


Institute  
and Faculty  
of Actuaries

## Getting your investments in order: what should AFH's consider?

Scott Eason, Barnett Waddingham



29 September 2014

---

---

---

---

---


---

---

---

### AFH duties

- Current – SUP 4.3.13 (paraphrased):
  - Advise the management on the capital needed to support the business
  - Monitor those risks that the insurer is exposed to with respect to meeting liabilities and holding enough capital, and inform the management if there are any material concerns
    - Need to be aware of the investment risks
- Solvency II – Article 48:
  - "Coordinate calculation of technical provisions"
  - "Contribute to the effective implementation of the risk-management system...in particular with respect to the risk modelling underlying the calculation of the capital requirements"
  - Investment governance is a key part of risk management
  - Capital role is unclear – need to "contribute"



29 September 2014 2

---

---

---

---

---


---

---

---

### Agenda

- Investment governance
- Matching Adjustment and Volatility Adjustment
- Investment issues under Solvency II capital calculations



29 September 2014 3

---

---

---

---

---

---

---

---

## Agenda

- Investment governance
- Matching Adjustment and Volatility Adjustment
- Investment issues under Solvency II capital calculations



29 September 2014

4

---

---

---

---

---

---

---

---

## Features of a strong governance framework



29 September 2014

5

---

---

---

---

---

---

---

---

## Questions that need to be answered satisfactorily

- Are your risk appetite and IMA consistent (and PPFM)?
- Is approval process quick enough?
- Is Board oversight maintained?
- Does IMA reflect wishes of management?
  - E.g. Outperformance targets
- Does MI provide clear indicators of performance and risk measures?



29 September 2014

6

---

---

---

---

---

---

---

---

## Agenda

- Investment governance
- Matching Adjustment and Volatility Adjustment
- Investment issues under Solvency II capital calculations



29 September 2014

7

---

---

---

---

---

---

---

---

## Calculation of technical provisions

Risk free rate given by EIOPA

Adjustments under LTGA:

- Matching Adjustment
- Volatility Adjustment
- Transitional Measures



29 September 2014

8

---

---

---

---

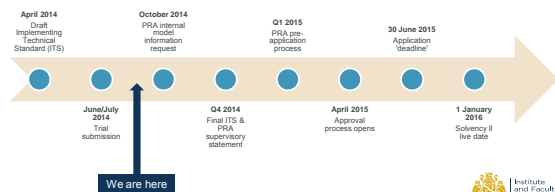
---

---

---

---

## Matching Adjustment – timeline



29 September 2014

9

---

---

---

---

---

---

---

---

### MA application contents

Evidence that assets and liabilities meet criteria	Line-by-line asset info (class, quality, duration, etc)	Description of how assets will be maintained if cashflows change	Evidence of adequate processes to manage A&L separately
Evidence that own funds have been adjusted to reflect reduced transferability	Evidence that SCR reflects reduced scope for risk diversification	"Liquidity plan"	Sensitivity analysis
Assess capital requirements without MA	Detailed explanation and demonstration of the calculation process used to determine the MA	Information about other applications made or expected for approval (internal models, ancillary own funds, SPVs, etc.)	

Institute and Faculty of Actuaries

10

---

---

---

---

---

---

---

---

### MA – question marks

Which business?	What assets?	How much assets?
When can I rebalance?	How often do I have to re-apply?	How to apply in internal model SCR calculation?

Institute and Faculty of Actuaries

29 September 2014 11

---

---

---

---

---

---

---

---

### What if can't meet criteria?

- Sell assets
- Re-allocate assets within group
- Reinsurance
  - Outside of SII jurisdiction?
  - Recoverables equal to annuity cashflows
- "Re-shape"
  - SPVs
  - Asset swaps
- Volatility adjustment
- Transitional measures

Ineligible asset

↓

Asset re-shaper

↓

Eligible asset

Institute and Faculty of Actuaries

12

---

---

---

---

---

---

---

---

## Volatility adjustment

- Details yet to be finalised
  - 'Reference portfolio'
  - Very difficult to hedge
- Approval process looks likely
  - HMT consultation
- PRA have six months to decide
- Fast-tracked if MA application fails?
  - Called for by ABI
  - Otherwise, have to wait (up to) another six months
- Combine with transitional measures?



29 September 2014

13



Institute  
and Faculty  
of Actuaries

## Agenda

- Investment governance
- Matching Adjustment and Volatility Adjustment
- Investment issues under Solvency II capital calculations



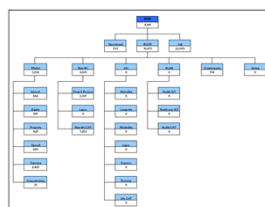
Institute  
and Faculty  
of Actuaries

29 September 2014

14

## Investment issues under SII capital calculations

- Asset data
  - Increased level of detail
- Assets to watch out for
- Treatment of hedging contracts



Source: Bernel Waddingham SCR Tool



Institute  
and Faculty  
of Actuaries

29 September 2014

15

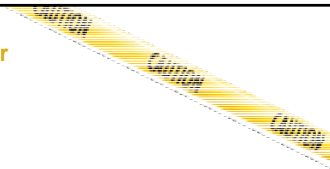
### Asset data under SII

- "Look through" approach
  - Line-by-line data
- Asset valuation
  - Reliability
  - Trading/pricing frequency
  - Mark-to-model issues
- Credit ratings
  - Appropriateness of external rating
  - Unrated can be penal



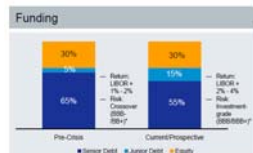
### Assets to watch out for

- "Type II" equity shock
  - Unlisted equities
  - Non-EEA/OECD equities
  - Hedge funds
  - Commodities
  - Alternatives
- Securitisations/re-securitisations
  - SCR of 100% in some cases
- Currency mismatches
  - Hedge significant positions
- Zero capital for EU sovereigns



### Long term credit capital

#### Infrastructure Debt



- Spread risk SCR for a 20y duration, BBB rated bond = 30%
- Assuming a 10% CoC and a 25% diversification benefit, cost of holding capital = 225bps
- Can see that liquidity premium is wiped out

## Hedging restrictions

- SCR may be reduced by taking into account any financial risk mitigation techniques (eg derivative strategies)
- The benefit allowed is the change in value of the derivative held under the SCR stresses
- Hedging instruments have to be eligible for standard formulae
  - Effective risk transfer to 3rd party
  - Not material basis risk (see box)
  - BBB minimum counterparty rating
- Can only get full benefit if maturity > 1y or part of a documented rolling program
- Undertakings should not reflect knowledge of their SCR shocks

### Focus on basis risk

- Overall principle: the protection must cover 90% of the changes in MM of the underlying
- When an index-based protection is used on a particular allocation, the basis risk between the index and the allocation may be beyond limits given in the actual specifications. However:
  - Specifications are rather vague at this stage on two aspects: measurement period and the scenario under which the correlation needs to be measured
  - We believe correlation should be appreciated in stressed periods, during which the correlation between underlyings increases and on which stress tests are usually calibrated.
  - One way to show the efficiency of a protection is to use a methodology similar to that chosen in the CEICPS Consultation Papers, where the Stl stress test calibrations were discussed. Under this, ECOPA would calculate historical Cornish Fisher VaR.
  - Moreover, companies have to consider that protections are fungible in the insurance company portfolio, so that the basis risk may not be appreciated at the level of a particular investment, but at the balance sheet level.



19

## Summary

- Ensure correct investment governance in place
- MAVVA affect technical provisions
  - MA application is significant undertaking
  - Start thinking about impact and asset issues now
- Be mindful of asset-side issues in capital calculations
  - Additional data requirements
  - Strategy may need to change, especially under standard formula



29 September 2014

20

## 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.



29 September 2014

21