



somewhat  
different

## From the CFO's desk

**Roland Vogel, Chief Financial Officer**

# Asset allocation unchanged

Rise in assets under management despite EUR 750 m. bond redemption in Feb

## Tactical asset allocation<sup>1)</sup>

Investment category	2010	2011	2012	2013	1H/2014
<b>Fixed-income securities</b>	<b>84%</b>	<b>89%</b>	<b>91%</b>	<b>89%</b>	<b>89%</b>
- Governments	23%	19%	19%	19%	20%
- Semi-governments	21%	23%	23%	20%	20%
- Corporates	25%	30%	32%	34%	35%
Investment grade	24%	29%	30%	33%	33%
Non-investment grade	1%	1%	2%	2%	2%
- Pfandbriefe, Covered Bonds, ABS	16%	16%	17%	15%	15% <sup>2)</sup>
<b>Equities</b>	<b>4%</b>	<b>2%</b>	<b>2%</b>	<b>2%</b>	<b>2%</b>
- Listed	2%	<1%	<1%	<1%	<1%
- Private Equity	2%	2%	2%	2%	2%
<b>Real estate/real estate funds</b>	<b>2%</b>	<b>2%</b>	<b>2%</b>	<b>4%</b>	<b>4%</b>
<b>Others</b>	<b>2%</b>	<b>2%</b>	<b>2%</b>	<b>2%</b>	<b>2%</b>
<b>Short-term investments &amp; cash</b>	<b>8%</b>	<b>5%</b>	<b>3%</b>	<b>4%</b>	<b>4%</b>
<b>Total balance sheet values in bn. EUR</b>	<b>25.4</b>	<b>28.3</b>	<b>31.9</b>	<b>31.9</b>	<b>32.4</b>

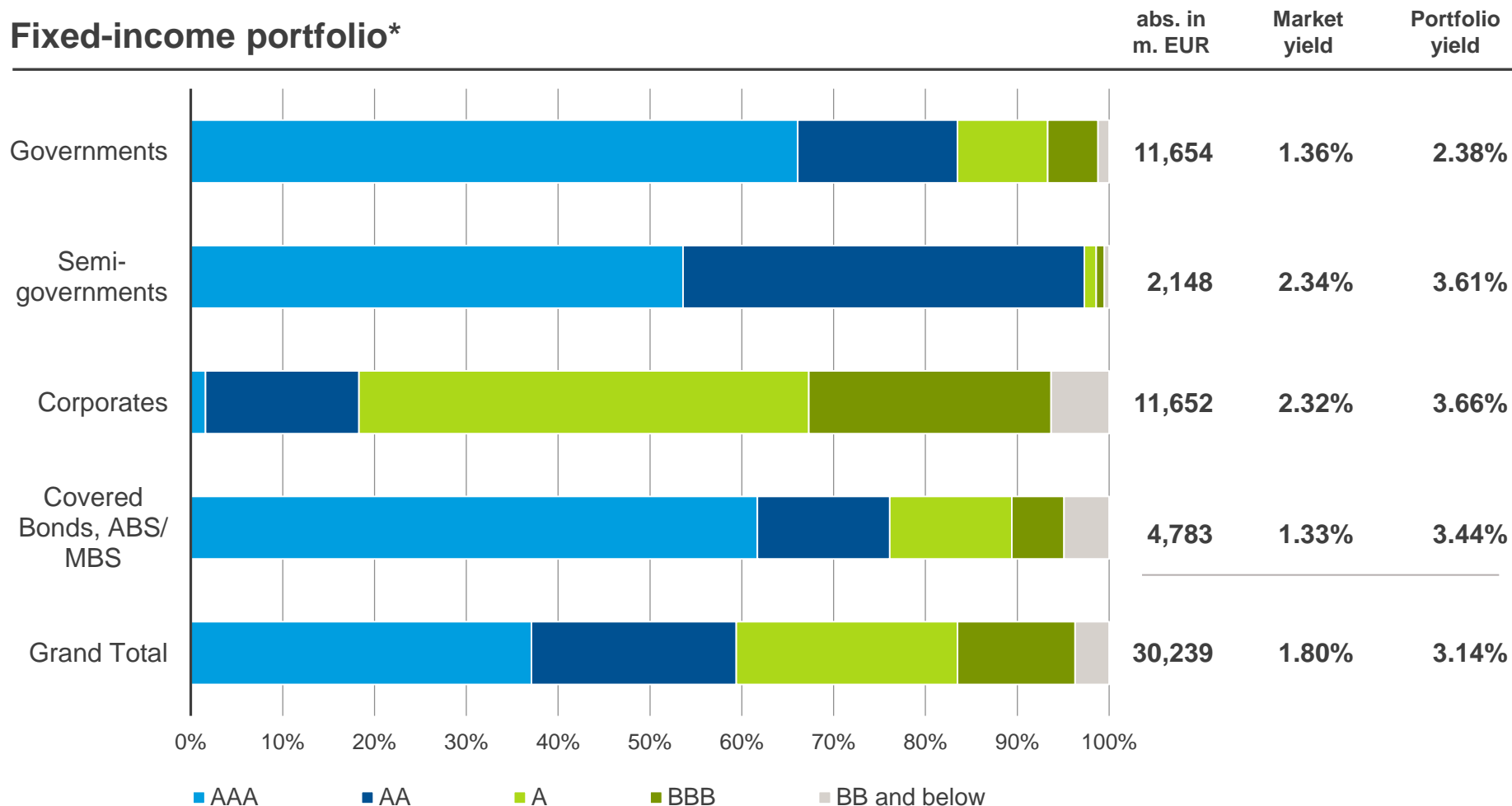
1) Economic view based on market values without outstanding commitments for Private Equity and Alternative Real Estate as well as fixed-income investments of EUR 618.0 m. (EUR 598.5 m.) as at 30 June 2014

2) Of which Pfandbriefe and Covered Bonds = 82.4%

# Existing portfolio yield still in target range

Nevertheless, "normalised" yield levels would be more than appreciated

## Fixed-income portfolio\*

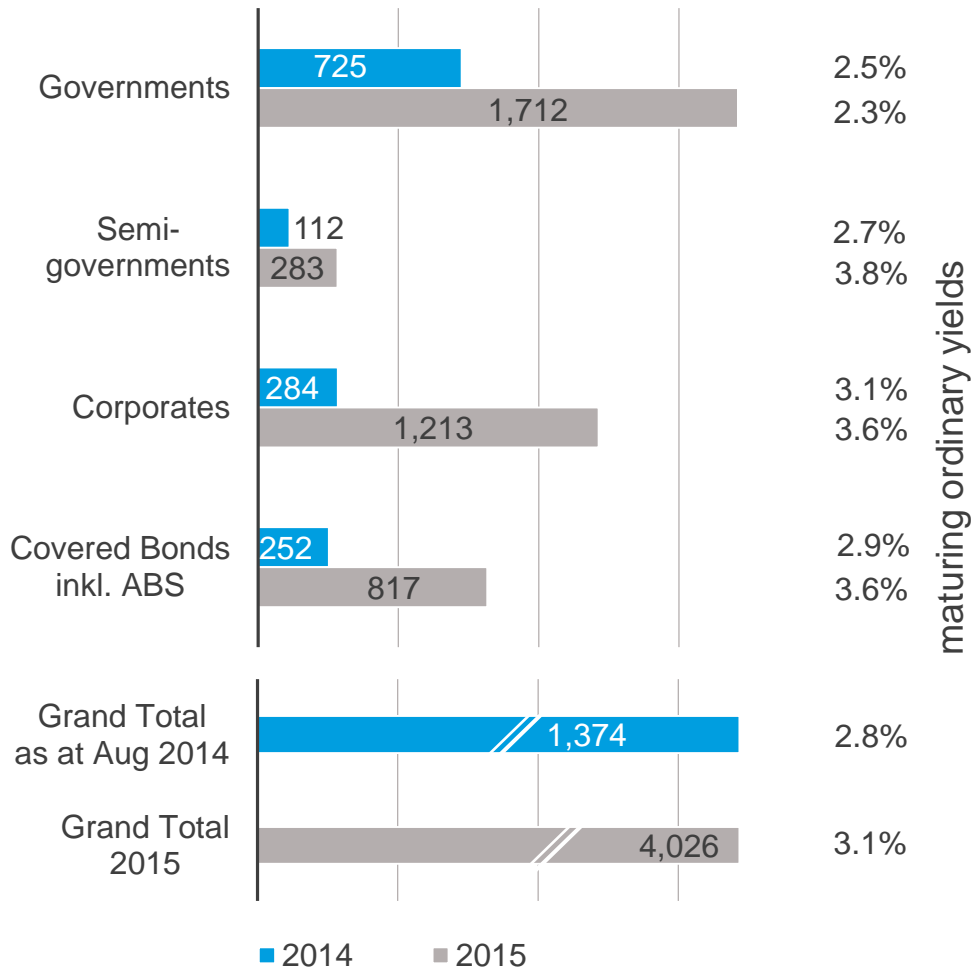


\* Preliminary analysis as at 15 Aug 2014, excluding short-term investments and cash, governments according economic view

# Maturity pattern 2014 and 2015

## Heterogeneous maturing yield profile per asset class

### Fixed-income maturities in m. EUR



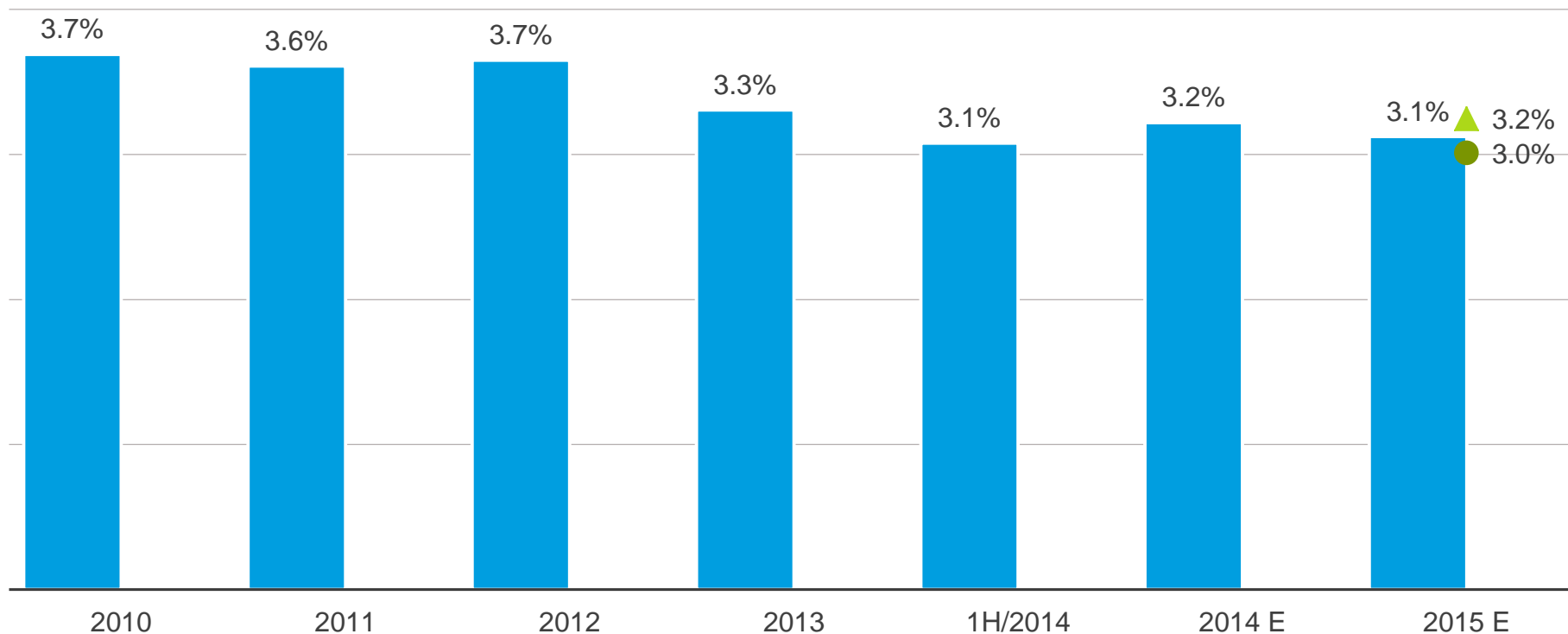
### ► Simulation assumptions

- Maturing fixed-income securities re-invested according to current market yields
- (Re)investment of short-term investments (STIs) at currently low returns
- New cash flows in 2014 and 2015 reinvested at an average of 2.04% p.a.
- The emission of new hybrid bond is not included

# Ordinary return on investments declines at appr. 15 bps p.a.

Expected ordinary yield in 2014/2015 from assets under own management

in %



■ Expected ordinary investment yield

▲ Current yield + 100 bps

● Current yield - 100 bps

\* Analysis as at 15 August 2014

# Ordinary investment yield development follows our projections

## Ordinary investment income (average expectation) from assets under own management

Asset class <sup>2)</sup>		Allocation 08/2014	2014 E	2015 E
Governments		34%	2.4%	2.3%
Semi-governments		6%	3.6%	3.5%
Corporates		36%	3.7%	3.6%
Covered Bonds incl. ABS/MBS		15%	3.4%	3.2%
Short-term investments (ex Short Govies) <sup>1)</sup>		3%	1.1%	1.1%
Real Estate <sup>1)</sup>		4%	5.3%	5.3%
Private Equity <sup>1)</sup>		2%	6.0%	6.0%
Cash In - 2014 (at at Aug 2014)	+EUR 0.6 bn.		2.0%	2.0%
Cash In - 2015	+EUR 1.7 bn.			2.0%
<b>Total</b>		<b>EUR 32.84 bn.</b>	<b>3.2%</b>	<b>3.1%</b>

1) Fixed approximation

2) Risk perspective deviating from accounting/legal perspective

## Hybrid capital - a value driver in capitalisation?

# Hybrid capital - only one amongst many

## Financing instruments in the insurance sector

Senior bond

Common shares

Contingent convertible

Hybrid bond

Preference shares

Bilateral credit facility

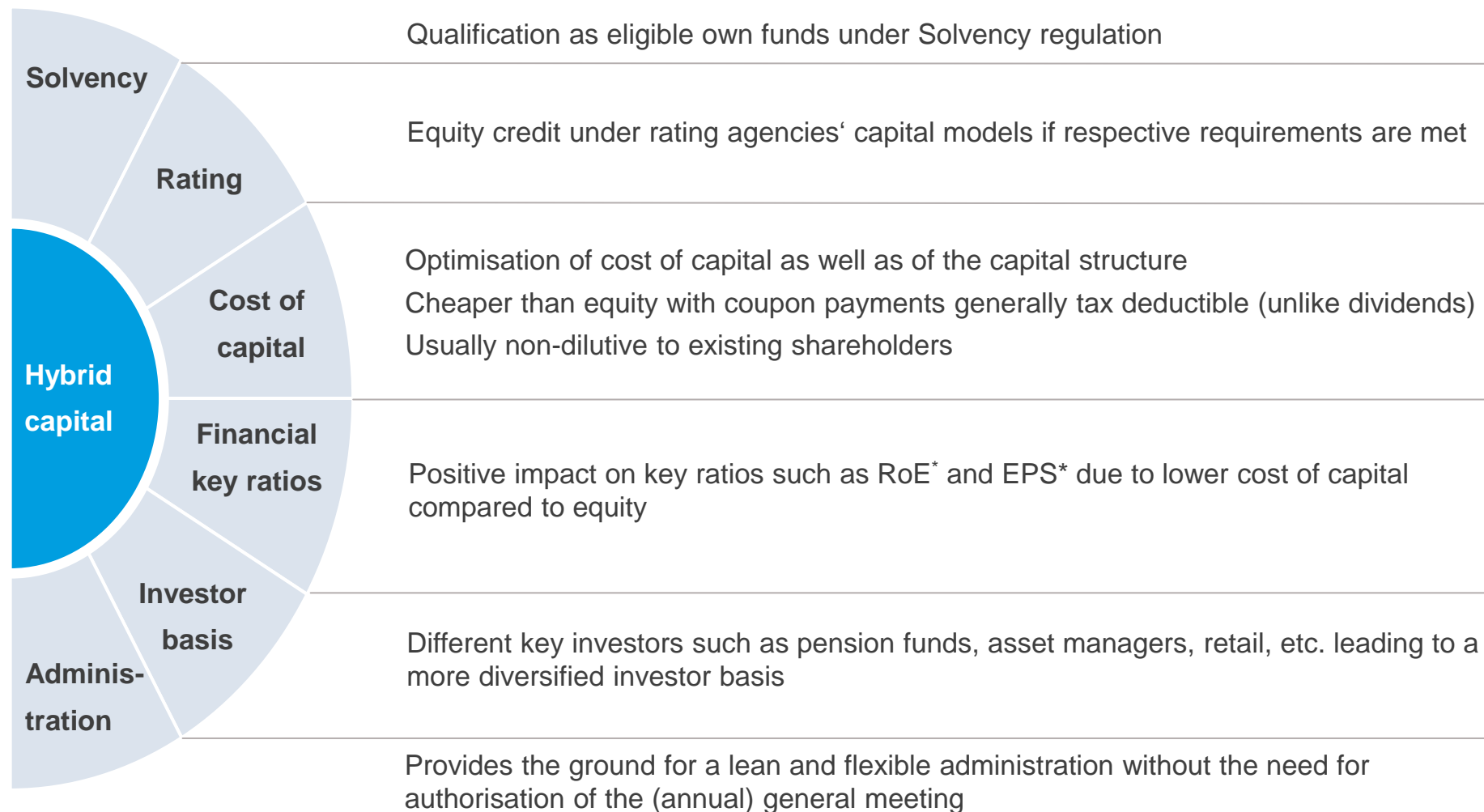
Syndicated credit facility

Mandatory convertible



# The Swiss Army knife in insurance financing?

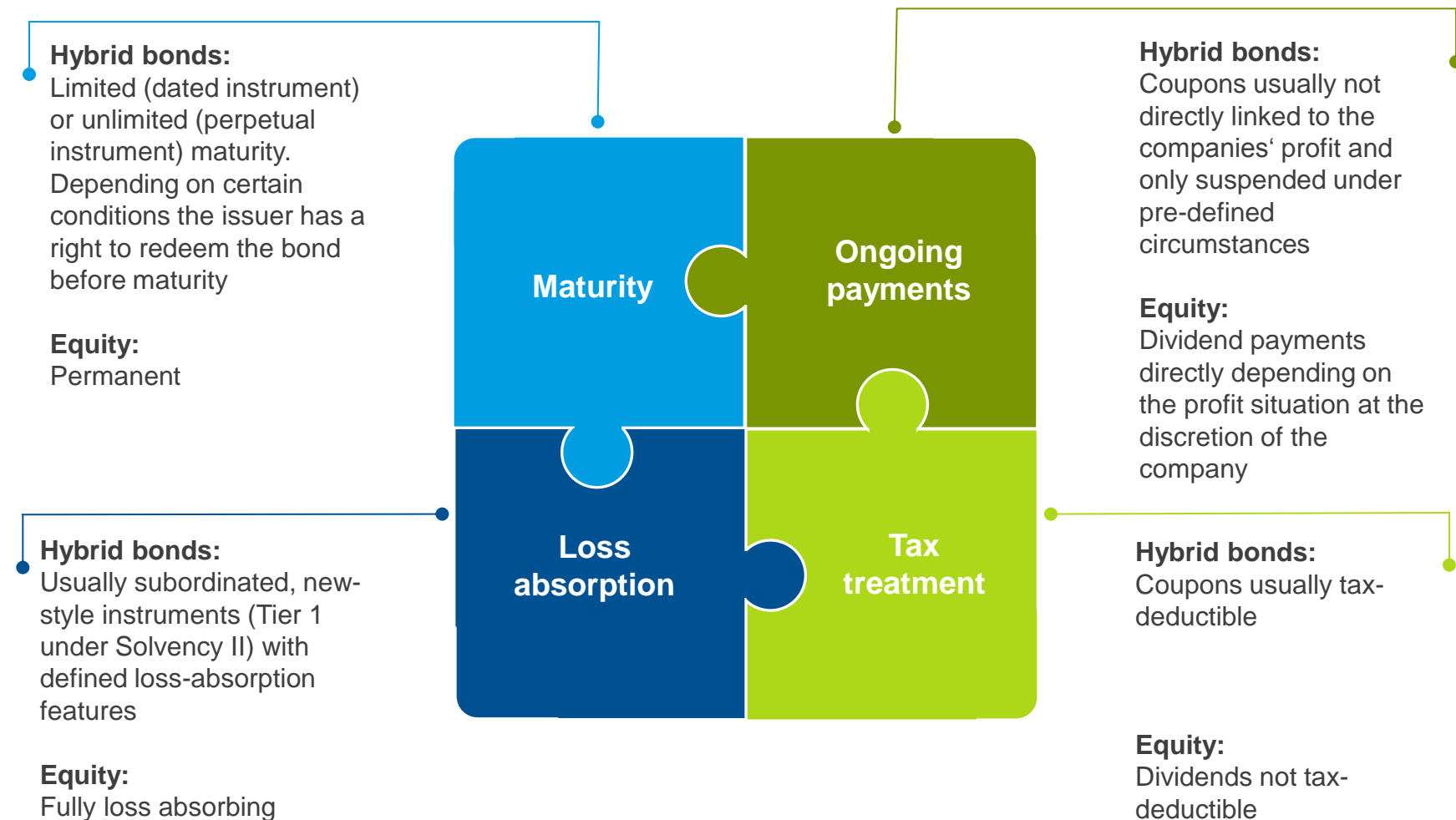
## Hybrid capital - a versatile instrument



\* Liability treatment under accounting rules assumed

# More debt or more equity-like?

## Hybrid vs equity: selected features

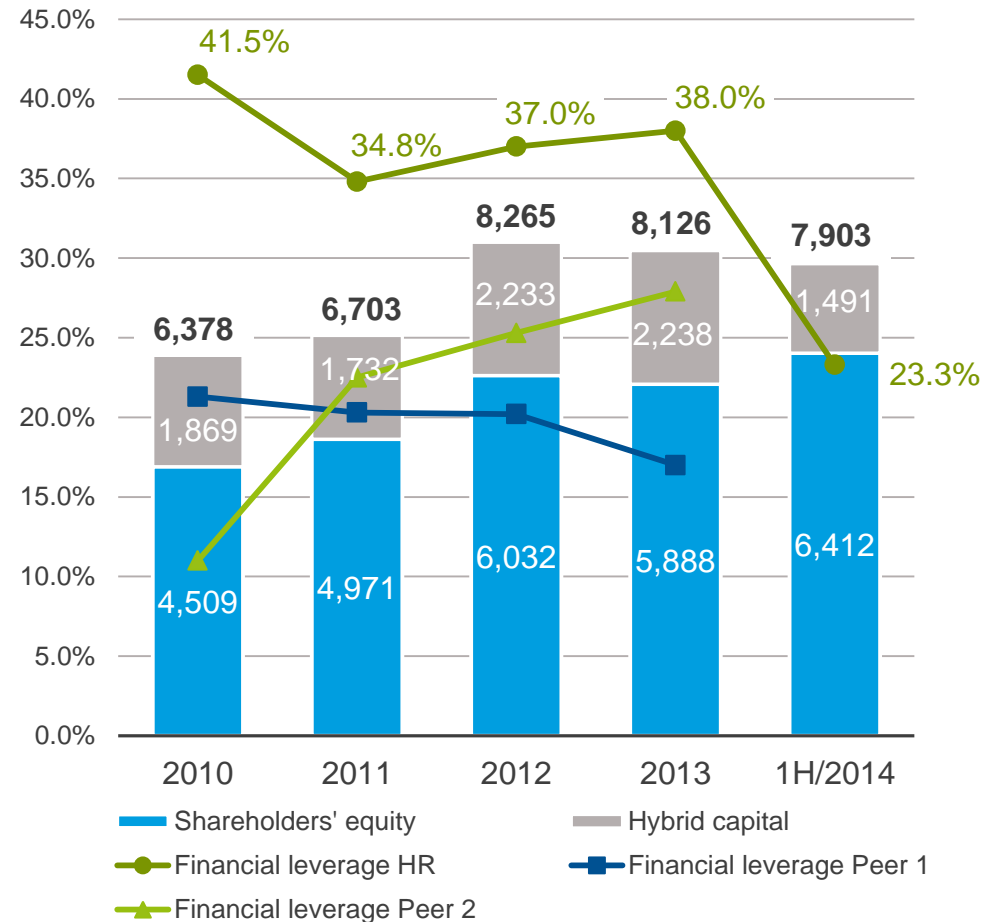


# Our strategy determines capitalisation level

## Adequate level of capitalisation

- ▶ Rating agencies' requirement defines the hurdle
- ▶ Capitalisation level has to comply with
  - Expectations of rating agencies
  - Economic capital model requirements
  - Solvency regulation requirements
  - Expectations of clients and shareholders
- ▶ . . .while maintaining a sufficient equity buffer for business opportunities

Shareholders' equity\* and hybrid capital in m. EUR

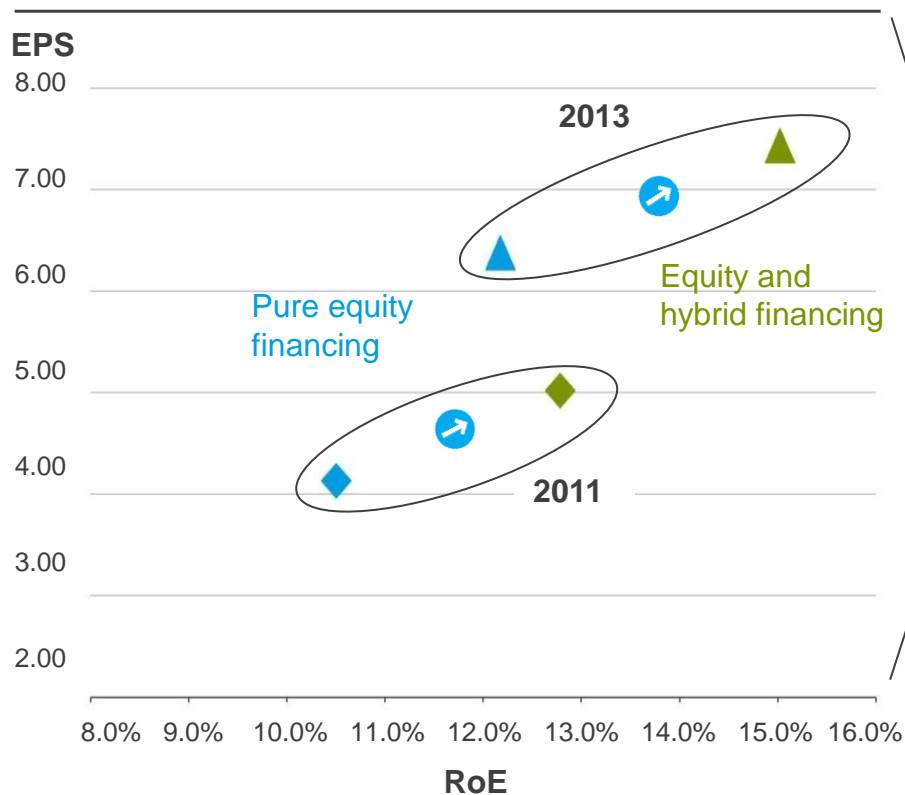


\* Excl. non-controlling interests; financial leverage = hybrid capital / shareholders' equity (excl. non-controlling interests)

# Financial ratios benefit from hybrid capital

## Comparison to pure equity capitalisation demonstrates benefits

RoE<sup>1)</sup> and EPS<sup>1)</sup> 2011 and 2013<sup>2)</sup>



		RoE	EPS
2011	Pure equity	10.5%	4.1
	Equity and hybrid	12.8%	5.0
2013	Pure equity	12.2%	6.4
	Equity and hybrid	15.0%	7.4

1) RoE = Return on Equity (in %); EPS = Earnings per share (in EUR per share)

2) Source: Hannover Re Annual Reports 2011 and 2013; own calculations

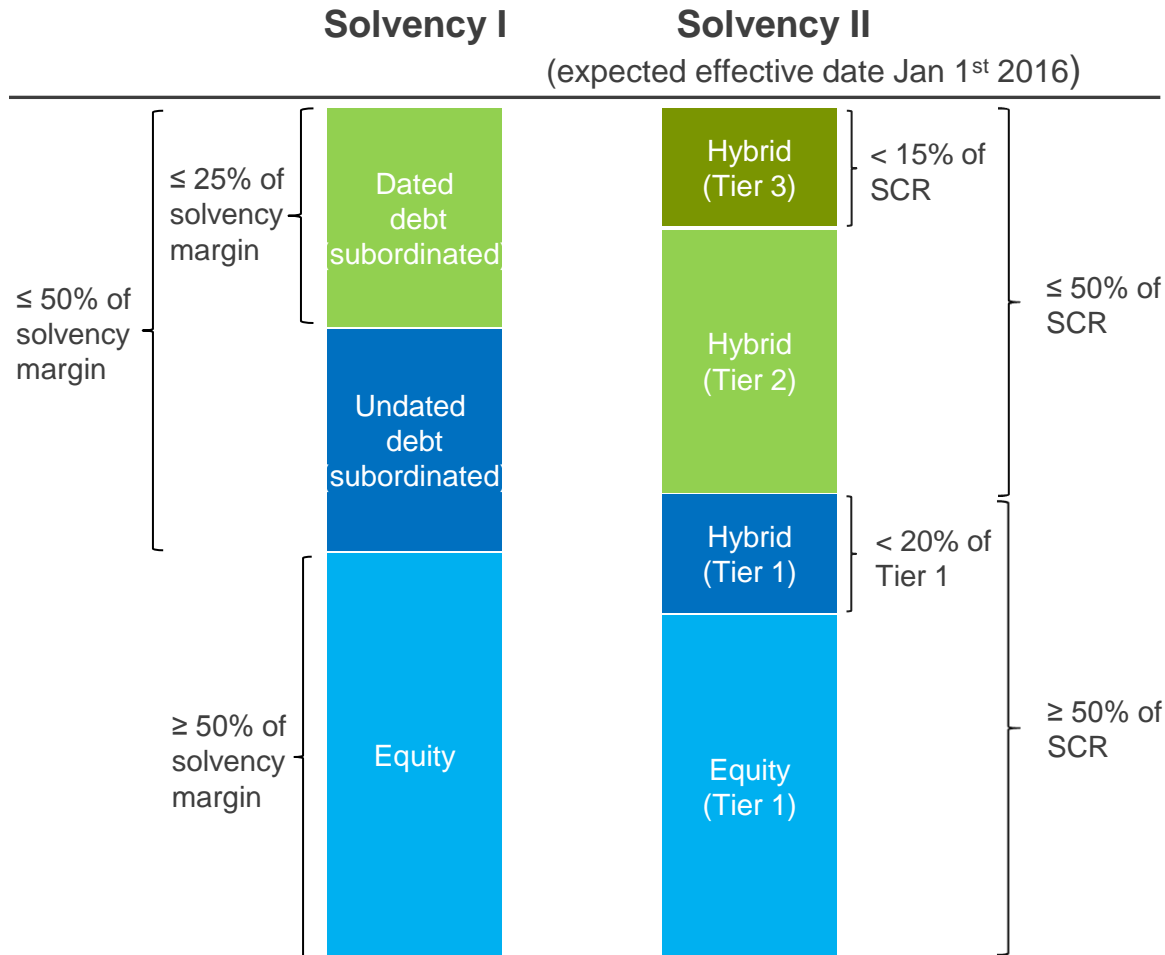
# Not only the sky is the limit

## Balance is key

- ▶ Despite its various uses, hybrid capital is considered to be only a limited part of the Hannover Re capital structure
- ▶ Excessive use is not an alternative to boost financial metrics:
  - Recognition limits under certain regimes (i.e. Solvency and rating) – hybrid capital beyond these limits would compare to expensive (senior) debt
  - Strong increase in financial or leverage risks would lead to a significantly higher expected rate of return by equity investors

# Own funds calculation in a changing regulatory environment

## Comparing Solvency I to Solvency II



- ▶ SCR\* as one of two capital requirement ratios under Solvency II
- ▶ Risk-based calculation of required capital on the basis of underlying business under Solvency II; Solvency I static
- ▶ Solvency II: Tier 2 more relevant than Tier 1 due to its higher relative recognition

\* Solvency Capital Requirement

# Qualification requirements for hybrid capital

## Comparing Solvency I to Solvency II

	Solvency I	Solvency II	
	dated/undated <sup>1)</sup>	Tier 1 <sup>2)</sup>	Tier 2 <sup>2)</sup>
<b>Maturity</b>	<ul style="list-style-type: none"> <li>▶ 5 years minimum maturity</li> <li>▶ Perpetual</li> </ul>	<ul style="list-style-type: none"> <li>▶ Perpetual</li> <li>▶ Mandatory suspension in case of non-compliance with SCR</li> </ul>	<ul style="list-style-type: none"> <li>▶ 10 years minimum maturity</li> <li>▶ Mandatory suspension in case of non-compliance with SCR</li> </ul>
<b>Issuer Call</b>	<ul style="list-style-type: none"> <li>▶ Callable after 5 years</li> <li>▶ Predefined call options prior to 5 years from issuance allowed</li> </ul>	<ul style="list-style-type: none"> <li>▶ Callable after 5 years</li> <li>▶ No call options prior to 5 years from issuance</li> </ul>	<ul style="list-style-type: none"> <li>▶ Callable after 5 years</li> <li>▶ No call options prior to 5 years from issuance</li> </ul>
<b>Coupon</b>		<ul style="list-style-type: none"> <li>▶ No step-up or any other incentive to redeem</li> <li>▶ Non-cumulative</li> <li>▶ Mandatory coupon cancellation upon breach of SCR</li> <li>▶ Fully optional coupon deferral (no dividend pusher or stopper)</li> </ul>	<ul style="list-style-type: none"> <li>▶ Limited incentives to redeem not before year 10 after issuance</li> <li>▶ Step-up of 100 bps or 50% of the initial credit spread permitted after 10 years</li> <li>▶ Cumulative possible</li> <li>▶ Mandatory coupon deferral upon breach of SCR</li> </ul>
<b>Loss absorption</b>		<ul style="list-style-type: none"> <li>▶ Write-down or conversion into equity if SCR less than 75% once or less than 100% over a 3 month period</li> <li>▶ Write-up out of future profits subsequent to compliance with the SCR</li> </ul>	
<b>Ranking</b>	<ul style="list-style-type: none"> <li>▶ Subordinated</li> </ul>	<ul style="list-style-type: none"> <li>▶ Deeply subordinated</li> </ul>	<ul style="list-style-type: none"> <li>▶ Subordinated</li> </ul>

1) Source: §53c Versicherungsaufsichtsgesetz

2) Source: Technical Specifications for the Preparatory Phase by EIOPA dated 30 April 2014

Consultation Paper on the proposals for Guidelines on SII relating to Pillar 1 requirements by EIOPA dated 2 June 2014

# S&P's capital adequacy and hybrid limits

## Hybrid capital supports Financial Risk Profile

- ▶ Capital adequacy is one major factor of the company's Financial Risk Profile  
Redundancy/Deficiency =  $(TAC^{1}) + \text{regulatory qualified hybrids}$  - required capital
- ▶ Recognition of hybrid capital is limited depending on:
  - Qualification as own funds under the respective supervisory regulation
  - Equity content of the hybrid instrument:
    - 35% of  $TAC^{2)}$  for hybrid bonds with „high equity content“
    - 25% of  $TAC^{2)}$  for hybrid bonds with „intermediate equity content“
    - 0% of  $TAC^{2)}$  for hybrid bonds with „minimal equity content“
- ▶ All outstanding Hannover Re hybrids fulfil S&P's requirements for „intermediate equity content“ and help to maintain our capital adequacy at excellent levels:  
„We view Hannover Re's capital and earnings as extremely strong, based on our forecast of the group maintaining capital adequacy at the `AAA` level over 2014-2016, based on our capital model.“ (S&P research update as per June 30, 2014)

1) Total adjusted capital excl. hybrid bonds

2) Total adjusted capital incl. hybrid bonds



# Summary

## ▶ Financial ratios

- Hybrid instruments have a significant influence on financial metrics such as RoE and EPS
- But: a higher proportion of hybrid capital effects a higher financial or leverage risk

## ▶ Solvency II works as a game-changer in terms of

- Risk-based calculation of required capital
- Relative recognition of Tier 2 to Tier 1 capital
- Equity content of Tier 1 capital (loss absorption features)

## ▶ Rating

- Hannover Re's hybrid capital actively improves the Financial Risk Profile
- Instruments are tailored to be recognised as „intermediate equity content“

## ↳ Hybrid capital is an important part of Hannover Re's capitalisation due to its

- (partial) qualification as equity under regulatory and rating regimes while having a
- considerably lower cost of capital than equity and positive effects on financial key ratios

## How to read the run-off result

# The reporting standard provides full insight, but. . .

. . .without additional information is difficult to interpret

## Loss and loss adjustment expense reserve (net) - year in question & previous years plus payments made to date on the original reserve

in m. EUR	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
End of year	13,081.5	12,541.8	13,192.4	16,276.4	12,657.0	13,509.9	13,840.6	15,077.8	16,463.9	17,072.7	17,680.5
One year later	13,504.1	14,895.0	14,828.0	12,512.4	12,948.6	14,618.6	13,352.3	14,526.9	16,149.6	16,649.1	
Two years later	14,747.8	15,787.5	11,258.7	12,077.3	12,874.2	13,348.3	12,684.2	13,938.9	15,800.9		
Three years later	15,482.9	12,985.0	10,716.3	11,987.5	12,383.9	12,569.6	12,110.5	13,504.5			
Four years later	13,278.6	12,524.1	10,706.8	11,557.9	11,612.5	12,074.2	11,683.1				
Five years later	13,009.2	12,550.0	10,338.0	10,858.7	11,262.2	11,734.9					
Six years later	13,103.6	12,246.0	9,700.4	10,586.3	10,959.5						
Seven years later	12,834.7	11,717.2	9,501.3	10,311.1							
Eight years later	12,371.2	11,588.4	9,289.5								
Nine years later	12,282.9	11,435.1									
Ten years later	12,145.7										

## Change relative to previous year

Net run-off result	137.1	16.1	58.5	63.4	27.6	36.6	88.1	7	(85.7)	74.9	= 423.6
As % of original loss reserve	1.0	0.1	0.4	0.4	0.2	0.3	0.6	0.0	(0.5)	0.1	

- ▶ 2006 reflects deconsolidation of Praetorian
- ▶ Allocation of losses and premiums to occurrence year not always possible (estimates if cedant information not available). We prefer underwriting year.
- ▶ Partly original currency on reporting units

# "Neutral" positive run-off

## A very, very simplified example

### Ideal run-off of a stable segment with a 10-year tail

U/Y	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	
Initial reserves	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000	
Assumed initial BE mid point	900	900	900	900	900	900	900	900	900	900	900	
Assumed initial redundancy	100	100	100	100	100	100	100	100	100	100	100	
												<b>CY 2012</b>
2012 reserves	0	100	200	300	400	500	600	700	800	900	1,000	5,500
2012 BE mid point	0	90	180	270	360	450	540	630	720	810	900	4,950
2012 redundancy	0	10	20	30	40	50	60	70	80	90	100	550
2012 run-off result	10	10	10	10	10	10	10	10	10	10	0	100
Loss ratio 2012	100%											
Economic L/R	90%											
Contribution run-off	10%											
Contribution redundancy	-10%											

## "Normal" positive reserve development

- ▶ Due to Hannover Re's internal estimation system for individual proportional treaties as well as conservative IBNR based on ULRs per segment we expect a positive development in each quarter
- ▶ Detailed analysis and external actuarial assessment only once a year
  - ↳ educated estimates per quarter

---

**HR's quarterly results expected to include positive development of ~ EUR 50 m.**

## **Selected examples from 2013. . .**

**. . .and their impact on run-off result (R/O) and confidence level (CL)**

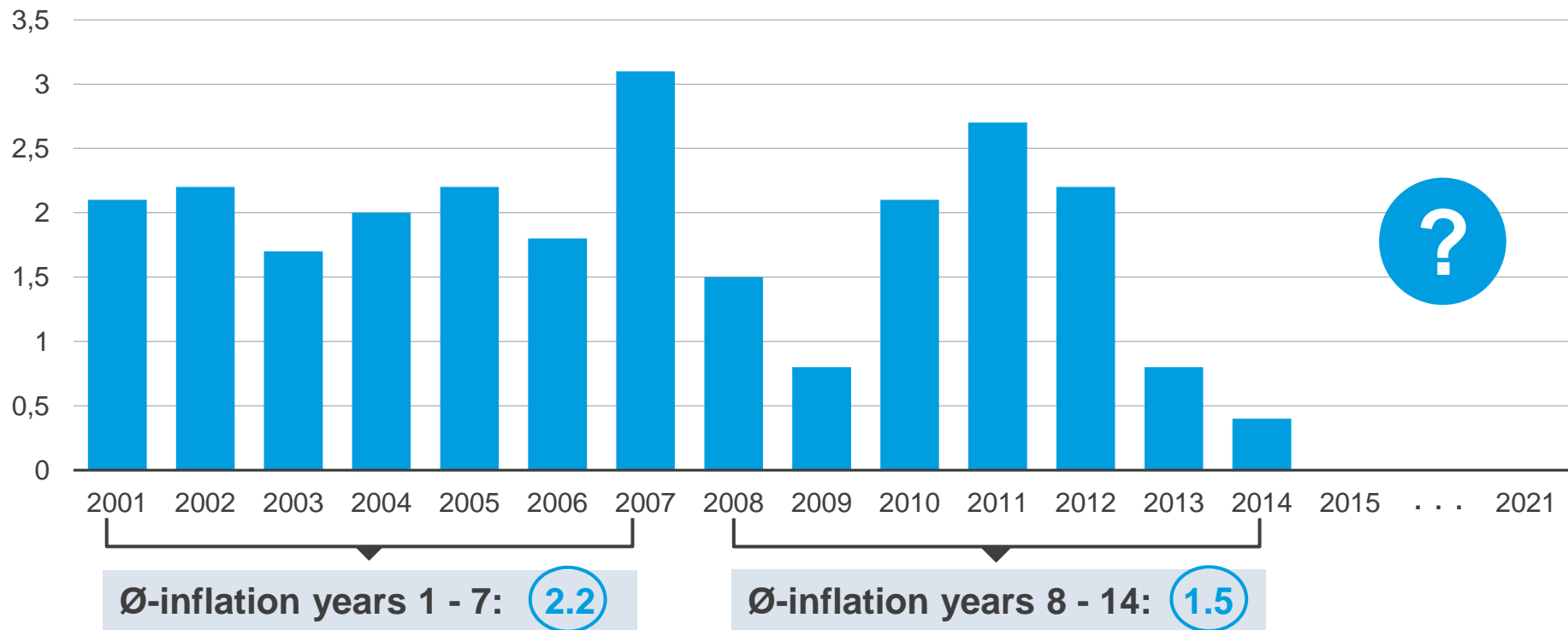
- ▶ **Negative R/O; neutral CL:** increase of individual treaty reserve
  - Credit/Surety (older UYs due to court decision claims in Spain)
  - Increased loss estimates from hailstorm “Andreas”
  - Deepwater Horizon
- ▶ **Positive R/O, neutral CL:** decrease of individual treaty reserve
  - Decreased loss estimates for floods in Thailand/EQ Japan
- ▶ **Neutral R/O, reduced CL:** negative reserve development covered by redundancy
  - Credit/Surety UYs 2009/10 – unexpected additional claims booked against IBNR
- ▶ **Neutral R/O, increased CL:** keep ULR up on old level despite sustainable positive loss experience
  - Hard market U/W years 2002 - 2006 in US Casualty
- ▶ **Negative R/O; increased CL:** increase of ULR within the best estimate range without sustainable loss experience
  - Facultative Casualty UYs 2009 - 2012

**Run-off results and CL development need to be considered to qualify a C/R**

# Impact of inflation on loss estimates

## EUR zone HICP inflation

year-on-year



- ▶ Low inflation experience in ULR projection supports positive run-off/redundancy level but leads to lower estimates for future years

# Disclaimer

This presentation does not address the investment objectives or financial situation of any particular person or legal entity. Investors should seek independent professional advice and perform their own analysis regarding the appropriateness of investing in any of our securities.

While Hannover Re has endeavoured to include in this presentation information it believes to be reliable, complete and up-to-date, the company does not make any representation or warranty, express or implied, as to the accuracy, completeness or updated status of such information.

Some of the statements in this presentation may be forward-looking statements or statements of future expectations based on currently available information. Such statements naturally are subject to risks and uncertainties. Factors such as the development of general economic conditions, future market conditions, unusual catastrophic loss events, changes in the capital markets and other circumstances may cause the actual events or results to be materially different from those anticipated by such statements.

This presentation serves information purposes only and does not constitute or form part of an offer or solicitation to acquire, subscribe to or dispose of, any of the securities of Hannover Re.

© Hannover Rück SE. All rights reserved.

Hannover Re is the registered service mark of Hannover Rück SE.