



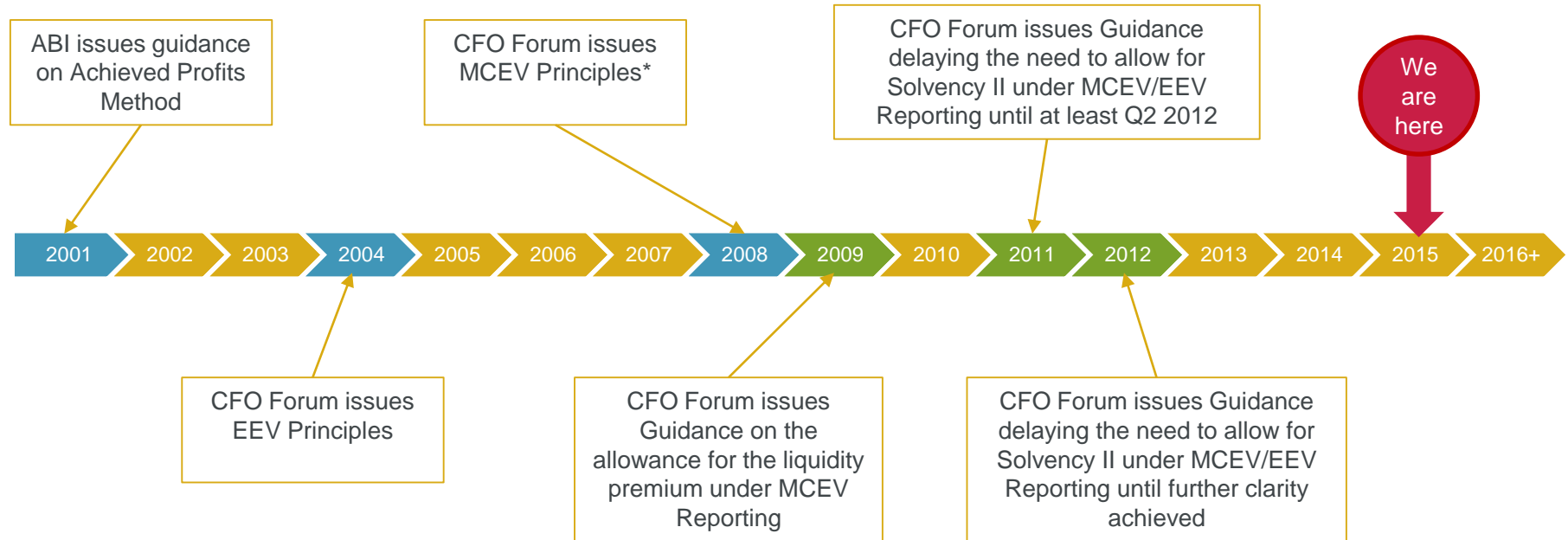
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# The Future for Embedded Value after Solvency II

Stuart Reynolds



# Brief History of Embedded Value Reporting



\*the European Insurance CFO Forum Market Consistent Embedded Value Principles, Copyright© Stichting CFO Forum Foundation 2008



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# Session Agenda

- Recent Developments in Embedded Value
- Comparison to Solvency II
- Summary and Conclusions





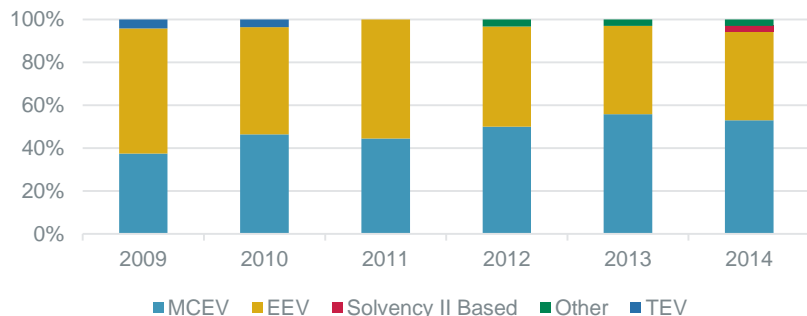
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# The Future for Embedded Value after Solvency II

Recent Developments in Embedded Value

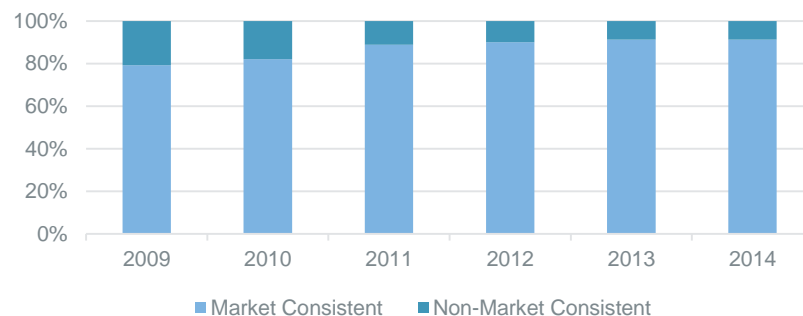
# EV Principles

Principles/Methodology from EV Disclosures



Source: Milliman analysis/public disclosures

Market Consistent/Non-Market Consistent Split



Source: Milliman analysis/public disclosures

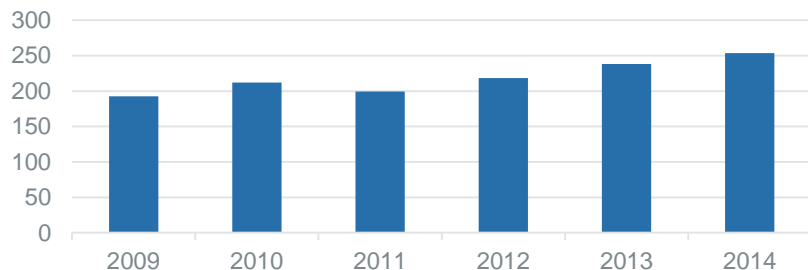
- Trend towards the use of MCEV Principles
- One firm disclosed the use of a Solvency II approach and processes for year-end 2014
- Market consistent approach generally used.



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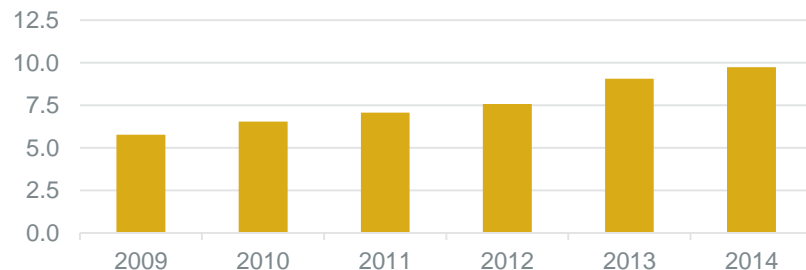
# Recent Embedded Value Results

Embedded Value for CFO Forum Members (£m)



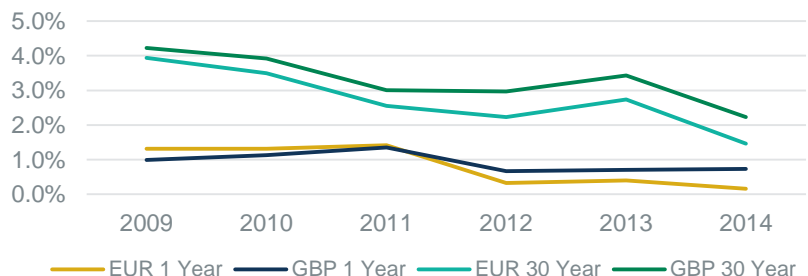
Source: Milliman analysis/public disclosures

Value of New Business for CFO Forum Members (£m)



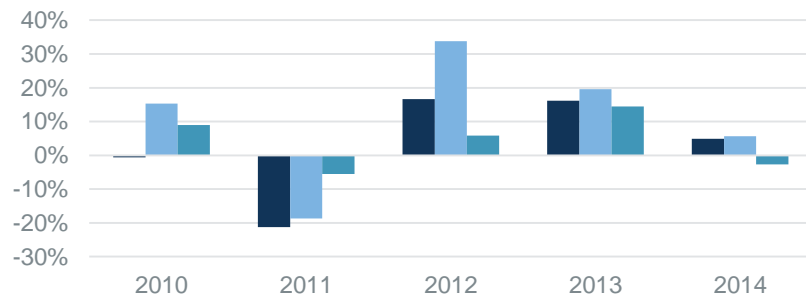
Source: Milliman analysis/public disclosures

GBP/EUR Swap Rates



Source: Bloomberg

Year-on-year change in Equity Indices

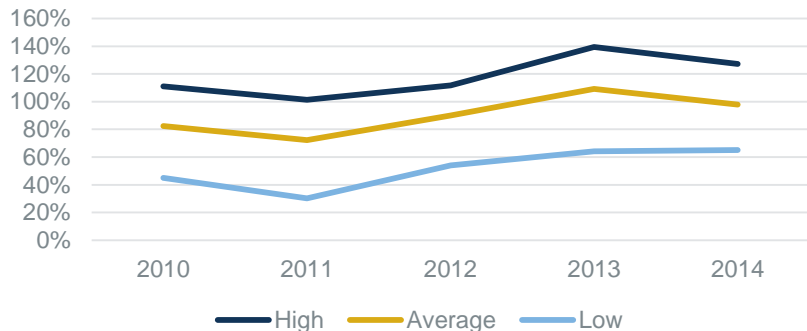


Source: Bloomberg

■ CAC 40 ■ DAX Index ■ FTSE 100

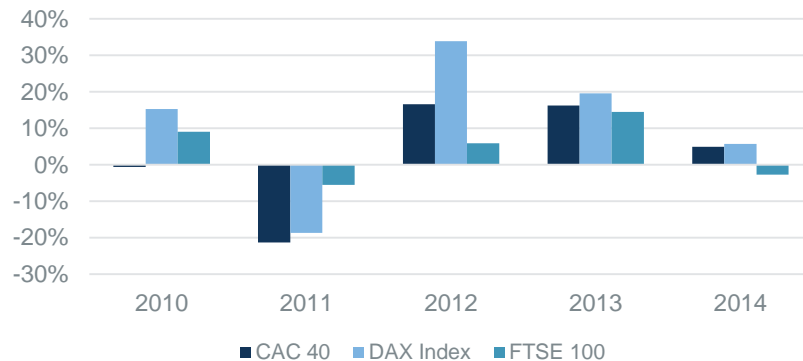
# Embedded Value versus Market Capitalisation

Market Capitalisation/Embedded Value for CFO Forum Members



Source: Milliman analysis/public disclosures

Year-on-year change in Equity Indices



Source: Bloomberg

- The ratio of market capitalisation to embedded value for CFO Forum members has been below 100% in recent years.
- Ratio seems to move in line with the movement in equity markets.



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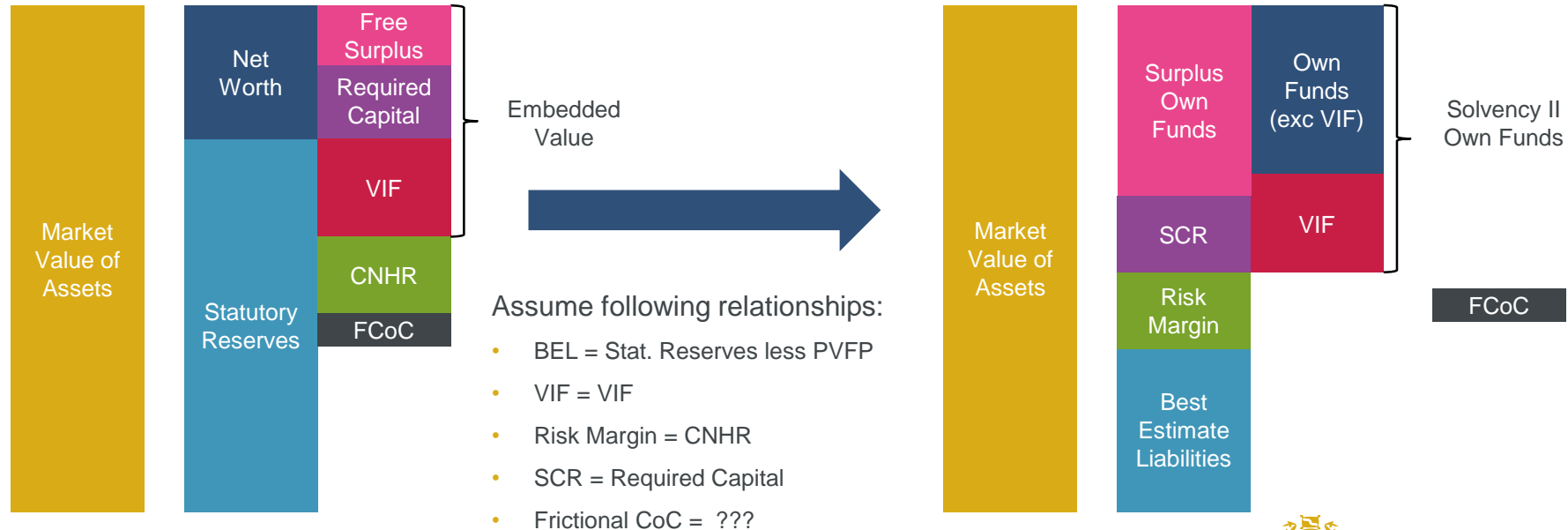
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# The Future for Embedded Value after Solvency II

## Comparison to Solvency II



# MCEV and Solvency II Equivalency?

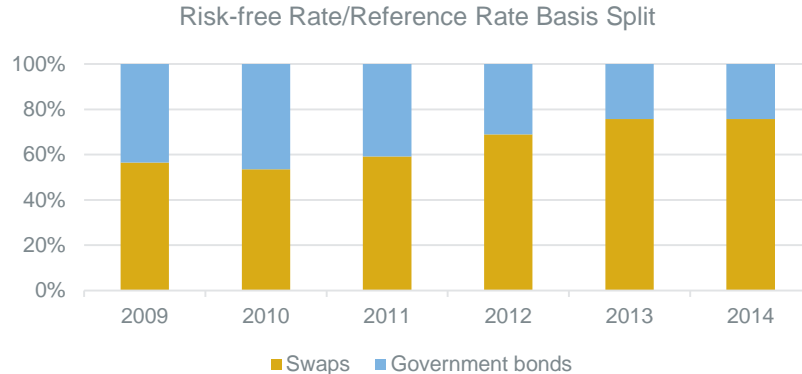


Relative size of components are for illustrative purposes only.



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# Risk-Free Rate/Reference Rate - Basis



Source: Milliman analysis/public disclosures

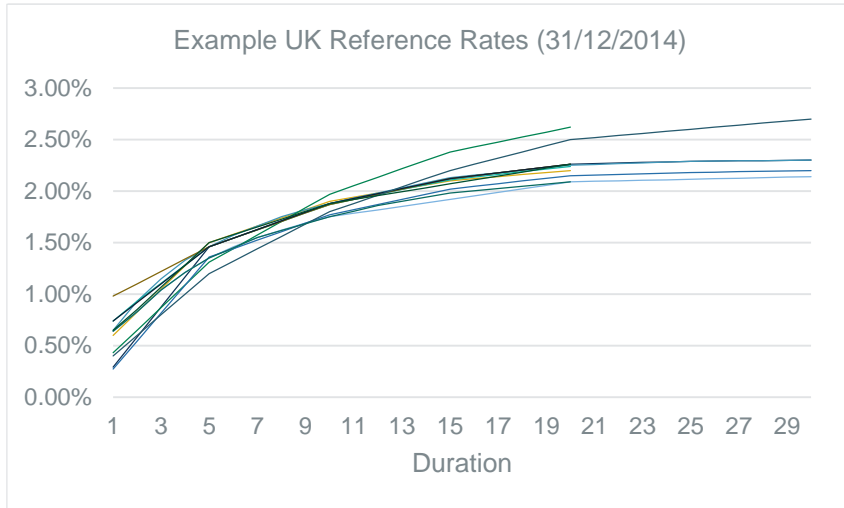
- Trend towards the use swaps
- In line with both MCEV Principles and the Solvency II methodology

- Some firms have aligned the SII risk-free curves to those published by EIOPA:
  - The credit risk adjustment.
  - Four firms stated that impact of moving to the Solvency II risk-free curves of between a reduction of 9% and a 12.5% increase.

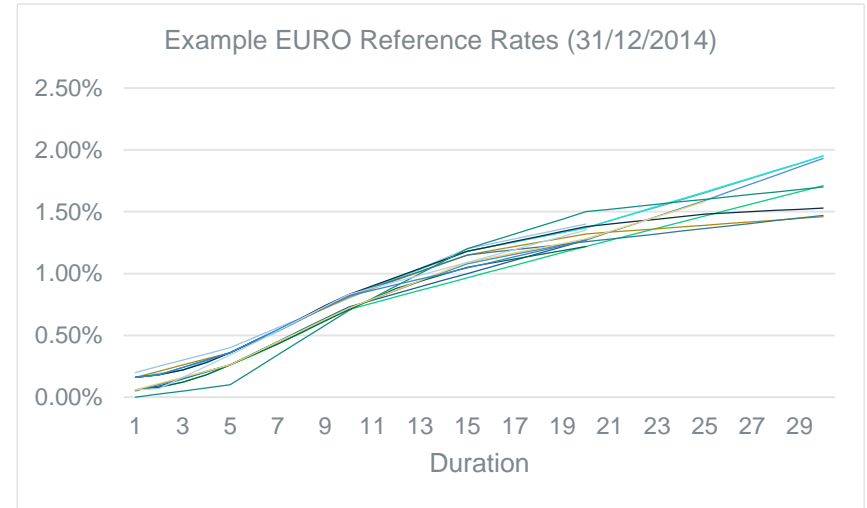


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# Risk-Free Rate – Example Reference Rates



Source: Milliman analysis/public disclosures

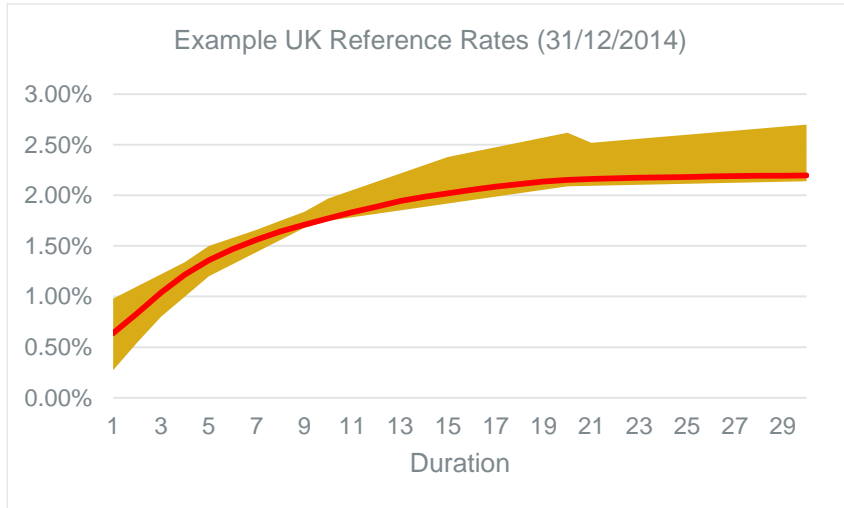


Source: Milliman analysis/public disclosures

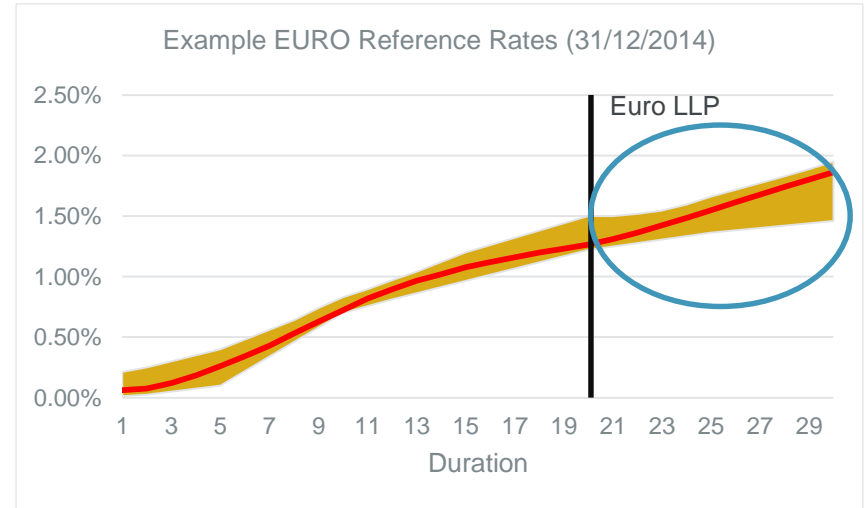


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# Risk-Free Rate – Example Reference Rates



Source: Milliman analysis/public disclosures/EIOPA



Source: Milliman analysis/public disclosures/EIOPA



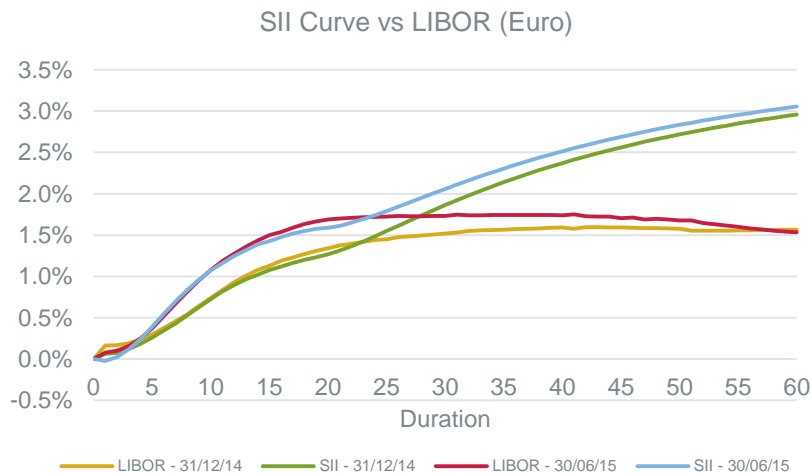
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# Risk-Free Rate - Extrapolation

- Required where available financial market data is not considered to be reliable.
- Examples given in the MCEV Principles:
  - Assume spot/forward rates remain level at longest term
  - Assume constant margin over government bond yield curve.
- Under Solvency II, the technique requires, amongst other things:
  - A last liquid point (LLP);
  - An ultimate forward rate (UFR); and,
  - The duration at which the UFR is reached.
- A number of firms have stated that the extrapolation methodology has moved in line with Solvency II.



# Risk-Free Rate – Extrapolation – in the news



Source: Bloomberg/EIOPA

- Some estimates indicate a reduction in the UFR is possible
  - The Dutch regulator has adjusted the UFR for local pension funds to 3.3%
  - Is there a “good time” for a reduction for insurers (if one is needed)?

- 4.2% UFR calibrated at a certain point in time.
- Low interest rate environment in Eurozone – is this UFR appropriate?
- Concerns that the UFR may be distorting insurers balance sheets
- Other see this as a “very long-term rate”



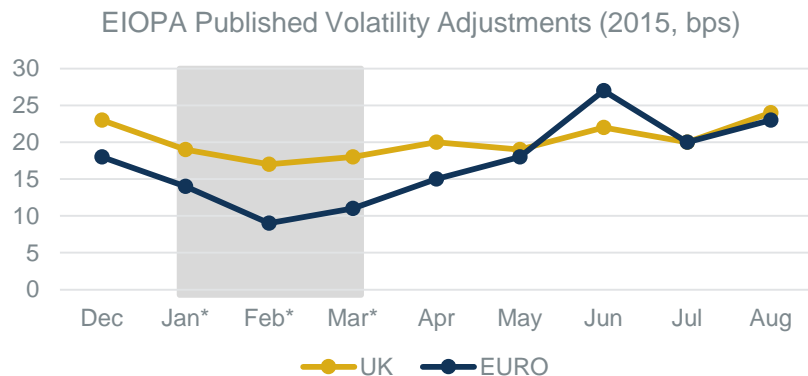
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# Risk-Free Rate – Matching Adjustment

- MCEV Principles state that for illiquid liabilities the reference rate should include a liquidity premium.
- Approx. 2/3rds of firms in the analysis apply a liquidity premium
- Most firms apply the “50/40” approach and apply to “buckets” of products.
- One firm disclosed the use of the Solvency II matching adjustment in part of business
- Some potential differences:
  - Calculation of the matching adjustment
  - Eligible liabilities and assets
- Is this just a delay until matching adjustment applications have been approved?
- Will firms only apply to approved business in EV reporting?



# Risk-Free Rate – Volatility Adjustment



Source: EIOPA

- Five firms in the analysis moved to use the VA in line with Solvency II
- Based on the disclosures, the VA was often significantly less than the previous methods used.
- Benefit of VA was cut for UK due to changes in the underlying reference portfolio
- Potential for divergence - not all countries require approval to use VA under Solvency II:
  - Will some firms include the allowance in EV reporting without SII approval?

\* As at 31 August 2015, EIOPA have not published revised VA for Jan 2015, Feb 2015 and Mar 2015.



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# Cost of Non-hedgeable Risks and the Risk Margin

- Both are needed to make allowance for risk not captured elsewhere.
- Risk Margin calculated using a cost-of-capital (CoC) methodology, CNHR should be disclosed against a CoC methodology.
- On the whole, the methodologies seem comparable but there are potential differences in the allowance for diversification, the projection of capital and the CoC rate applied.

CoC Rate	2011	2012	2013	2014
CoC≤1%	0	0	0	1
1%< CoC≤2%	3	2	3	2
2%< CoC≤3%	3	3	2	2
3%< CoC≤4%	5	5	6	6
4%< CoC≤5%	1	1	2	2
5%< CoC≤6%	0	1	0	0
6%< CoC≤7%	1	1	1	1

- CoC rate under SII is fixed at 6%
- From EV disclosures, CoC rate typically falls in the range 2%-4% with an average of around 3.5%

Source: Milliman analysis/public disclosures



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# Other Potential Differences

Item	Potential Differences
Contract Boundaries	<ul style="list-style-type: none"><li>• Slightly different interpretations between MCEV and Solvency II</li><li>• Solvency II definition has impacted some lines of business.</li><li>• Some firms have moved to a Solvency II definition.</li></ul>
Frictional Cost of Capital	<ul style="list-style-type: none"><li>• No explicit allowance in the Solvency II balance sheet</li><li>• Separate allowance from CNHR required by MCEV Principles</li></ul>
Transitional Measures	<ul style="list-style-type: none"><li>• Transitional deduction typically eases in the impact of Solvency II Should this be recognised in the Embedded Value?</li></ul>
Required Capital	<ul style="list-style-type: none"><li>• Should this reflect internal targets etc.?</li><li>• Use of Solvency II standard formula appropriate in MCEV?</li><li>• Allowance for management actions?</li></ul>



# Disclosures

## MCEV Principles

- **Clear description of covered business**
- **Assumptions:**
  - Methodology for setting assumptions
- **Methodology**
  - Each component of MCEV & VNB metrics
- **Analysis of MCEV including commentary**
  - In prescribed format
- **Reconciliation to IFRS**
- **Statement by Directors**
- **Sensitivities**
  - Prescribed (usually with additional ones, if appropriate)

## Solvency II: SFCR

- **Summary**
  - Clear, concise & understandable to policyholders
- **A. Business and Performance**
  - Business sold and investment/underwriting performance
- **B. System of Governance**
  - Details on RMS, ORSA and key functions
- **C. Risk Profile**
  - Risk exposure, mitigation, sensitivity by risk category
- **D. Valuation for Solvency Purposes**
  - Description of methods/bases used to value assets & TPs
- **E. Capital Management**
  - Details on Own Funds and SCR/MCR





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# The Future for Embedded Value after Solvency II

## Summary and Conclusions

# Summary and Conclusions: Global Developments

- Focus has been European region – EV has increasingly become an important metric globally, particularly in Asia.
- Such markets:
  - do not typically use market consistent techniques
  - are large in terms of EV and VNB
  - have the potential to be active in the M&A space in the future which may mean that its reporting practices are followed by others
  - may not have desire or capability to implement a market consistent framework.
- Therefore, embedded value may continue to be a key metric at a global level post-Solvency II implementation.
- These regions are, however, introducing or enhancing RBC frameworks.



# Summary and Conclusions

## EV reporting stops

- Already some trend towards Solvency II.
- No longer need to report two “market consistent values”
- Capitalise on recent developments/system changes for Solvency II.
- Extra evidence of “use test” for IM firms
- Strong SII disclosures (e.g. audited)

## EV Reporting continues

- Not all firms embraced market consistent or Solvency II methods/assumptions
- Identified a number of areas where EV and SII differ (SII is a regulatory regime)
- What about if SII approvals are not granted?
- Need to explain further changes to stakeholders
- IFRS changes on the horizon



# Questions

# Comments

Expressions of individual views by members of the Institute and Faculty of Actuaries and its staff are encouraged.

The views expressed in this presentation are those of the presenter.



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