Group risk management update

On track for Solvency II introduction

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18th International Investors' Day
Frankfurt, 14 October 2015

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Agenda

- Update on P&C claim reserves
- Risk governance
- Capital monitoring and capitalisation update
- Internal model approval for Solvency II and beyond
- Sources of risk and its changes in 2014

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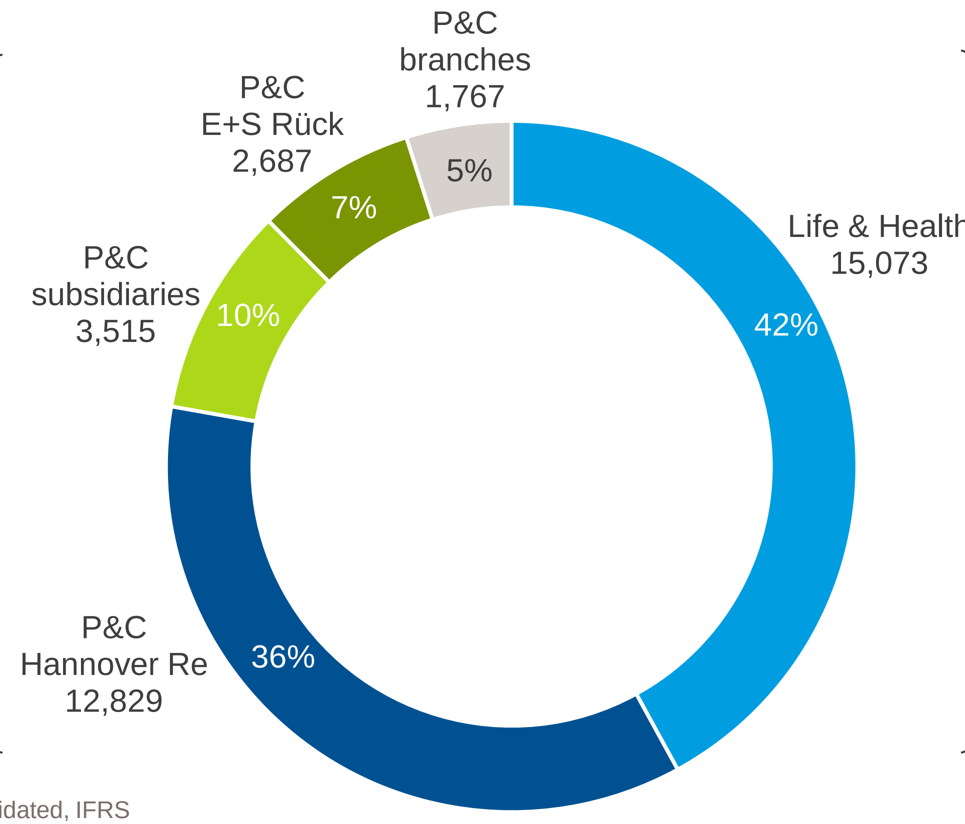
Two segments of reserves in our balance sheet

Recent figures from year-end 2014

Total gross reserves* EUR 35,871 m.

Property & Casualty R/I
EUR 20,798 m.



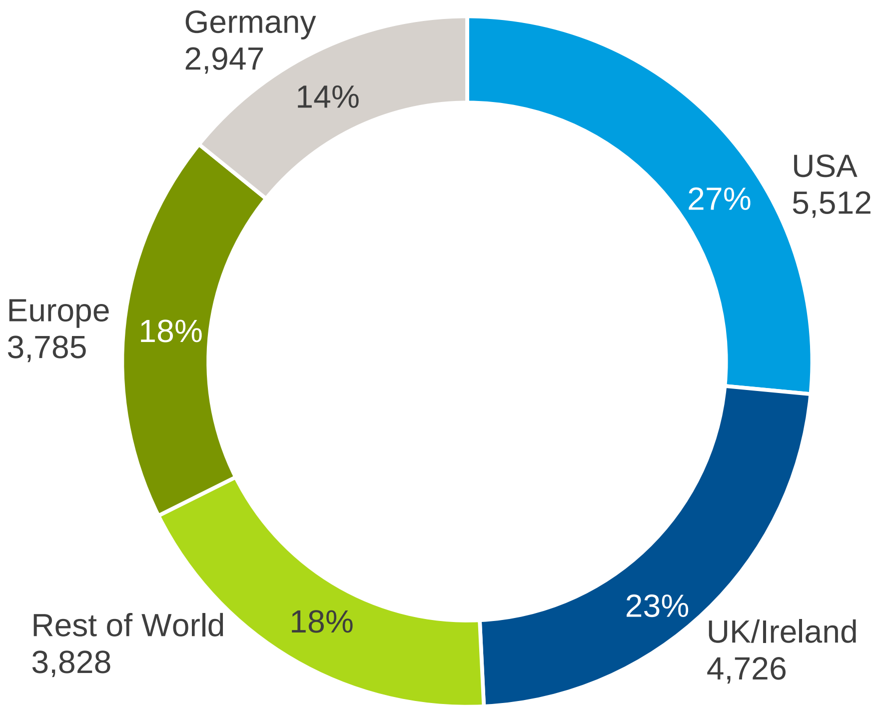
Life & Health R/I
EUR 11,757 m. benefit reserve
EUR 3,316 m. loss reserve

* As of 31 December 2014, consolidated, IFRS

Property & Casualty weight 58%, Life & Health stable at 42%

Well diversified gross Property & Casualty loss reserves ...

Total gross P&C loss reserves* EUR 20,798 m.



- Group-wide P&C reserve study (internal and external)
  - Hannover Re/E+S Rück, Canada, France, Bahrain / Takaful, Sweden, Bermuda
    - calculations by Group's own actuaries: EUR 17,012 m. (82%)
  - Australia, Malaysia, Shanghai
    - by external appointed actuaries: EUR 917 m. (4%)
  - UK(IICH), Ireland, South Africa
    - by HR Group's own actuaries: EUR 2,869 m. (14%)

* As of 31 December 2014, consolidated, IFRS

... across entities and countries

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Internal reserve studies 2009 - 2014 reviewed
by Towers Watson show increasing redundancies*

- For the HR Group, over the last 6 years on average 2.6% of the net earned loss ratio for P&C business is due to net reserve redundancy increases

in m. EUR

Year	Redundancy	Increase redundancy	Effect on loss ratio	P&C premium (net earned)
2009	867	276	5.3%	5,230
2010	956	89	1.6%	5,394
2011	1,117	162	2.7%	5,961
2012	1,308	190	2.8%	6,854
2013	1,517	209	3.1%	6,866
2014	1,546	29	0.4%	7,011
2009 - 2014 total		**955**		**37,316**
2009 - 2014 average		**159**	**2.6%**	**6,219**

* Redundancy of loss and loss adjustment expense reserve for its non-life insurance business against held IFRS reserves, before tax and minority participations. Towers Watson reviewed these estimates - more details shown in slide V (appendix)

No change in reserving policy in 2014

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Reported loss triangles for HR/E+S ...

Reconciliation to our balance sheet

in m. EUR

No.	Line of business	Total reserves U/Y 1979 - 2002	U/Y 1979 - 2002 in % of HR Group	Total reserves U/Y 2003 - 2014	U/Y 2003 - 2014 in % of HR Group
1	General liability non-prop.	600	2.9%	4,308	20.7%
2	Motor non-prop.	464	2.2%	1,743	8.4%
3	General liability prop.	234	1.1%	1,781	8.6%
4	Motor prop.	170	0.8%	746	3.6%
5	Property prop.	24	0.1%	1,092	5.2%
6	Property non-prop.	13	0.1%	1,011	4.9%
7	Marine	38	0.2%	968	4.7%
8	Aviation	225	1.1%	878	4.2%
9	Credit/surety	40	0.2%	881	4.2%
	All lines of business	1,808	**8.7%**	13,408	**64.5%**

As at 31 December 2014, consolidated, IFRS figures

... represent about 3/4 of our gross carried reserves

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Data description and information

Understanding the data is crucial for interpretation, analysis and results!

- Statistical gross reported loss triangles based on cedents' original advices (paid and case reserve information)
- Converted to EUR with exchange rates as at 31 December 2014
- Figures in triangles do not include business written at branch offices and subsidiaries
- Data on underwriting-year basis
- Data are combined triangles for companies HR and E+S Rück

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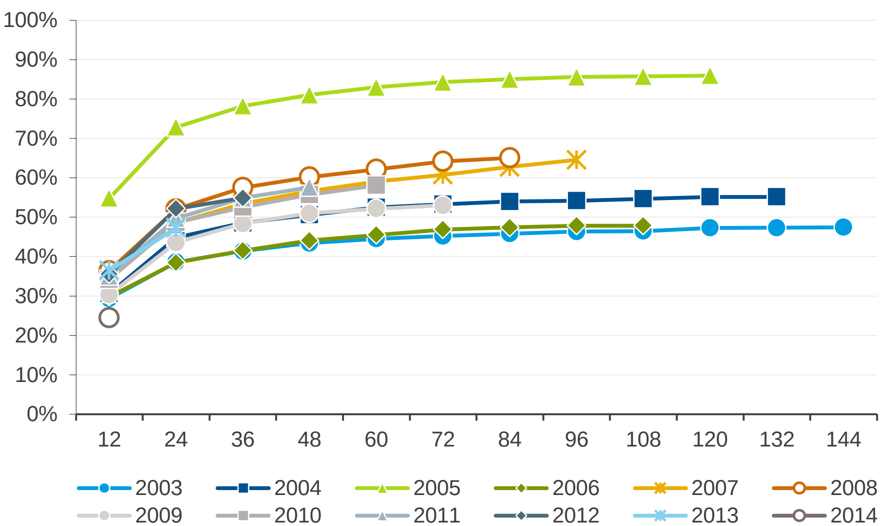
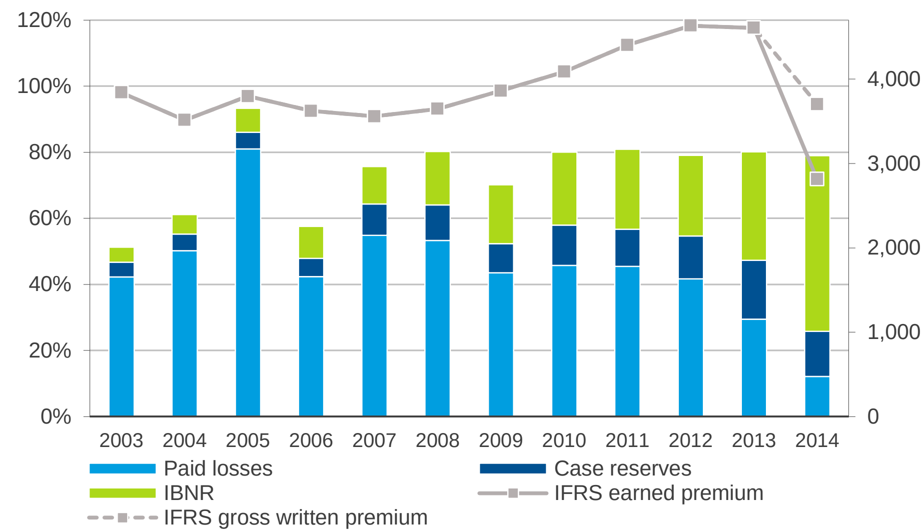
Reported claims triangle for HR/E+S

Total (~2/3 of HR Group reserves shown in 9 individual triangles)

		Statistical data (as provided by cedents)												Booked data			
U/W year	IFRS earned premium	12	24	36	48	60	72	84	96	108	120	132	144	Ultimate loss ratio	Paid losses	Case reserves	IBNR balance
2003	3,842	29.4%	38.6%	41.4%	43.4%	44.5%	45.2%	45.8%	46.4%	46.5%	47.3%	47.3%	47.4%	51.3%	42.2%	4.5%	4.5%
2004	3,515	30.6%	44.8%	48.5%	50.6%	52.5%	53.3%	54.0%	54.2%	54.7%	55.2%	55.2%		61.1%	50.2%	5.0%	5.9%
2005	3,797	54.8%	72.9%	78.2%	81.0%	83.0%	84.3%	85.0%	85.6%	85.7%	85.9%			93.3%	81.1%	5.0%	7.2%
2006	3,623	29.8%	38.5%	41.5%	44.1%	45.5%	46.9%	47.4%	47.9%	47.9%				57.5%	42.4%	5.6%	9.6%
2007	3,558	35.2%	48.6%	53.5%	56.6%	59.0%	60.8%	62.7%	64.5%					75.6%	54.8%	9.6%	11.2%
2008	3,648	36.4%	52.1%	57.5%	60.2%	62.1%	64.2%	65.1%						80.3%	53.3%	10.7%	16.2%
2009	3,863	30.4%	43.6%	48.4%	51.0%	52.1%	53.0%							70.1%	43.5%	8.9%	17.8%
2010	4,088	34.3%	48.7%	52.5%	55.7%	58.1%								80.0%	45.7%	12.2%	22.1%
2011	4,404	35.1%	49.7%	54.9%	57.6%									80.9%	45.5%	11.2%	24.3%
2012	4,634	35.6%	52.1%	54.9%										79.1%	41.7%	12.9%	24.5%
2013	4,607	36.5%	47.3%											80.1%	29.5%	17.8%	32.9%
2014	2,814	24.5%												79.0%	12.2%	13.6%	53.2%





As at 31 Dec 2014 (in m. EUR), consolidated, IFRS, development in months

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Reserving risk is reflected in the variation in ultimate loss ratios

Total (~2/3 of HR Group reserves shown in 9 individual triangles)

U/Y	Ultimate loss ratio 2008	Ultimate loss ratio 2009	Ultimate loss ratio 2010	Ultimate loss ratio 2011	Ultimate loss ratio 2012	Ultimate loss ratio 2013	Ultimate loss ratio 2014	Paid losses 2014	Case reserves 2014	IBNR balance 2014
2003	54.8%	57.1%	54.8%	53.5%	52.7%	52.5%	51.3%	42.2%	4.5%	4.5%
2004	66.9%	65.8%	65.1%	63.8%	62.8%	62.6%	61.1%	50.2%	5.0%	5.9%
2005	98.9%	96.2%	96.2%	95.8%	94.1%	92.7%	93.3%	81.1%	5.0%	7.2%
2006	66.2%	65.2%	63.3%	62.1%	60.9%	59.5%	57.5%	42.4%	5.6%	9.6%
2007	79.5%	80.2%	78.3%	77.1%	77.5%	77.2%	75.6%	54.8%	9.6%	11.2%
2008	85.8%	84.8%	83.2%	84.1%	81.8%	80.9%	80.3%	53.3%	10.7%	16.2%
2009		78.8%	78.3%	75.8%	73.1%	72.7%	70.1%	43.5%	8.9%	17.8%
2010			81.2%	84.1%	81.4%	78.9%	80.0%	45.7%	12.2%	22.1%
2011				85.6%	82.4%	81.9%	80.9%	45.5%	11.2%	24.3%
2012					89.1%	83.1%	79.1%	41.7%	12.9%	24.5%
2013						82.8%	80.1%	29.5%	17.8%	32.9%
2014							79.0%	12.2%	13.6%	53.2%

As at 31 December 2014 (in m. EUR), consolidated, IFRS, development in years

Governance supports centralised risk management approach

System aligned with Solvency II requirements

Supervisory Board
Advising and supervising the Executive Board in its management of the company, inter alia with respect to risk management, on the basis of the Supervisory Board‘s Rules of Procedure

Executive Board
Overall responsibility for Group-wide risk management and definition of the risk strategy

2nd line of defence

Risk Committee
Operational risk management, monitoring and coordinating body as well as implementation and safeguarding of a consistent Group-wide risk management culture

Group Risk Management
Risk monitoring across the Group as a whole and the business groups of all material risks from the company perspective
supported by local risk management functions

Chief Risk Officer
Responsibility for holistic risk monitoring across the Group as a whole and the business groups of all material risks from the Group perspective
supported by local risk management functions

Actuarial function
Ensures adequacy of the methods used and underlying models in relation to calculation of the technical provisions
supported by local actuarial functions

2nd line of defence

Compliance function
Monitoring of areas where mis-conduct can result in civil actions or criminal/ administrative proceedings
supported by local compliance functions

3rd line of defence

Group Auditing
Process-independent and Group-wide monitoring on behalf of the Executive Board

1st line of defence

Subsidiaries, branches, service companies, representative offices as well as treaty/ regional and service divisions within the business groups of Property & Casualty reinsurance, Life & Health reinsurance and investments
Risk steering and original risk responsibility for risk identification and assessment on the divisional and company level

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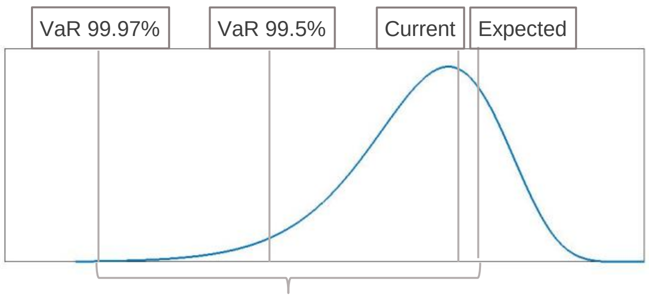
Hannover Re maintains strong capital position

Strategic targets control capital basis and operational volatility

Internal Model

Economic capital in m. EUR	Q4/2014	Limit
Available (incl. hybrid capital)	12,444	
Required (VaR 99.97%)	7,787	
Excess	4,657	
Capital adequacy ratio	160%	100%



Probability of ruin	Q4/2014	Limit
Probability of a total loss of shareholders' equity	0.01%	0.3‰
Probability of a total loss of economic capital	< 0.01%	0.3‰

Probability of adverse earnings	Q4/2014	Limit
Probability of a negative net income	4.6%	10.0%
Probability of a negative EBIT	4.1%	10.0%

Rating agency view

- Standard & Poor‘s: AA- (Very Strong)
- AM Best: A+ (Superior)

Regulatory view

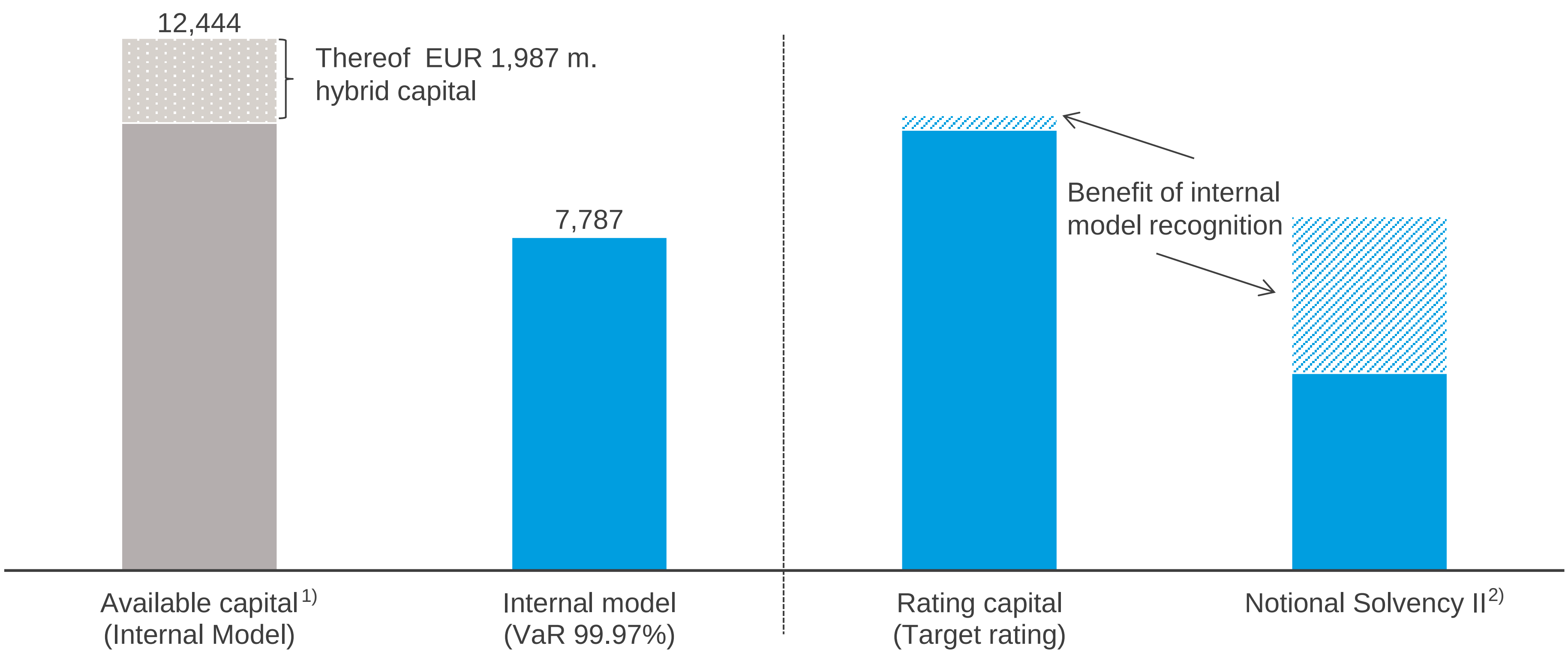
- Notional Solvency II: 253%
  - According to approved partial internal model
  - Improved regulatory solvency under Solvency II compared to Solvency I
  - Solvency I Hannover Re SE: 136%

All figures as of Q4/2014

Capital level for target ratings remains the key driver

Despite partial recognition of internal model results

Risk capital in m. EUR



All figures as of Q4/2014

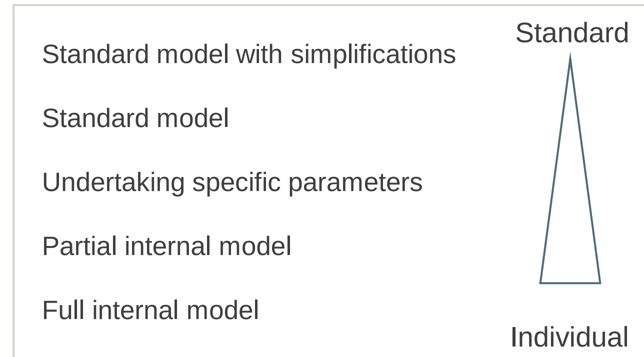
1) The available capital in the rating agencies' models and under Solvency II differs from Hannover Re's internal model due to different accounting models.

2) Value-at-Risk at the security level 99.5% according to approved partial internal model

Internal model approval

Successful use of internal capabilities for regulatory requirements

- Hannover Re opted for a partial internal model
  - Including L&H and P&C underwriting risk, market risk and counterparty default risk
  - Excluding operational risk
- Model approval – concluding a successful project
  - Almost 7 years of pre-application
  - Implementation of extensive governance and documentation processes including Pillar II (ORSA*, key functions)
  - Model improvement due to continuous discussions on individual parameters
- Model results are independent from
  - Decisions on third-country equivalence, volatility and matching adjustment
  - Standard formula recalibration (excl. op. risk)



* ORSA = Own Risk and Solvency Assessment

Consistency of internal and external risk measurement

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Solvency II preparation completed

Experienced employees due to early start of preparation phase

- Pillar I:
  Regulatory capital requirements remain a side constraint
  - Solvency II capital basis very comfortable (253%)
  - Flexible capital instruments in place incl. hybrid capital and retrocession
  - Group internal capital allocation optimised on basis of new Solvency constraints
- Pillar 2:
  Internal governance strengthened and aligned with Solvency II
  - Extensive documentation and controls at reasonable expense
  - Responsibilities with minimal conflict of interest
  - Existing processes leveraged to produce ORSA and Solvency II actuarial report
- Pillar III:
  From test to production
  - Test reporting completed
  - Systems in place, extensions and further automation will be introduced in-line with closing dates
  - Existing processes leveraged to produce Regular Supervisory Reporting (RSR)
  - Significant disclosure content reported via IFRS annual statement
- Markets & Clients:
  Solutions in place, further development supported by experienced staff
  - Internal Solvency II training in place since 2010 with sections especially targeting underwriters
  - Expert teams offer specific products suitable for Solvency II and similar solvency regimes

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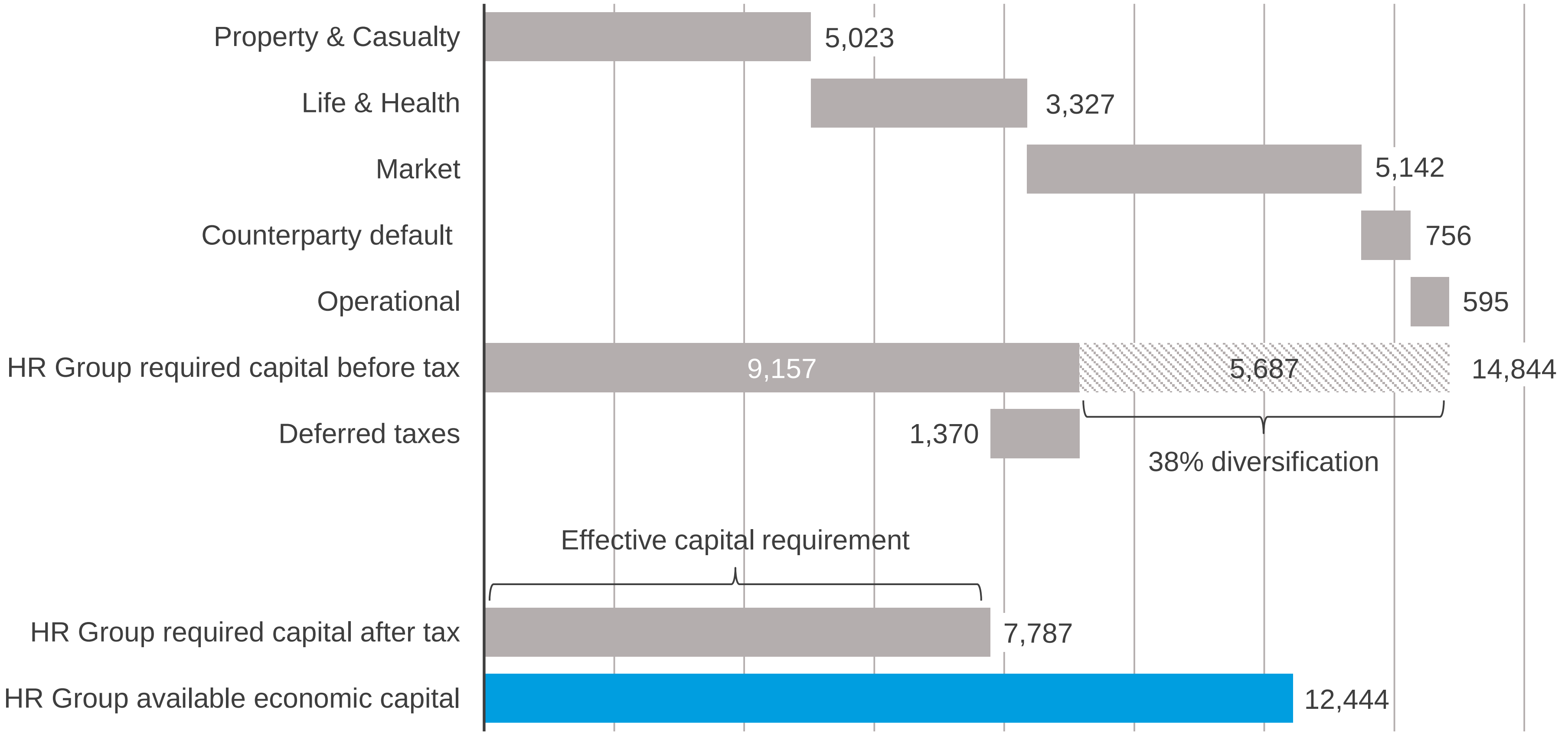
Well diversified across business groups
Hannover Re's risk profile

Risk capital for the 99.97% VaR (according to economic capital model) in m. EUR



As at December 2014

Business growth supports diversification

Other factors: model strengthening, changes in interest and fx rates

Required capital, VaR 99.97% in m. EUR	**Q4/2014**	**Q4/2013**	**Delta**	**Delta mainly due to**
Underwriting risk P&C	5,023	4,460	563	Business growth, decreasing interest rates, EUR weakening and model strengthening
Underwriting risk L&H	3,327	2,607	720	Business growth (mortality and longevity), decreasing interest rates and EUR weakening
Market risk	5,142	3,610	1,532	Model strengthening, increase in asset volume
Counterparty default risk	756	740	17	Increase in future positive cash flows from L&H
Operational risk	595	511	85	Increase in all business groups
Diversification	(5,687)	(3,905)	(1,782)	Diversified growth
Tax effects	(1,370)	(1,125)	(245)	Increase in pre-tax risk due to the reasons given above
Hannover Re Group	**7.787**	**6.897**	**890**	**Diversified growth, interest and f/x rates, model strengthening**

Required capital at a confidence level of 99.97% (assumed AA-rating equivalence)

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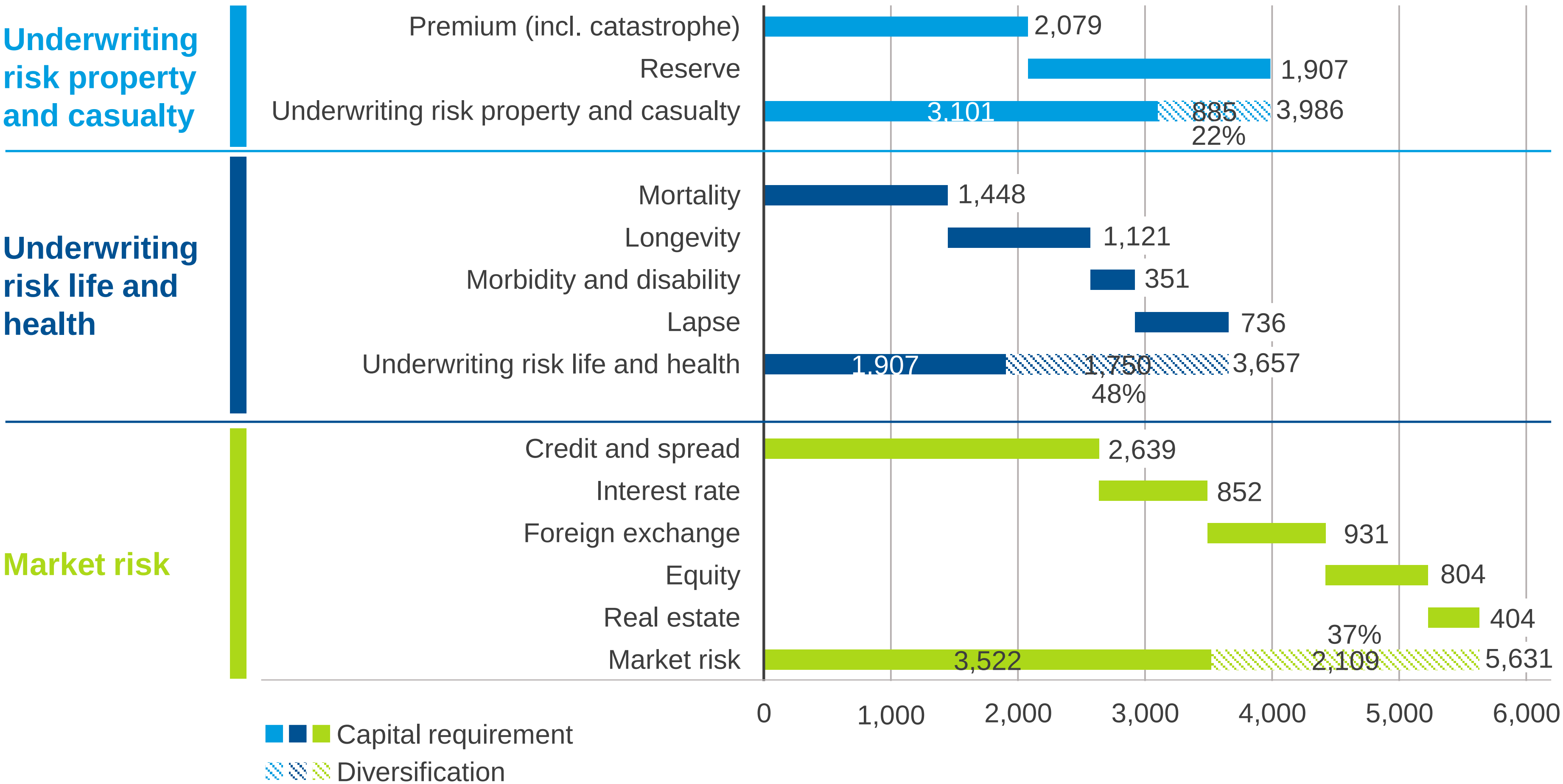
Well diversified within each business group

Balanced asset and liability portfolio

Risk capital for the 99.5% VaR (according to economic capital model)

in m. EUR



As at December 2014

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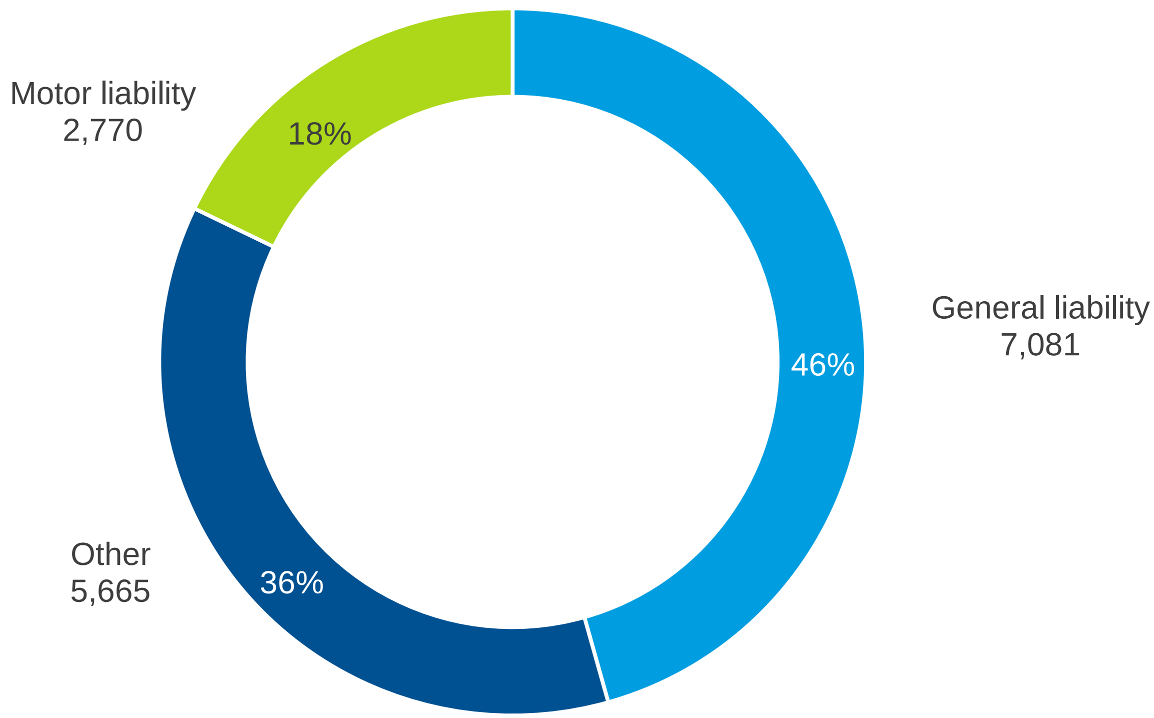
Appendix

About 46% related to general liability

Driven by premium volume in recent U/Y

Gross P&C reinsurance loss reserves

EUR 15,516 m.

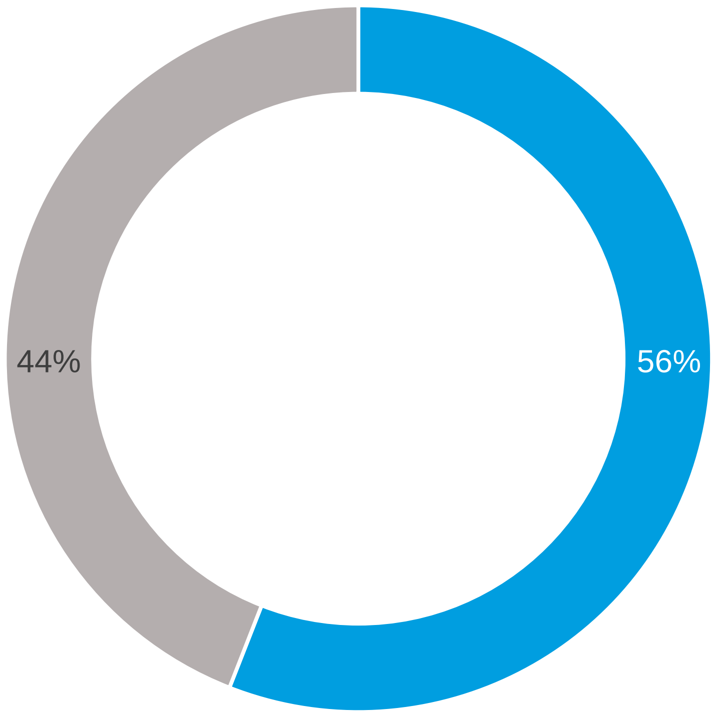


HR and E+S as at 31 December 2014, consolidated, IFRS figures

Estimation system & bulk IBNR

Roughly one half of own IBNR is self-made

"Home-made" IBNR EUR 15,516 m.



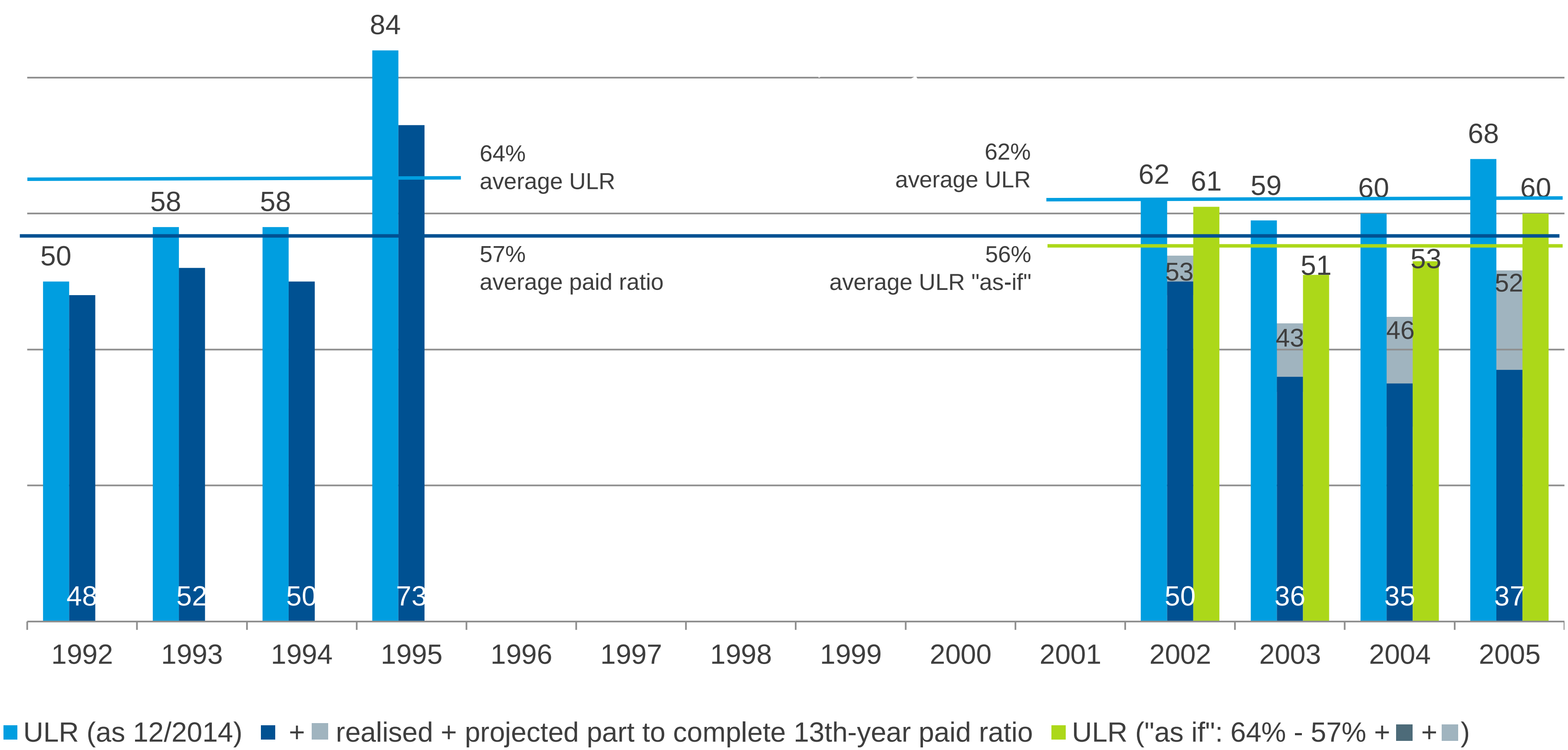
HR and E+S as at 31 December 2014, consolidated, IFRS figures

US/Bermuda liability non-proportional: looks promising

On average still ~6%pts higher ULRs than mature years suggest

Ultimate Loss Ratios (ULR)

in %



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Individual aspects

Special A&E[1] reserves

- 2014 A&E reserves are prudent best estimates and exceed the corresponding internal reserve study estimates reviewed by Towers Watson[2]
  - IBNR factor of 5.6 compared to 5.9 at previous year-end
  - Paid Survival ratio of 28.2 years remains at a high level

Financial year	Case reserves	HR additional reserves for A&E (in TEUR)	Total reserve for A&E (in TEUR)	3-year-average paid (in TEUR)	Survival ratio	IBNR factor = add. reserves/case reserves
2008	22,988	127,164	150,152	6,008	25.0	5.5
2009	26,216	171,363	197,579	8,130	24.3	6.5
2010	29,099	182,489	211,588	9,270	22.8	6.3
2011	28,422	193,957	222,379	8,574	25.9	6.8
2012	27,808	182,240	210,049	7,210	29.1	6.6
2013	28,839	170,805	199,643	6,224	32.1	5.9
2014	33,755	189,306	223,061	7,922	28.2	5.6

1) A&E = Asbestos & Environmental
2) More details of Towers Watson´s review are shown in slide V (Appendix)

Details on reserve review by Towers Watson

- The scope of Towers Watson's work was to review certain parts of the held loss and loss adjustment expense reserve, net of outwards reinsurance, from Hannover Rück SE's consolidated financial statements in accordance with IFRS as at each 31 December from 2009 to 2014, and the implicit redundancy margin, for the non-life business of Hannover Rück SE. Towers Watson concludes that the reviewed loss and loss adjustment expense reserve, net of reinsurance, less the redundancy margin is reasonable in that it falls within Towers Watson's range of reasonable estimates.
  - Life reinsurance and health reinsurance business are excluded from the scope of this review.
  - Towers Watson's review of non-life reserves as at 31 December 2014 covered **97.9% / 97.8**% of the gross **and** net held non-life reserves of €20.8 billion and € 19.7 billion respectively. Together with life reserves of gross €3.3 billion and net €3.0 billion, the total balance sheet reserves amount to €24.1 billion gross and €22.7 billion net.
  - The results shown in this presentation are based on a series of assumptions as to the future. It should be recognised that actual future claim experience is likely to deviate, perhaps materially, from Towers Watson's estimates. This is because the ultimate liability for claims will be affected by future external events; for example, the likelihood of claimants bringing suit, the size of judicial awards, changes in standards of liability, and the attitudes of claimants towards the settlement of their claims.
  - The results shown in Towers Watson's reports are not intended to represent an opinion of market value and should not be interpreted in that manner. The reports do not purport to encompass all of the many factors that may bear upon a market value.
  - Towers Watson's analysis was carried out based on data as at evaluation dates for each 31 December from 2009 to 2014. Towers Watson's analysis may not reflect development or information that became available after the valuation dates and Towers Watson's results, opinions and conclusions presented herein may be rendered inaccurate by developments after the valuation dates.
  - As is typical for reinsurance companies, the claims reporting can be delayed due to late notifications by some cedants. This increases the uncertainty in the estimates.
  - Hannover Rück SE has asbestos, environmental and other health hazard (APH) exposures which are subject to greater uncertainty than other general liability exposures. Towers Watson's analysis of the APH exposures assumes that the reporting and handling of APH claims is consistent with industry benchmarks. However, there is wide variation in estimates based on these benchmarks. Thus, although Hannover Rück SE's held reserves show some redundancy compared to the indications, the actual losses could prove to be significantly different to both the held and indicated amounts.
  - Towers Watson has not anticipated any extraordinary changes to the legal, social, inflationary or economic environment, or to the interpretation of policy language, that might affect the cost, frequency, or future reporting of claims. In addition, Towers Watson's estimates make no provision for potential future claims arising from causes not substantially recognised in the historical data (such as new types of mass torts or latent injuries, terrorist acts), except in so far as claims of these types are included incidentally in the reported claims and are implicitly developed.
  - In accordance with its scope Towers Watson's estimates are on the basis that all of Hannover Rück SE's reinsurance protection will be valid and collectable. Further liability may exist for any reinsurance that proves to be irrecoverable.
  - Towers Watson's estimates are in Euros based on the exchange rates provided by Hannover Rück SE as at each 31 December evaluation date. However, a substantial proportion of the liabilities is denominated in foreign currencies. To the extent that the assets backing the reserves are not held in matching currencies, future changes in exchange rates may lead to significant exchange gains or losses.
  - Towers Watson has not attempted to determine the quality of Hannover Rück SE's current asset portfolio, nor has Towers Watson reviewed the adequacy of the balance sheet provisions except as otherwise disclosed herein.

- In its review, Towers Watson has relied on audited and unaudited data and financial information supplied by Hannover Rück SE and its subsidiaries, including information provided orally . Towers Watson relied on the accuracy and completeness of this information without independent verification.
- Except for any agreed responsibilities Towers Watson may have to Hannover Rück SE, Towers Watson does not assume any responsibility and will not accept any liability to any person for any damages suffered by such person arising out of this commentary or references to Towers Watson in this document.

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