment streams for the purposes of Solvency II.

Differences in valuation

Tier 2 subordinated loans are classified as R0870 Subordinated liabilities in Basic Own Funds for the purposes of Solvency II. The IFRS financial statements do not make any distinction in the classification of the loans and as such they are classified as R0810 Financial liabilities other than debts owed to credit institutions.

The remaining difference is due to loans and borrowings being measured at amortised cost using the effective interest method in the IFRS financial statements. The Solvency II value includes future interest payments and is discounted.

D.3.9 Any other liabilities, not elsewhere shown R0880

in USD 000's	Solvency II	IFRS
Any other liabilities, not elsewhere shown	3	3

The carrying amount of any other liabilities, not elsewhere shown is deemed to be a reasonable approximation of fair value.

D.4 Alternative methods for valuation

Valuation principles are applied pursuant to Solvency II. In addition to the general valuation principles the following valuation hierarchy is applied to the recognition and valuation of assets and other liabilities.

1. Stock exchange prices observed on active markets are utilised as part of the standard valuation method. The use of stock exchange prices should be based on the criteria stipulated for an active market, which are defined in the International Accounting Standards (IAS).
2. If no stock exchange prices in active markets are available for the assets and liabilities to be valued, stock exchange prices from similar assets and liabilities are used. Adjustments are made in order to reflect the differences.
3. In instances where the criteria for the use of stock exchange prices are not fulfilled, alternative valuation methods are utilised (different methods to those described in number 2). If alternative valuation methods are used these should be – to the greatest extent possible – based on market data, and should contain – to the least extent possible – company-specific influencing factors.

HRI uses alternative valuation methods for some balance sheet items, which are subsequently described in more detail in Section D.4.1 below.

D.4.1 Further information on alternative valuation methods

For the calculation of market values for assets and other liabilities which are not listed on a stock exchange, or whose relevant markets are deemed to be inactive at the point in time of valuation, we use the following valuation models and methods as an alternative. They represent the standard and recognised methods used for the respective assets, and are used in order to be able to determine a market price in spite of the absence of available valuations from active markets.

Financial instruments	Parameters	Valuation models / methods
Unlisted plain-vanilla bonds, loans	Interest rate curves	Present value method
Unlisted, structured bonds	Interest rate curve, volatility surfaces	Hull-White, Black-Karasinski, Libor Market Model among others
Unlisted CDO/CLO	Risk premiums, default rates, prepayment speed and recovery rates	Present value method
Unlisted equities and participations	Acquisition costs, cash flows, EBIT multiples, book value as applicable	Capitalised earnings method, discounted cash flow method, multiples-based approaches
Unlisted fixed income funds	Audited net asset values (“NAV”)	Net asset value method
Currency forwards	Interest rate curves, spot and forward rates	Interest rate parity model
Life settlements	Interest rate curves, spot rates, mortality rates	Discounted cashflow method

The majority of assets valued using alternative valuation methods are valued on the basis of the present value method. This is a predominantly assumption-free method, with which the future cash flows of securities are discounted with the use of suitable interest rate curves. These curves are derived from appropriate market data observed on publicly accessible markets. Broadly speaking, this procedure is premised on the assumption generally accepted in the market that price differences for comparable securities listed in transparent markets with regard to risk, term and creditworthiness are predominantly the result of issuance-specific characteristics and lower liquidity, and are thus deemed immaterial with regard to their influence on market value.

Specific assumptions are made in the valuation of CLOs. They relate to prepayment rates and retrieval rates. The prepayment rate describes the scope available for the instrument to repay to the bearer parts of the outstanding nominal amount before maturity. The retrieval rate is the proportion of the nominal amount repaid to the bearer subsequent to proceedings triggered by a potential default. Both parameters are estimated with an industry-standard fixed value. They do, however, have a comparably limited influence on the valuation. The significant valuation parameters here are either directly observable market data or are derived from market data.

If particular structures are embedded into the security such as, for example, termination rights, further valuation models are also utilised such as, for example, the Hull-White Model or the Libor Market Model. The models calculate, for example, the probability of termination rights being exercised with the help of swaption volatilities. No noteworthy assumptions are utilised here either.

The use of models includes different model risks, which can lead to a degree of valuation uncertainty:

- Modelling risk (appropriateness and suitability of the model)
- Data quality risk (incomplete or obsolete data for the model calibration or parameterisation)
- Risk pertaining to the validity of assumptions and estimations.
- Risks in the model implementation

Through a process of regular validation in which a systematic, quantitative and qualitative assessment of the appropriateness of valuation models and methods is undertaken, model risks can be limited. Furthermore, the model results (for items which are predominantly valued using alternative valuation methods) are continuously subject to plausibility checks as part of daily quality assurance processes.

D.5 Any other information

There is no other material information regarding the valuation of assets and liabilities for solvency purposes.

E. Capital Management

E.1 Own Funds

E.1.1 Management of own funds

The objective of own funds management is to maintain sufficient own funds to cover the SCR and MCR with an appropriate buffer on a continuous basis.

The own funds are categorised into three tiers, according to their capacity to absorb losses. Own fund items included in Tier 1 are of the highest quality and, as they are permanently available, demonstrably absorb unexpected losses to enable an undertaking to continue in the case of winding-up, as well as on a going-concern basis. Tier 2 relates to basic own funds, the characteristic of which is that they are able to absorb losses in the case of winding-up of the undertaking (e.g. classic subordinated loans) but not on a going-concern basis. Own funds items not classified as Tier 1 or Tier 2 shall be classified as Tier 3, for example a deferred tax asset or ancillary own funds, which are items of capital other than basic own-funds which can be called up to absorb losses.

The time horizon used for business planning is five years, which aligns with the ORSA and the business plan.

E.1.2 Tiering

The own funds of HRI split by tier as at 31 December 2018 compared to 31 December 2017 was comprised as follows:

in USD 000's	2018	2017
Tier 1	621,573	1,538,990
Tier 2	97,926	346,823
Tier 3	51,921	169,219
Total eligible own funds to meet SCR	**771,420**	**2,055,032**

None of the Tier 1 own funds is restricted capital. There is an upper limit 15% of the SCR on the amount of Tier 3 capital that can be counted towards covering the SCR.

The eligible amount of basic own funds to cover the MCR as at 31 December 2018 compared to 31 December 2017 was comprised as follows:

in USD 000's	2018	2017
Tier 1	621,573	1,538,990
Tier 2	31,153	101,531
Total eligible own funds to meet MCR	**652,726**	**1,640,521**

There are currently no ring-fenced funds or restrictions on capital fungibility.

E.1.3 Basic own funds

Share capital

The ordinary share capital of HRI as of 31 December 2018 amounts to USD 36.9m (2017: 54.6m). At the beginning of the year, the Company has authorised share capital of 1,000,000 voting and dividend bearing registered shares with a nominal value of EUR 100. During the year, to facilitate the capital repatriation, the share capital of the Company was amended to 500,000 ordinary shares of EUR 100 each and 500,000 redeemable ordinary shares of EUR 100 each. The Company's issued share capital consists of 338,287 Redeemable Ordinary Shares (2017: 500,000) with a nominal value of EUR 100 at year end. The shares are fully paid.

The ordinary shares and the redeemable shares of the Company rank pari passu in all respects, with one exception in relation to the redeemable shares, which shall be redeemable in whole or in part at any time or times by notice in writing given by the Company.

Undenominated Capital Reserve

The Undenominated Capital Reserve at 31 December 2018 is USD 17.7m and relates to shares redeemed during 2018.

Capital Contribution

The Capital Contribution account, approved by the CBI, related to ordinary share capital at 31 December 2018 is USD 590.5m (2017: USD 1,240.5m). A capital repatriation of USD 650m was completed during the year, following approval from the Central Bank of Ireland. This has resulted in the reduction of Shareholder's equity.

Foreseeable dividends, distributions and charges

The Company has received approval from the Central Bank of Ireland for a further capital repatriation of USD 260m in 2019. The Company expects the repayment of such to occur in the first half of 2019.

Net deferred tax asset

The net deferred tax asset per the Solvency II balance sheet at 31 December 2018 is USD 1.6m (2017: USD 0.7m).

Reconciliation reserve

The reconciliation reserve equals the total Solvency II excess of assets over liabilities reduced by all of the following:

- Share capital
- Net deferred tax asset
- Capital Contribution
- Foreseeable dividends, distributions and charges;

The reconciliation reserve at 31 December 2018 is USD (23.5m) (2017: USD 243.9m).

Structure of basic own funds (2018)

in USD 000's	Total	Tier 1 unrestricted	Tier 1 restricted	Tier 2	Tier 3
Ordinary share capital	36,965	36,965	-	-	-
Undenominated capital reserve	17,670	17,670	-	-	-
Capital Contribution	590,468	590,468	-	-	-
Reconciliation reserve	-23,530	-23,530	-	-	-
Net deferred tax asset	1,644	-	-	-	1,644
Subordinated liability	97,926	-	-	97,926	-
Total	**721,143**	**621,573**	**-**	**97,926**	**1,644**

Structure of basic own funds (2017)

in USD 000's	Total	Tier 1 unrestricted	Tier 1 restricted	Tier 2	Tier 3
Ordinary share capital	54,635	54,635	-	-	-
Capital Contribution	1,240,468	1,240,468	-	-	-
Reconciliation reserve	243,888	243,888	-	-	-
Net deferred tax asset	716	-	-	-	716
Subordinated liability	346,823	-	-	346,823	-
Total	**1,886,530**	**1,538,991**	**-**	**346,823**	**716**

E.1.4 Ancillary own funds

Within the Tier 3 own funds is included an AOF item approved by the Central Bank of Ireland on 14 December 2015. The material terms and conditions of the Tier 3 AOF are as follows:

	Ancillary Own Funds
Counterparty	Hannover Rück SE
Initial Consideration	EUR 1
Subordinated loan tranche	USD 50m
Total Commitment Sum	The lower of 15% of SCR and 300m
Rank	Tier 3

Upon drawdown of these Ancillary Own Funds, Hannover Rück SE will provide subordinated loans that qualify as Tier 2 basic own funds items. The method of valuation has not changed over the time period.

E.1.5 Comparison of IFRS Financial Statements Equity and Solvency II excess of assets over liabilities

The table below shows the difference between the IFRS Financial Statements Equity and Solvency II Excess of assets over liabilities for 2018.

In USD 000's	2018	2017
Solvency II Excess of assets over liabilities	883,217	1,539,706
Total shareholders' equity - IFRS	857,256	1,479,947
Difference	**25,961**	**59,759**

The difference is further analysed into the key drivers of this revaluation in the table below:

In USD 000's	2018	2017
Difference relating to non-technical positions	4,605	-9,095
Difference relating to technical positions	25,033	77,390
Difference relating to deferred tax	-3,677	-8,536
Total	**25,961**	**59,759**

The reasons for the difference in valuation on a line by line basis are further described in Section D Valuation for Solvency Purposes.

E.2 Solvency Capital Requirement and Minimum Capital Requirement

E.2.1 Solvency Capital Requirement

The Solvency Capital Requirement split by risk categories as at 31 December 2018 with a comparison to 31 December 2017 is below.

In USD 000's	2018	2017
Underwriting risk - Property & Casualty	293,478	421,699
Underwriting risk - Life & Health	107,513	817,090
Market risk	176,340	417,924
Counterparty default risk	39,564	84,484
Operational risk	104,151	290,572
Diversification	325,689	750,517
Total risk (pre-tax)	**395,356**	**1,281,251**
Deferred tax	49,215	153,127
Total risk (post-tax)	**346,141**	**1,128,124**

The Solvency Capital Requirement has been calculated based on the approved internal model. HRI was also granted approval in 2018 to use a volatility adjustment. This was implemented for the calculation of the required capital as at year end 2018.

The most material changes in the SCR over the reporting period were as follows:

- a significant decrease in Life & Health underwriting risk due to the recapture of the majority of the US-originated Life & Health treaties following the US Tax Cuts and Jobs Act.
- a significant decrease in Property & Casualty underwriting risk mainly due to the approval and implementation of a major model change.
- a significant decrease in market risk due to lower asset volume and the capital repatriations made over the course of 2018.
- a significant decrease in counterparty default risk due to the recapture of the majority of US-originated Life & Health treaties, which led to a significant reduction in the number of reinsurance counterparties.
- a decrease in operational risk capital due to the recapture of the majority of US-originated Life & Health treaties and the operational risk associated therewith.

E.2.2 Minimum Capital Requirement

The Minimum Capital Requirement at the end of 2018 was USD 155.8m (2017: 507.7m). The ratio of eligible own funds for the Minimum and Solvency Capital Requirements was 419% (2017: 323%). The MCR is currently equal to the cap which is the maximum level of the MCR i.e. 45% of the SCR.

E.3 Use of the duration-based equity risk sub-module in the calculation of the Solvency Capital Requirement

This is not applicable to HRI.

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

E.4.1 Technical Specifications on the Internal Model

HRI documents the uses of the internal model in a Use Test Register. The key local applications are:

- assessing the overall required capital including the diversification benefit
- in risk budgeting and allocation
- monitoring of risk appetite statements
- for strategic decisions
- in pricing
- testing risk mitigation options
- to quantify the severity and frequency of the risks faced by HRI.

There are also locally important uses at a group level such as setting margins and investment benchmarks and informing the strategic asset allocation.

The complete risk landscape of Hannover Rück SE consists of the primary categories of underwriting risks (Property & Casualty, Life & Health), market risks, counterparty default risks, operational risks and other risks.

The scope of the internal model is such that the risk categories addressed quantitatively by the model are Life & Health underwriting risk, Property & Casualty underwriting risk, market risk, counterparty default risk and operational risk. These risks and their interactions are accounted for in the representation of target variables through the application of stochastic simulation models. There are no separate modules for other risks in the internal model for the following reasons:

- In contrast to existing risks, emerging risks concern potential risks that can develop at short notice. It is more appropriate to assess these risks on a qualitative basis. Capital requirements arising from emerging risks would only occur when a qualitative assessment leads to the conclusion that the risks could materialise.

- Liquidity risk relates to the short-term payments which could necessitate the sale of assets. A financial loss can occur if the sales process leads to deterioration in the market price as a consequence of the scale of the transaction or due to illiquid markets. It is assumed that the company is not in a position to execute transactions which could lead to a shift in the market. Market illiquidity is covered within the calibration of economic scenarios, and is therefore covered by market risk.

- Reputational risk and strategic risk do not affect the available capital over a one-year horizon, but rather the franchise value of the company exclusively. They are therefore excluded from the scope of the internal model.

It should be noted that concentration risk is taken into account in the calculation of required capital for every risk category.

E.4.2 Implementation of the Internal Model

A stochastic model is used to project own funds under a range of different scenarios. The Solvency Capital Requirement is derived from the 99.5 percentile of the resulting distribution. The internal model currently covers all business units and risk categories.

E.4.3 Comparison of the Internal Model with the Standard Formula

Generally speaking, the internal model represents a probability calculation approach, while the standard formula is factor-based. For natural and man-made catastrophes, the internal model uses exposure data for all risks whereas the standard formula only uses exposure data for EU proportional business. Premium figures are used for all other areas. Retrocessions and reinsurance cover are applied precisely in the internal model, whereas the standard formula only permits the use of approximate values. Further differences arise from correlation assumptions and the presentation of retrocessions. The latter cannot be expressed exactly in the standard formula.

In the internal model, the premium and reserve risk on the Property & Casualty line of business is modelled by estimating marginal distributions for every risk factor, with their mutual dependencies assessed on the basis of company-specific historical data or expert judgement. This results in more refined segmentation than under the standard formula. It also leads to non-linear dependency structures, whereas a correlation approach would be used under the standard formula. The internal model covers all risks from provisions relating to incepted unearned premiums within the reserve risk sub-module instead of the premium risk sub-module. The volume measure for the reserve risk of a particular segment is the best estimate ultimate claims provision relating to that segment instead of the best estimate outstanding ultimate claim provision as set out in the regulations.

For Life & Health underwriting risk, the standard formula does not sufficiently allow for the portfolio and diversification effects of a globally active reinsurer. It also does not allow for diversification between geographies. Relatively static scenarios or factors are used to determine the necessary amount of capital for every risk category within market risk. The internal model allows for diversification between geographies and thus generates a more comprehensive set of scenarios in an integrated way. While the standard formula explicitly allows for concentration risk, this risk is implicitly represented in the internal model where applicable.

Default risks in the internal model follow a stochastic model for credit spreads. This produces a complete distribution of random variables, which represents the counterparty default risk. The standard formula calculates the required capital for the counterparty default risk on the basis of multiples of standard deviations of the respective loss distribution. The internal model uses a comprehensive matrix in which the transitions between the individual valuations are described, as opposed to the standard formula, which is premised on the probability of default for every valuation class and on certain correlation assumptions between the counterparties. The internal model includes a fixed recovery rate for every counterparty, and permits the full use of collaterals. In the standard formula, the recovery rate and the use of collaterals depends on the economic situation of the counterparty. For new business, the internal model uses the fully stochastic exposure at default, subject to any risk mitigation measures, while the standard formula uses the difference between the SCRs with and without the corresponding measures as the constant exposure at default.

The risk measure used is the change in own funds as used to calculate the SCR over a one year time horizon. The confidence level used is the 1-in-200 year, or 99.5%, level, in line with Solvency II guidance.

Data

All data used in the internal model is subject to the data standards for internal models. This design is appropriate in order to be able to supply timely data which is free from significant errors. HRI relies on data which is also used in other business applications to ensure consistent information and data usage within the company. Examples include the individual data sets from cash flow projections underlying the calculation of the Best Estimate Liability and the IFRS accounting methods, through which a reference point is provided for other established reporting processes. Subsequently, many individual data sets are subject to numerous quality assessments and both internal and external auditing.

The plausibility and credibility of information and data is established by way of repeated discussion with the suppliers. Calibration assumptions are reported and made transparent in calibration reports, which are discussed with the suppliers of information and the recipients of model results. The effect of influencing parameters is presented in sensitivity analyses. In particular, significant assumptions which are based on expert assessments are documented separately.

Relevant historical company data and internal company data is used to calibrate the model, particularly for underwriting risk. Long-term market data is used for the calibration of market and counterparty risk.

The risk profile of HRI consists of Property & Casualty and Life & Health underwriting risks, market risks, counterparty default risks, operational risks and other risks including strategic risk, emerging risk, liquidity risk and reputational risk. The risk categories explicitly covered by the internal model are underwriting risks, market risk, counterparty default risk and operational risk. The other risks are managed and monitored using other appropriate methods.

E.5 Non-compliance with the Minimum Capital Requirement and non-compliance with the Solvency Capital Requirement

E.5.1 Non-Compliance with Minimum Capital Requirement

There have been no instances of non-compliance with the Minimum Capital Requirement.

E.5.2 Significant Non-Compliance with Solvency Capital Requirement

There have been no instances of non-compliance with the Solvency Capital Requirement.

E.6 Any other information

There is no other material information regarding capital management.

Abbreviations and Glossary

AOF	Ancillary Own Funds
ASI	Advanced Solutions Ireland
BaFin	Bundesanstalt für Finanzdienstleistungsaufsicht, Federal Financial Supervisory Authority
BEL	Best Estimate Liability
BOF	Basic Own Funds
CBI	Central Bank of Ireland
CDO	Collateralised Debt Obligation
CLO	Collateralised Loan Obligation
CEO	Chief Executive Officer
CFs	Control Functions
CoFWH	Coinsurance funds withheld
CoC	Cost of Capital
DAC	Deferred Acquisition Cost
EBIT	Earnings before interest and taxes
EIOPA	European Insurance and Occupational Pensions Authority
EPIFP	Expected profits included in future premiums
F&P	Fitness and Probity
FOGs	Financial options and guarantees
GAAP	Generally Accepted Accounting Principles
HGB	Handelsgesetzbuch, German Commercial Code
HRI	Hannover Re (Ireland) Designated Activity Company
IBNR	Incurred But Not Reported
HRM	Human Resource Management
IAS	International Accounting Standard
IFRS	International Financial Reporting Standards
L&H	Life and Health
MCR	Minimum Capital Requirement
ModCo	Modified co”insurance
NAV	Net asset value
ORSA	Own Risk and Solvency Assessment
P&C	Property and Casualty
PCFs	Pre-approval Control Functions
RM	Risk margin
SCR	Solvency Capital Requirement
SE	Societas Europaea
SLA	Service Level Agreement
TP	Technical Provisions
UPR	Unearned Premium Reserve

Quantitative Reporting Templates

All values are in USD 000's if not otherwise stated.

If a value amounts to less than USD 0.5, we show "0" in the respective cell. Empty cells represent the fact that HRI has no value to state.

Rounding differences of +/- one unit can occur in the following tables.

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Balance sheet

		Solvency II value
Assets		**C0010**
Goodwill	**R0010**	
Deferred acquisition costs	**R0020**	
Intangible assets	**R0030**	-
Deferred tax assets	**R0040**	10,539
Pension benefit surplus	**R0050**	-
Property, plant & equipment held for own use	**R0060**	233
Investments (other than assets held for index-linked and unit-linked contracts)	**R0070**	2,548,025
Property (other than for own use)	**R0080**	-
Holdings in related undertakings, including participations	**R0090**	50,000
Equities	**R0100**	-
Equities - listed	**R0110**	-
Equities - unlisted	**R0120**	-
Bonds	**R0130**	2,371,676
Government Bonds	**R0140**	1,342,886
Corporate Bonds	**R0150**	956,408
Structured notes	**R0160**	-
Collateralised securities	**R0170**	72,382
Collective Investments Undertakings	**R0180**	22,688
Derivatives	**R0190**	11,334
Deposits other than cash equivalents	**R0200**	9,931
Other investments	**R0210**	82,396
Assets held for index-linked and unit-linked contracts	**R0220**	-
Loans and mortgages	**R0230**	-
Loans on policies	**R0240**	-
Loans and mortgages to individuals	**R0250**	-
Other loans and mortgages	**R0260**	-
Reinsurance recoverables from:	**R0270**	407,851
Non-life and health similar to non-life	**R0280**	-19,316
Non-life excluding health	**R0290**	-19,316
Health similar to non-life	**R0300**	-
Life and health similar to life, excluding health and index-linked and unit-linked	**R0310**	427,167
Health similar to life	**R0320**	-
Life excluding health and index-linked and unit-linked	**R0330**	427,167
Life index-linked and unit-linked	**R0340**	-
Deposits to cedants	**R0350**	68,288
Insurance and intermediaries receivables	**R0360**	323,085
Reinsurance receivables	**R0370**	35,835
Receivables (trade, not insurance)	**R0380**	859
Own shares (held directly)	**R0390**	-
Amounts due in respect of own fund items or initial fund called up but not yet paid in	**R0400**	-
Cash and cash equivalents	**R0410**	68,869
Any other assets, not elsewhere shown	**R0420**	-
Total assets	**R0500**	3,463,584

Liabilities		Solvency II value C0010
Technical provisions – non-life	**R0510**	967,033
Technical provisions – non-life (excluding health)	**R0520**	887,000
Technical provisions calculated as a whole	**R0530**	-
Best Estimate	**R0540**	848,419
Risk margin	**R0550**	38,581
Technical provisions - health (similar to non-life)	**R0560**	80,033
Technical provisions calculated as a whole	**R0570**	-
Best Estimate	**R0580**	75,752
Risk margin	**R0590**	4,281
Technical provisions - life (excluding index-linked and unit-linked)	**R0600**	953,486
Technical provisions - health (similar to life)	**R0610**	66,323
Technical provisions calculated as a whole	**R0620**	-
Best Estimate	**R0630**	63,734
Risk margin	**R0640**	2,589
Technical provisions – life (excluding health and index-linked and unit-linked)	**R0650**	887,163
Technical provisions calculated as a whole	**R0660**	-
Best Estimate	**R0670**	843,849
Risk margin	**R0680**	43,314
Technical provisions – index-linked and unit-linked	**R0690**	-
Technical provisions calculated as a whole	**R0700**	-
Best Estimate	**R0710**	-
Risk margin	**R0720**	-
Other technical provisions	**R0730**	
Contingent liabilities	**R0740**	-
Provisions other than technical provisions	**R0750**	5,613
Pension benefit obligations	**R0760**	-
Deposits from reinsurers	**R0770**	-191
Deferred tax liabilities	**R0780**	8,895
Derivatives	**R0790**	1,089
Debts owed to credit institutions	**R0800**	-
Financial liabilities other than debts owed to credit institutions	**R0810**	428,928
Insurance & intermediaries payables	**R0820**	64,223
Reinsurance payables	**R0830**	53,362
Payables (trade, not insurance)	**R0840**	-
Subordinated liabilities	**R0850**	97,926
Subordinated liabilities not in Basic Own Funds	**R0860**	-
Subordinated liabilities in Basic Own Funds	**R0870**	97,926
Any other liabilities, not elsewhere shown	**R0880**	3
Total liabilities	**R0900**	2,580,367
Excess of assets over liabilities	**R1000**	883,217

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Premiums, claims and expenses by line of business

		Line of Business for: non-life insurance and reinsurance obligations (direct business and accepted proportional reinsurance)								
		Medical expense insurance	Income protection insurance	Workers' compen-sation insurance	Motor vehicle liability insurance	Other motor insurance	Marine, aviation and transport insurance	Fire and other damage to property insurance	General liability insurance	Credit and suretyship insurance
		C0010	**C0020**	**C0030**	**C0040**	**C0050**	**C0060**	**C0070**	**C0080**	**C0090**
Premiums written										
Gross - Direct Business	**R0110**									
Gross - Proportional reinsurance accepted	**R0120**	2,282	24,832	84,239	1,027,668	454,654	40,758	866,471	301,543	160,455
Gross - Non-proportional reinsurance accepted	**R0130**									
Reinsurers' share	**R0140**	2,168	8,417	-	81,647	344	33,314	198,428	50,556	152,426
Net	**R0200**	114	16,415	84,239	946,021	454,309	7,444	668,043	250,987	8,029
Premiums earned										
Gross - Direct Business	**R0210**	-	-	-	-	-	-	-	-	-
Gross - Proportional reinsurance accepted	**R0220**	2,128	23,119	83,702	1,035,367	414,734	37,933	858,518	279,908	135,950
Gross - Non-proportional reinsurance accepted	**R0230**									
Reinsurers' share	**R0240**	2,022	6,889	0	104,365	-37,583	30,734	185,537	35,129	129,175
Net	**R0300**	106	16,231	83,702	931,002	452,317	7,199	672,981	244,779	6,775
Claims incurred										
Gross - Direct Business	**R0310**	-	-	-	-	-	-	-	-	-
Gross - Proportional reinsurance accepted	**R0320**	1,433	7,727	39,209	594,327	326,322	67,909	555,912	206,347	104,007

		Line of Business for: non-life insurance and reinsurance obligations (direct business and accepted proportional reinsurance)								
		Medical expense insurance	Income protection insurance	Workers' compen-sation insurance	Motor vehicle liability insurance	Other motor insurance	Marine, aviation and transport insurance	Fire and other damage to property insurance	General liability insurance	Credit and suretyship insurance
		C0010	**C0020**	**C0030**	**C0040**	**C0050**	**C0060**	**C0070**	**C0080**	**C0090**
Gross - Non-proportional reinsurance accepted	**R0330**									
Reinsurers' share	**R0340**	1,361	4,309	17	3,074	37,769	30,554	110,875	16,896	99,542
Net	**R0400**	72	3,418	39,192	591,253	288,553	37,355	445,037	189,451	4,464
Changes in other technical provisions										
Gross - Direct Business	**R0410**									
Gross - Proportional reinsurance accepted	**R0420**									
Gross - Non-proportional reinsurance accepted	**R0430**									
Reinsurers' share	**R0440**									
Net	**R0500**									
Expenses incurred	**R0550**	33	11,739	19,727	355,305	166,147	1,516	261,257	73,596	1,034
Other expenses	**R1200**									
Total expenses	**R1300**									

		Line of Business for: non-life insurance and reinsurance obligations (direct business and accepted proportional reinsurance)			Line of Business for: accepted non-proportional reinsurance				Total
		Legal expenses insurance	Assistance	Miscella-neous financial loss	Health	Casualty	Marine, aviation, transport	Property	
		C0100	**C0110**	**C0120**	**C0130**	**C0140**	**C0150**	**C0160**	**C0200**
Premiums written									
Gross - Direct Business	**R0110**								
Gross - Proportional reinsurance accepted	**R0120**			1,713					2,964,614
Gross - Non-proportional reinsurance accepted	**R0130**				13,014	27,318	1,755	45,777	87,864
Reinsurers' share	**R0140**			1,627			29	2,430	531,387
Net	**R0200**			86	13,014	27,318	1,726	43,346	2,521,091
Premiums earned									
Gross - Direct Business	**R0210**			-					
Gross - Proportional reinsurance accepted	**R0220**			1,403					2,872,763
Gross - Non-proportional reinsurance accepted	**R0230**				14,240	30,166	1,736	45,561	91,704
Reinsurers' share	**R0240**			1,334			32	2,515	460,149
Net	**R0300**			69	14,240	30,166	1,704	43,046	2,504,317

		Line of Business for: non-life insurance and reinsurance obligations (direct business and accepted proportional reinsurance)			Line of Business for: accepted non-proportional reinsurance				Total
		Legal expenses insurance	Assistance	Miscella-neous financial loss	Health	Casualty	Marine, aviation, transport	Property	
		C0100	**C0110**	**C0120**	**C0130**	**C0140**	**C0150**	**C0160**	**C0200**
Claims incurred									
Gross - Direct Business	**R0310**			-					
Gross - Proportional reinsurance accepted	**R0320**			236					1,903,429
Gross - Non-proportional reinsurance accepted	**R0330**				-1,296	-13,960	-6,265	6,794	-14,727
Reinsurers' share	**R0340**			225				10	304,632
Net	**R0400**			12	-1,296	-13,960	-6,265	6,784	1,584,070
Changes in other technical provisions				-	-	-	-	-	-
Gross - Direct Business	**R0410**			-					-
Gross - Proportional reinsurance accepted	**R0420**			-					-
Gross - Non-proportional reinsurance accepted	**R0430**			-	-	-	-	-	-
Reinsurers' share	**R0440**			-	-	-	-	-	-
Net	**R0500**			-	-	-	-	-	-
Expenses incurred	**R0550**			37	18,044	36,816	5,442	1,318	952,011
Other expenses	**R1200**								
Total expenses	**R1300**								952,011

		Line of Business for: life insurance obligations						Life reinsurance obligations		Total
		Health insurance	Insurance with profit participation	Index-linked and unit-linked insurance	Other life insurance	Annuities stemming from non-life insurance contracts and relating to health insurance obligations	Annuities stemming from non-life insurance contracts and relating to insurance obligations other than health insurance obligations	Health reinsurance	Life reinsurance	
		C0210	**C0220**	**C0230**	**C0240**	**C0250**	**C0260**	**C0270**	**C0280**	**C0300**
Premiums written										
Gross	**R1410**							81,545	327,828	409,373
Reinsurers' share	**R1420**								21,380	21,380
Net	**R1500**	-	-	-	-	-	-	81,545	306,448	387,993
Premiums earned										
Gross	**R1510**							79,715	327,780	407,495
Reinsurers' share	**R1520**								21,380	21,380
Net	**R1600**	-	-	-	-	-	-	79,715	306,400	386,115
Claims incurred										
Gross	**R1610**							49,821	299,257	349,079
Reinsurers' share	**R1620**								8,712	8,712
Net	**R1700**	-	-	-	-	-	-	49,821	290,545	340,366
Changes in other technical provisions										
Gross	**R1710**									
Reinsurers' share	**R1720**									
Net	**R1800**	-	-	-	-	-	-			
Expenses incurred	**R1900**							33,157	61,024	94,181
Other expenses	**R2500**									
Total expenses	**R2600**									94,181

S.05.02.01
Premiums, claims and expenses by country

		Home country	Top 5 countries (by amount of gross premiums written) - non-life obligations					Total Top 5 and home country
		C0010	C0020	C0030	C0040	C0050	C0060	C0070
	R0010		China	Germany	UK	UK (Gib)	USA	
		C0080	C0090	C0100	C0110	C0120	C0130	C0140
Premiums written								
Gross - Direct Business	R0110							
Gross - Proportional reinsurance accepted	R0120		470,409	1,636,542	-	444,648	145,881	2,697,480
Gross - Non-proportional reinsurance accepted	R0130			1,134	-		66,221	67,355
Reinsurers' share	R0140			493,034	-		4,290	497,324
Net	R0200		470,409	1,144,642	-	444,648	207,812	2,267,511
Premiums earned								
Gross - Direct Business	R0210				-			
Gross - Proportional reinsurance accepted	R0220		399,199	1,630,628	-	432,814	146,003	2,608,644
Gross - Non-proportional reinsurance accepted	R0230			1,134	-		64,762	65,896
Reinsurers' share	R0240			421,800	-		4,396	426,196
Net	R0300		399,199	1,209,962	-	432,814	206,369	2,248,345
Claims incurred								
Gross - Direct Business	R0310							
Gross - Proportional reinsurance accepted	R0320		272,509	1,095,762	-	256,791	95,623	1,720,685
Gross - Non-proportional reinsurance accepted	R0330			-730	-		-21,586	-22,316
Reinsurers' share	R0340			304,039	-		9	304,047
Net	R0400		272,509	790,993	-	256,791	74,028	1,394,321

		Home country	Top 5 countries (by amount of gross premiums written) - non-life obligations					Total Top 5 and home country
		C0010	C0020	C0030	C0040	C0050	C0060	C0070
	R0010		China	Germany	UK	UK (Gib)	USA	
		C0080	C0090	C0100	C0110	C0120	C0130	C0140
Changes in other technical provisions								
Gross - Direct Business	R0410							
Gross - Proportional reinsurance accepted	R0420							
Gross - Non-proportional reinsurance accepted	R0430							
Reinsurers' share	R0440							
Net	R0500							
Expenses incurred	R0550		146,023	425,655	-	183,932	117,388	872,997
Other expenses	R1200							
Total expenses	R1300							872,997

		Home country	Top 5 countries (by amount of gross premiums written) - life obligations					Total Top 5 and home country
		C0150	C0160	C0170	C0180	C0190	C0200	C0210
	R1400		UK	Hong Kong	United States			
		C0220	C0230	C0240				C0280
Premiums written								
Gross	R1410		137,287	136,698	102,438			376,424
Reinsurers' share	R1420				18,582			18,582
Net	R1500		137,287	136,698	83,856			357,841
Premiums earned								
Gross	R1510		137,287	134,817	102,438			374,543
Reinsurers' share	R1520				18,582			18,582
Net	R1600		137,287	134,817	83,856			355,961
Claims incurred								
Gross	R1610		106,380	98,899	116,271			321,550
Reinsurers' share	R1620			1,539	5,446			6,985
Net	R1700		106,380	97,360	110,826			314,565
Changes in other technical provisions								
Gross	R1710							
Reinsurers' share	R1720							
Net	R1800							
Expenses incurred	R1900		35,940	33,350	10,338			79,628
Other expenses	R2500							
Total expenses	R2600							79,628

S.12.01.02
Life and Health SLT Technical Provisions

		Insurance with profit participa-tion	Index-linked and unit-linked insurance			Other life insurance			Annuities stemming from non-life insurance contracts and relating to insurance obligation other than health insurance obligations	Accepted re-insurance	**Total (Life other than health insurance, incl. Unit-Linked)**
				Contracts without options and guaran-tees	Contracts with options or guaran-tees		Contracts without options and guaran-tees	Contracts with options or guaran-tees			
		C0020	**C0030**	**C0040**	**C0050**	**C0060**	**C0070**	**C0080**	**C0090**	**C0100**	**C0150**
Technical provisions calculated as a whole	**R0010**										
Total Recoverables from reinsurance/SPV and Finite Re after the adjustment for expected losses due to counterparty default associated to TP calculated as a whole	**R0020**										
Technical provisions calculated as a sum of BE and RM											
Best Estimate											
Gross Best Estimate	**R0030**									843,849	843,849
Total Recoverables from reinsurance/SPV and Finite Re after the adjustment for expected losses due to counterparty default	**R0080**									427,167	427,167

		Insurance with profit participation	Index-linked and unit-linked insurance		Other life insurance			Annuities stemming from non-life insurance contracts and relating to insurance obligation other than health insurance obligations	Accepted re-insurance	**Total (Life other than health insurance, incl. Unit-Linked)**
				Contracts without options and guarantees	Contracts with options or guarantees		Contracts without options and guarantees	Contracts with options or guarantees			
		C0020	**C0030**	**C0040**	**C0050**	**C0060**	**C0070**	**C0080**	**C0090**	**C0100**	**C0150**
Best estimate minus recoverables from reinsurance/SPV and Finite Re - total	**R0090**									416,682	416,682
Risk Margin	**R0100**									43,314	43,314
Amount of the transitional on Technical Provisions											
Technical Provisions calculated as a whole	**R0110**										
Best estimate	**R0120**									-	-
Risk margin	**R0130**										
Technical provisions - total	**R0200**									887,162	887,162

		Health insurance (direct business)			Annuities stemming from non-life insurance contracts and relating to health insurance obligations	Health reinsurance (reinsurance accepted)	**Total (Health similar to life insurance)**
			Contracts without options and guarantees	Contracts with options or guarantees			
		C0160	**C0170**	**C0180**	**C0190**	**C0200**	**C0210**
Technical provisions calculated as a whole	**R0010**						
Total Recoverables from reinsurance/SPV and Finite Re after the adjustment for expected losses due to counterparty default associated to TP calculated as a whole	**R0020**						
Technical provisions calculated as a sum of BE and RM							
Best Estimate							
Gross Best Estimate	**R0030**					63,734	63,734
Total Recoverables from reinsurance/SPV and Finite Re after the adjustment for expected losses due to counterparty	**R0080**					-	-
Best estimate minus recoverables from reinsurance/SPV and Finite Re - total	**R0090**					63,734	63,734
Risk Margin	**R0100**					2,589	2,589
Amount of the transitional on Technical Provisions							
Technical Provisions calculated as a whole	**R0110**						-
Best estimate	**R0120**					-	-
Risk margin	**R0130**						-
Technical provisions - total	**R0200**					66,323	66,323

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Non-life Technical Provisions

		Direct business and accepted proportional reinsurance								
		Medical expense insurance	Income protection insurance	Workers' compen-sation insurance	Motor vehicle liability insurance	Other motor insurance	Marine, aviation and transport insurance	Fire and other damage to property insurance	General liability insurance	Credit and suretyship insurance
		C0020	C0030	C0040	C0050	C0060	C0070	C0080	C0090	C0100
Technical provisions calculated as a whole	**R0010**									
Total Recoverables from reinsurance/SPV and Finite Re after the adjustment for expected losses due to counterparty default associated to TP calculated as a whole	**R0050**									
Technical provisions calculated as a sum of BE and RM										
Best estimate										
Premium provisions										
Gross	**R0060**	-	30	-	56,085	1,356	93	-9,708	294	837
Total recoverable from reinsurance/SPV and Finite Re after the adjustment for expected losses due to counterparty default	**R0140**	-	-	-	-25,772	-	-	12,367	254	-
Net Best Estimate of Premium Provisions	**R0150**	-	30	-	81,857	1,356	93	-22,075	41	837

		Direct business and accepted proportional reinsurance								
		Medical expense insurance	Income protection insurance	Workers' compen-sation insurance	Motor vehicle liability insurance	Other motor insurance	Marine, aviation and transport insurance	Fire and other damage to property insurance	General liability insurance	Credit and suretyship insurance
		C0020	C0030	C0040	C0050	C0060	C0070	C0080	C0090	C0100
Claims provisions										
Gross	**R0160**	-	6,373	-	179,218	1,659	391	192,157	89,364	2,288
Total recoverable from reinsurance/SPV and Finite Re after the adjustment for expected losses due to counterparty default	**R0240**	-	-	-	-46,267	-	746	37,833	761	-
Net Best Estimate of Claims Provisions	**R0250**	-	6,373	-	225,485	1,659	-355	154,323	88,602	2,288
Total Best estimate - gross	**R0260**	-	6,403	-	235,303	3,014	484	182,449	89,658	3,126
Total Best estimate - net	**R0270**	-	6,403	-	307,342	3,014	-262	132,249	88,643	3,126
Risk margin	**R0280**	-	353	-	17,616	-	-	320	2,098	9
Amount of the transitional on Technical Provisions										
Technical Provisions calculated as a whole	**R0290**	-	-	-	-	-	-	-	-	-
Best estimate	**R0300**	-	-	-	-	-	-	-	-	-
Risk margin	**R0310**	-	-	-	-	-	-	-	-	-

		Direct business and accepted proportional reinsurance								
		Medical expense insurance	Income protection insurance	Workers' compen-sation insurance	Motor vehicle liability insurance	Other motor insurance	Marine, aviation and transport insurance	Fire and other damage to property insurance	General liability insurance	Credit and suretyship insurance
		C0020	C0030	C0040	C0050	C0060	C0070	C0080	C0090	C0100
Technical provisions - total										
Technical provisions - total	R0320	-	6,756	-	252,918	3,014	484	182,769	91,756	3,134
Recoverable from reinsurance contract/SPV and Finite Re after the adjustment for expected losses due to counterparty default - total	R0330	-	-	-	-72,039	-	746	50,200	1,015	-
Technical provisions minus recoverables from reinsurance/SPV and Finite Re - total	R0340	-	6,756	-	324,958	3,014	-262	132,569	90,740	3,134

		Direct business and accepted proportional reinsurance			Accepted non-proportional reinsurance				Total Non-Life obligation
		Legal expenses insurance	Assistance	Miscellaneous financial loss	Non-proportional health reinsurance	Non-proportional casualty reinsurance	Non-proportional marine, aviation and transport reinsurance	Non-proportional property reinsurance	
		C0110	C0120	C0130	C0140	C0150	C0160	C0170	C0180
Technical provisions calculated as a whole	**R0010**								
Total Recoverables from reinsurance/SPV and Finite Re after the adjustment for expected losses due to counterparty default associated to TP as a whole	**R0050**								
Technical provisions calculated as a sum of BE and Best estimate									
Premium provisions									
Gross	**R0060**	-	-	68	458	3,222	74	99,598	152,408
Total recoverable from reinsurance/SPV and Finite Re	**R0140**	-	-	-	-	-	-	-	318
Net Best Estimate of Premium Provisions	**R0150**	-	-	52	68	458	3,222	74	99,280

		Direct business and accepted proportional reinsurance			Accepted non-proportional reinsurance				Total Non-Life obligation
		Legal expenses insurance	Assistance	Miscellaneous financial loss	Non-proportional health reinsurance	Non-proportional casualty reinsurance	Non-proportional marine, aviation and transport reinsurance	Non-proportional property reinsurance	
		C0110	C0120	C0130	C0140	C0150	C0160	C0170	C0180
Claims provisions									
Gross	R0160	-	-	329	68,891	76,804	2,949	151,341	771,763
Total recoverable from reinsurance/SPV and Finite Re after the adjustment for expected losses due to counterparty default	R0240	-	-	-	-	-	-	-	444
Net Best Estimate of Claims Provisions	R0250	-	-	119	329	68,891	76,804	2,949	150,897
Total Best Estimate - gross	R0260	-	-	397	69,349	80,026	3,023	250,939	924,171
Total Best Estimate - net	R0270	-	-	397	69,349	80,026	3,023	250,177	943,487
Risk margin	R0280	-	-	-	3,928	4,500	159	13,880	42,862
Amount of the transitional on Technical Provisions									
Technical Provisions calculated as a whole	R0290	-	-	-	-	-	-	-	-
Best Estimate	R0300	-	-	-	-	-	-	-	0
Risk margin	R0310	-	-	-	-	-	-	-	0
Technical provisions - total									
Technical provisions - total	R0320	-	-	397	73,277	84,526	3,182	264,819	967,033
Recoverable from reinsurance contract/SPV and Finite Re after the adjustment for expected losses due to counterparty default - total	R0330	-	-	-	-	-	-	762	-19,316
Technical provisions minus recoverables from reinsurance/SPV and Finite Re - total	R0340	-	-	397	73,277	84,526	3,182	264,057	986,349

S.19.01.21
Non-life insurance claims

Accident year / Underwriting year	Z0020	UWY

Gross Claims Paid (non-cumulative)
(absolute amount)

Development year

Year		0	1	2	3	4	5	6	7	8	9	10&+		In current year	Sum of years (cumu-lative)
		C0010	C0020	C0030	C0040	C0050	C0060	C0070	C0080	C0090	C0100	C0110		C0170	C0180
Prior	R0100											2,162,274	R0100	2,266	2,162,274
N-9	R0160	91,969	162,688	71,866	21,757	20,937	8,494	27,832	3,978	970	1,283		R0160	1,283	411,774
N-8	R0170	18,038	111,291	108,770	25,788	15,781	32,744	7,931	4,034	3,276			R0170	3,276	327,653
N-7	R0180	41,748	105,839	138,681	14,564	20,018	9,850	4,988	6,463				R0180	6,463	342,151
N-6	R0190	197,919	99,474	124,204	26,940	11,649	12,128	2,907					R0190	2,907	475,222
N-5	R0200	222,692	89,023	127,012	19,044	9,163	12,000						R0200	12,000	478,934
N-4	R0210	182,292	33,629	110,711	12,778	-1,361							R0210	-1,361	338,048
N-3	R0220	546,714	464,215	46,769	17,660								R0220	17,660	1,075,358
N-2	R0230	468,665	449,415	49,355									R0230	49,355	967,435
N-1	R0240	321,973	617,009										R0240	617,009	938,982
N	R0250	488,114											R0250	488,114	488,114
												Total	R0260	1,198,971	8,005,945

Gross undiscounted Best Estimate Claims Provisions
(absolute amount)

Development year

Year		0	1	2	3	4	5	6	7	8	9	10&+		Year end (dis-counted data)
		C0200	C0210	C0220	C0230	C0240	C0250	C0260	C0270	C0280	C0290	C0300		C0360
Prior	R0100											13,754	R0100	13,519
N-9	R0160								10,845	5,096	8,432		R0160	8,237
N-8	R0170							9,271	9,465	14,226			R0170	13,939
N-7	R0180						19,588	18,840	32,471				R0180	31,517
N-6	R0190					24,833	22,996	28,453					R0190	27,787
N-5	R0200				70,529	53,402	15,970						R0200	15,825
N-4	R0210			61,990	47,417	30,492							R0210	30,268
N-3	R0220		110,338	50,569	73,319								R0220	71,502
N-2	R0230	222,643	67,044	55,925									R0230	55,517
N-1	R0240	214,987	119,171										R0240	118,304
N	R0250	389,351											R0250	385,348
												Total	R0260	771,763

S.22.01.21

Impact of long term guarantees and transitional measures

		Amount with Long Term Guarantee measures and transitionals	Impact of transitional on technical provisions	Impact of transitional on interest rate	Impact of volatility adjustment set to zero	Impact of matching adjustment set to zero
		C0010	C0030	C0050	C0070	C0090
Technical provisions	R0010	1,920,518	-	-	22,921	-
Basic own funds	R0020	721,143	-	-	-10,229	-
Eligible own funds to meet Solvency Capital Requirement	R0050	770,211	-	-	-10,398	-
Solvency Capital Requirement	R0090	346,141	-	-	550	-
Eligible own funds to meet Minimum Capital Requirement	R0100	651,517	-	-	-10,431	-
Minimum Capital Requirement	R0110	155,764	-	-	248	-

S.23.01.01
Own funds

		Total	Tier 1 - unrestricted	Tier 1 - restricted	Tier 2	Tier 3
		C0010	C0020	C0030	C0040	C0050
Basic own funds before deduction for participations in other financial sector as foreseen in article 68 of Delegated Regulation 2015/35						
Ordinary share capital (gross of own shares)	R0010	54,635	54,635		-	
Share premium account related to ordinary share capital	R0030		-		-	
Initial funds, members' contributions or the equivalent basic own - fund item for mutual and mutual-type undertakings	R0040		-		-	
Subordinated mutual member accounts	R0050			-	-	-
Surplus funds	R0070		-			
Preference shares	R0090			-	-	-
Share premium account related to preference shares	R0110			-	-	-
Reconciliation reserve	R0130	-23,530				
Subordinated liabilities	R0140	97,926		-	97,926	-
An amount equal to the value of net deferred tax assets	R0160	1,644				1,644
Other own fund items approved by the supervisory authority as basic own funds not specified above	R0180	590,468	590,468	-	-	-
Own funds from the financial statements that should not be represented by the reconciliation reserve and do not meet the criteria to be classified as Solvency II own funds						
Own funds from the financial statements that should not be represented by the reconciliation reserve and do not meet the criteria to be classified as Solvency II own funds	R0220	-				
Deductions						
Deductions for participations in financial and credit institutions	R0230	-	-	-	-	
Total basic own funds after deductions	R0290	721,143	621,573		97,926	1,644

		Total	Tier 1 - unrestricted	Tier 1 - restricted	Tier 2	Tier 3
Ancillary own funds						
Unpaid and uncalled ordinary share capital callable on demand	R0300	-			-	
Unpaid and uncalled initial funds, members' contributions or the equivalent basic own fund item for mutual and mutual - type undertakings, callable on demand	R0310	-			-	
Unpaid and uncalled preference shares callable on demand	R0320	-			-	-
A legally binding commitment to subscribe and pay for subordinated liabilities on demand	R0330	-			-	-
Letters of credit and guarantees under Article 96(2) of the Directive 2009/138/EC	R0340	-			-	
Letters of credit and guarantees other than under Article 96(2) of the Directive 2009/138/EC	R0350	-			-	-
Supplementary members calls under first subparagraph of Article 96(3) of the Directive 2009/138/EC	R0360	-			-	
Supplementary members calls - other than under first subparagraph of Article 96(3) of the Directive 2009/138/EC	R0370	-			-	-
Other ancillary own funds	R0390	51,921			-	51,921
Total ancillary own funds	R0400	51,921			-	51,921
Available and eligible own funds		-	-	-	-	-
Total available own funds to meet the SCR	R0500	773,064	621,573	-	97,926	53,565
Total available own funds to meet the MCR	R0510	719,499	621,573	-	97,926	
Total eligible own funds to meet the SCR	R0540	771,420	621,573	-	97,926	51,921
Total eligible own funds to meet the MCR	R0550	652,726	621,573	-	31,153	
SCR	R0580	346,141				
MCR	R0600	155,764				
Ratio of Eligible own funds to SCR	R0620	223%				
Ratio of Eligible own funds to MCR	R0640	419%				

		C0060
Reconciliation reserve		
Excess of assets over liabilities	**R0700**	883,217
Own shares (held directly and indirectly)	**R0710**	
Foreseeable dividends, distributions and charges	**R0720**	260,000
Other basic own fund items	**R0730**	646,747
Adjustment for restricted own fund items in respect of matching adjustment portfolios and ring fenced funds	**R0740**	
Reconciliation reserve	**R0760**	-23,530
Expected profits		
Expected profits included in future premiums (EPIFP) - Life business	**R0770**	172,581
Expected profits included in future premiums (EPIFP) - Non-life business	**R0780**	
Total Expected profits included in future premiums (EPIFP)	**R0790**	172,581

S.25.03.21
Solvency Capital Requirement - for undertakings on Full Internal Models

Unique number of component	Components description	Calculation of the Solvency Capital Requirement
C0010	C0020	C0030
101	Market risk according to IM	176,340
102	Counterparty default risk according to IM	39,564
103	Life underwriting risk according to IM	107,513
104	Non-life underwriting risk according to IM	293,478
105	Operational risk according to IM	104,151
107	LAC TP according to IM	0
108	LAC DT according to IM	-49,215

Calculation of Solvency Capital Requirement		C0100
Total undiversified components	R0110	671,831
Diversification	R0060	-325,869
Capital requirement for business operated in accordance with Art. 4 of Directive 2003/41/EC (transitional)	R0160	
Solvency capital requirement excluding capital add-on	R0200	346,121
Capital add-ons already set	R0210	
Solvency capital requirement	R0220	346,121
Other information on SCR		
Amount/estimate of the overall loss-absorbing capacity of technical provisions	R0300	
Amount/estimate of the overall loss-absorbing capacity ot deferred taxes	R0310	-49,215
Total amount of Notional Solvency Capital Requirements for remaining part	R0410	
Total amount of Notional Solvency Capital Requirements for ring fenced funds	R0420	
Total amount of Notional Solvency Capital Requirement for matching adjustment portfolios	R0430	
Diversification effects due to RFF nSCR aggregation for article 304	R0440	

S.28.01.01
Minimum Capital Requirement - Only life or only non-life insurance or reinsurance activity

Linear formula component for non-life insurance and reinsurance obligations

		C0010
MCR_{NL} Result	R0010	405,750

		Net (of reinsurance/SPV) best estimate and TP calculated as a whole	Net (of reinsurance) written premiums in the last 12 months
		C0020	C0030
Medical expense insurance and proportional reinsurance	R0020	-	2,282
Income protection insurance and proportional reinsurance	R0030	6,403	24,832
Workers' compensation insurance and proportional reinsurance	R0040	-	84,239
Motor vehicle liability insurance and proportional reinsurance	R0050	307,342	1,014,648
Other motor insurance and proportional reinsurance	R0060	3,014	467,674
Marine, aviation and transport insurance and proportional reinsurance	R0070	-262	40,758
Fire and other damage to property insurance and proportional reinsurance	R0080	132,249	866,471
General liability insurance and proportional reinsurance	R0090	88,643	301,543
Credit and suretyship insurance and proportional reinsurance	R0100	3,126	160,455
Legal expenses insurance and proportional reinsurance	R0110	-	-
Assistance and proportional reinsurance	R0120	-	-
Miscellaneous financial loss insurance and proportional reinsurance	R0130	397	1,713
Non-proportional health reinsurance	R0140	69,349	13,014
Non-proportional casualty reinsurance	R0150	80,026	27,318
Non-proportional marine, aviation and transport reinsurance	R0160	3,023	1,755
Non-proportional property reinsurance	R0170	250,177	45,777

Linear formula component for life insurance and reinsurance obligations

		C0040
MCRL Result	R0200	199,450

		Net (of reinsurance / SPV) best estimate and TP calculated as a whole	Net (of reinsurance / SPV) total capital at risk
		C0050	C0060
Obligations with profit participation - guaranteed benefits	R0210	69,250	
Obligations with profit participation - future discretionary benefits	R0220	-	
Index-linked and unit-linked insurance obligations	R0230	-	
Other life (re)insurance and health (re)insurance obligations	R0240	411,166	
Total capital at risk for all life (re)insurance obligations	R0250		268,933,902

Overall MCR calculation

		C0070
Linear MCR	R0300	605,200
SCR	R0310	346,141
MCR cap	R0320	155,764
MCR floor	R0330	86,535
Combined MCR	R0340	155,764
Absolute floor of the MCR	R0350	4,122
Minimum Capital Requirement	R0400	155,764

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