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Hedging Practices in the UK Life Industry

Dynamic Hedging Working Party

28 October 2016

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Introduction

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Dynamic Hedging Working Party

- Examining different approaches to hedging in the Life industry
- Propose and recommend best practice
  - rationale for hedging (practicalities, value)
  - regulation (i.e. Solvency II and matching adjustment).
- Key objective is to 'Challenge the Norm'
  - to what extent can the industry benefit from increased usage of more sophisticated dynamic hedging techniques?

Survey taken to assess attitudes and typical practices across the industry in the UK on the cusp of Solvency II.

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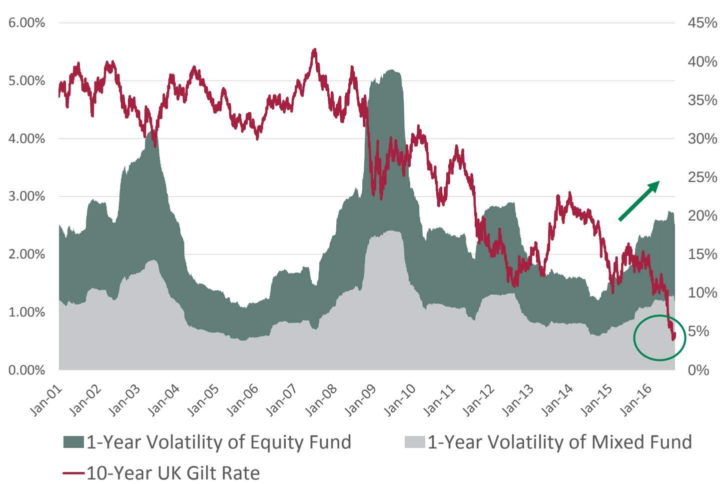
8-years on from Lehman



Record low rates

Volatility on the rise again

Much uncertainty on the horizon

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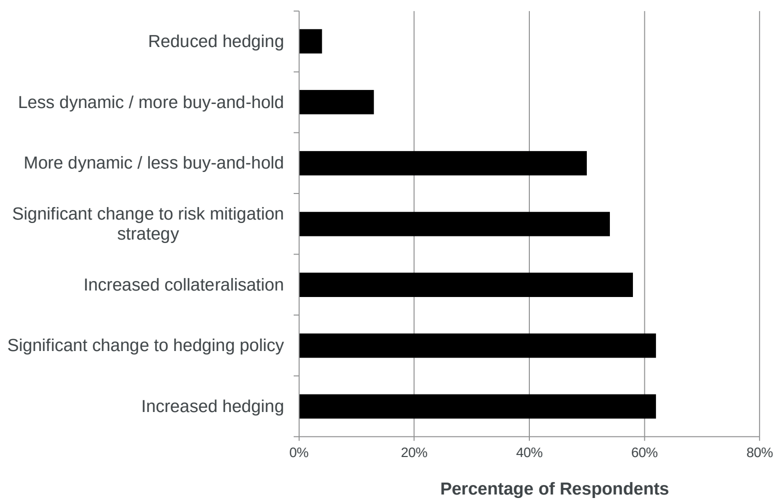
Since crisis: More hedging; more dynamic



Key finding: The industry has moved in the direction of more sophisticated hedging since the crisis

Regulatory push and pull factors:

- Solvency II
- EMIR/Basel III →
  encourages simple/plain vanilla
  discourages OTC/complex

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Since crisis: More hedging; more dynamic

LIVE POLLING:

What was the prime driver behind any increased sophistication in your company's hedging?

1) Solvency II
2) Lessons learned from 2008
3) Economic environment: low(er) rates, high volatility
4) EMIR / Basel III
5) Desire to manage/reduce risks and capital requirements
6) None of the above

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The Dynamic Hedging Survey

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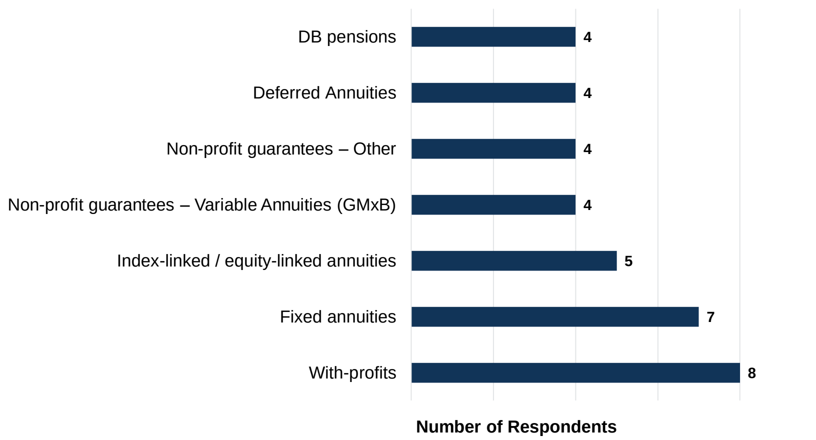
The Survey – why?

- Key objective is to ‘Challenge the Norm’
  - Before we can challenge the norm, what exactly is the norm?
  - Do some companies just do things differently?
  - What’s the influence of the crisis / regulation?

Participants: Size and Type



16 responses

A real mix of companies by product; by size; by reporting basis

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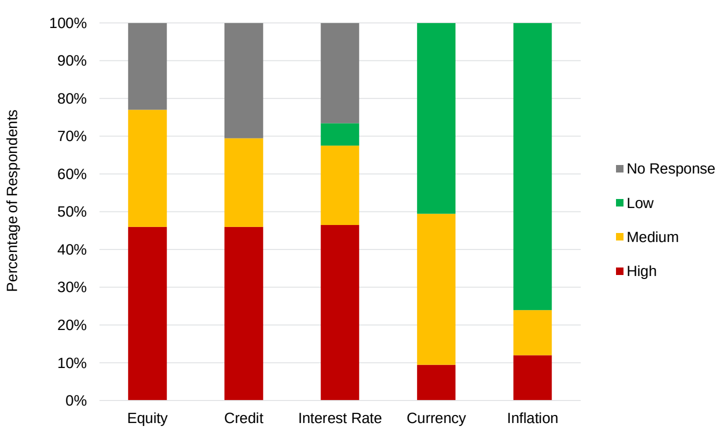
Participants: Key Risks



The 3 big risks:

Equity; Rates; Credit

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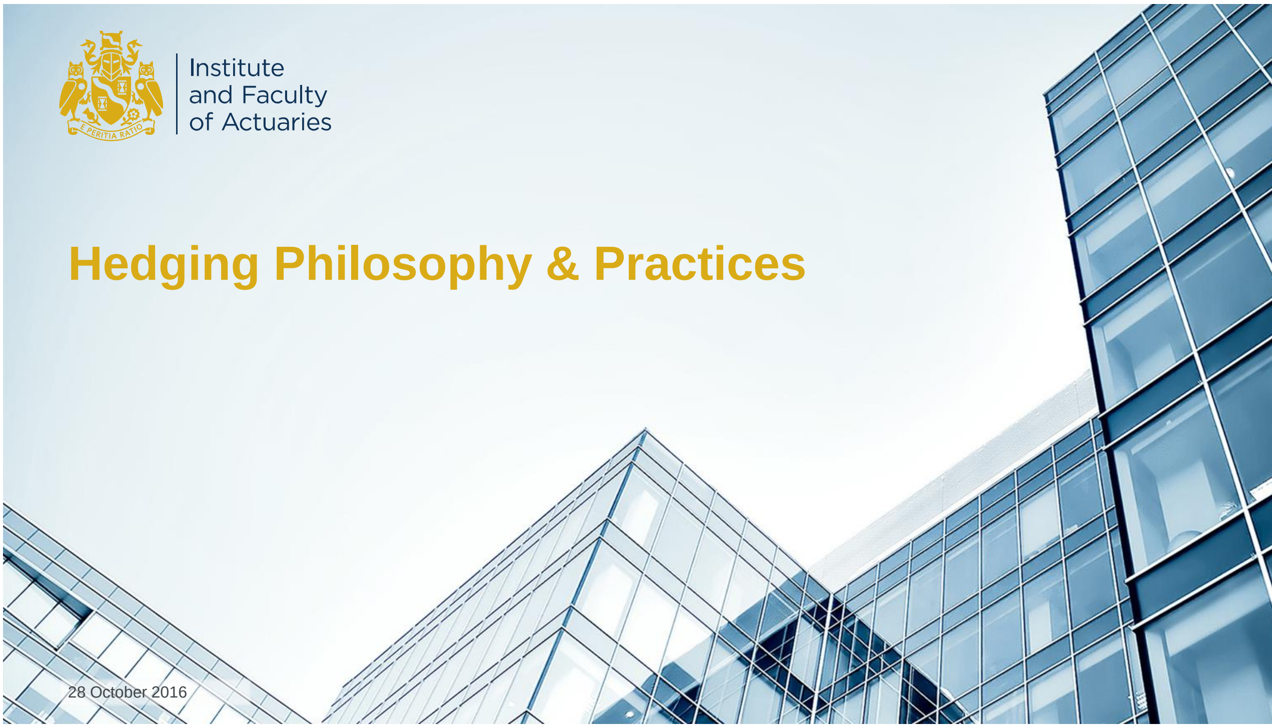

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Hedging Philosophy & Practices

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Hedging Philosophy

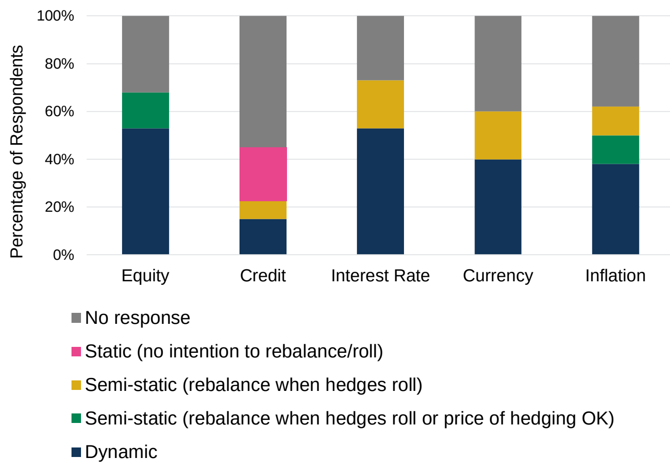
- Why do companies have different approaches?

  Different business model:
  - Different liabilities (Variable Annuity versus With Profits)
  - Different objectives (Economic vs Regulatory vs P&L hedging)
  - Different regulatory regime (US GAAP vs SII)
  - Different solvency positions (Healthy vs Dire)

  Other reasons
  - Historical/legacy reason (We just do things differently)
  - Person with loudest voice

  Where differences are cultural, will there be convergent evolution or will differences persist?

Hedging Approaches



- Hedging approaches largely dynamic – except credit risk.

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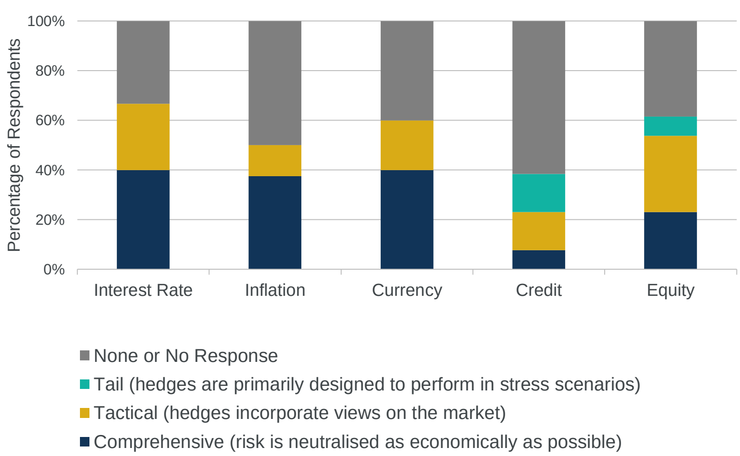
Hedging Philosophy



- **Rates, inflation & currency:** largely comprehensively hedged out, although a small degree of tactical approaches
- **Equity & credit:** much more deviation in approach – many willing to degree some risk and to 'play the market'

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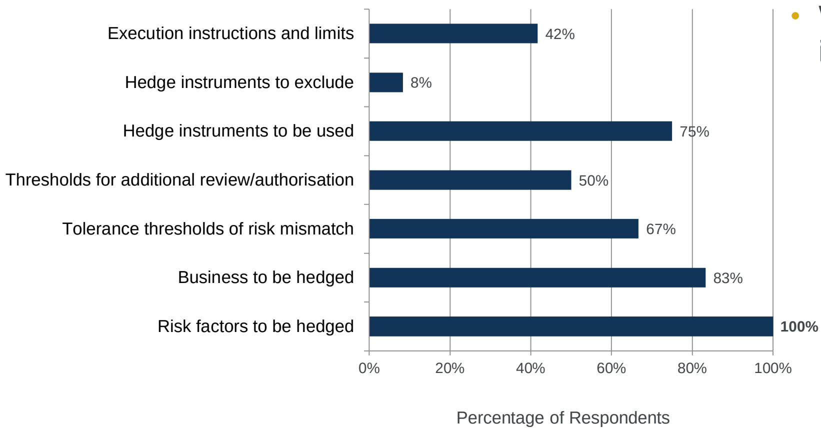
Hedging Governance: Documentation

Scope of hedging policy



- Work to be done to achieve industry best practice?

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Hedging Governance: Documentation

- Work to be done to achieve industry best practice?

Scope of hedging policy

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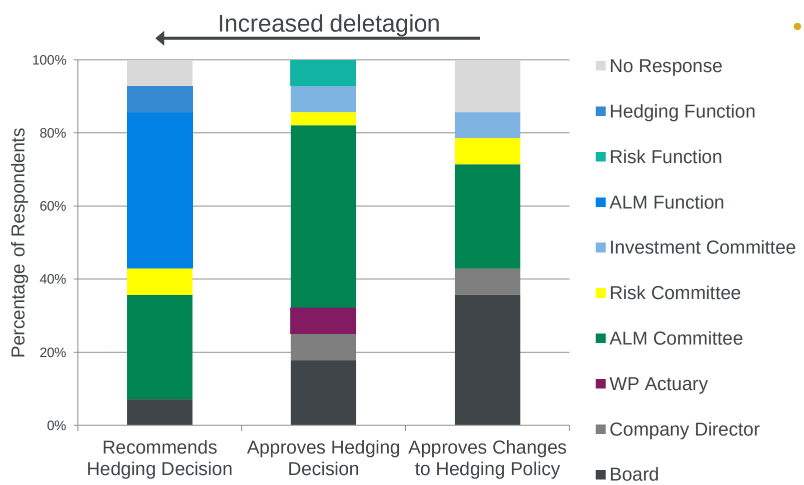
Hedging Governance: Decision Making



- Is there scope for further delegation?

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Hedging Governance: Decision Making

LIVE POLLING:

In your experience is the level of delegation of hedging decisions / approvals:

1) Too much - more governance is appropriate
2) About right
3) Too little - more could be pushed downwards

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Hedging Practices by Asset Class

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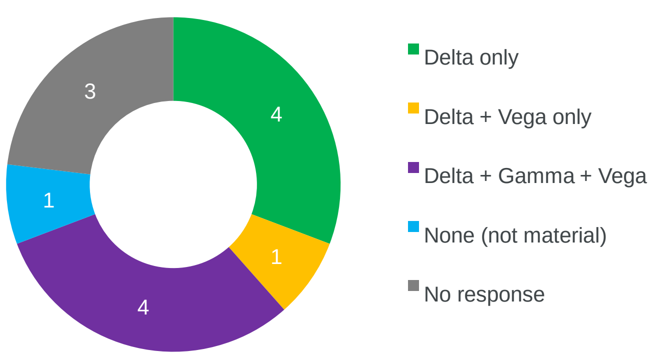
Equity Risk

- Survey conformed to our expectations
- Clear split by approach between VA providers and With Profits providers



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Interest Rate Risk

- Survey conducted when interest rates were still sliding …

  … surely rates couldn't get any lower?
- Is this hedged to death? Not quite – survey said that there is still a degree of tactical hedging

Product Type	Less frequently	Monthly	Weekly	Daily	More than daily	Total
Companies Selling Variable Annuity products	0	0	0	1	2	**3**
Companies Selling With Profits	3	2	0	1	0	**6**
Companies Selling Both VA and WP	0	0	0	1	0	**1**
Companies Selling Other Products	0	0	1	0	0	**1**
Total	**3**	**2**	**1**	**3**	**2**	**11**

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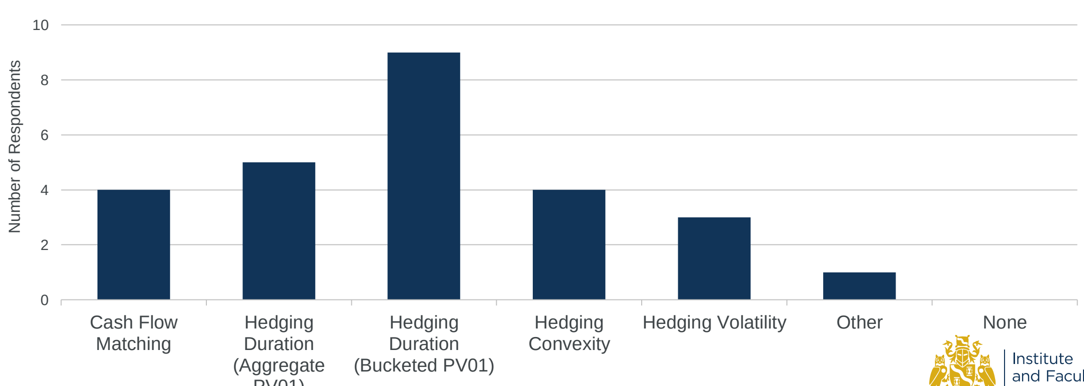
Interest Rate Risk

- A variety of approaches used but bucketed PV01 is the most common.
- Convexity not hedged most of the times: not fully understood?



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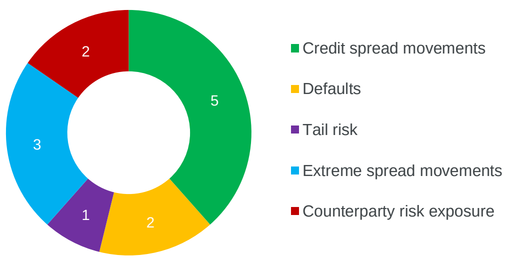
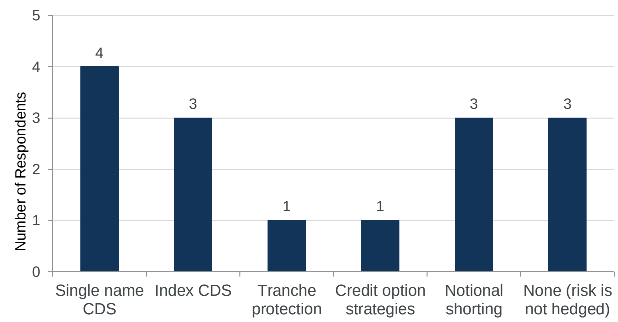
Credit Risk

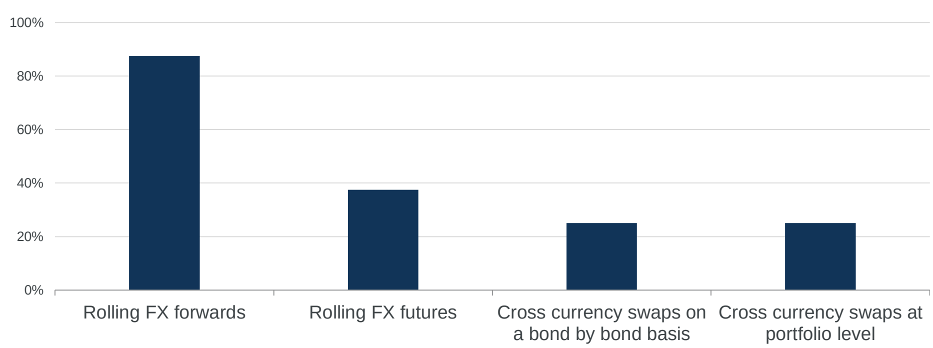
- Wide range of instruments
- Unexpected response from MA firms: CDS still used to hedge spread movements





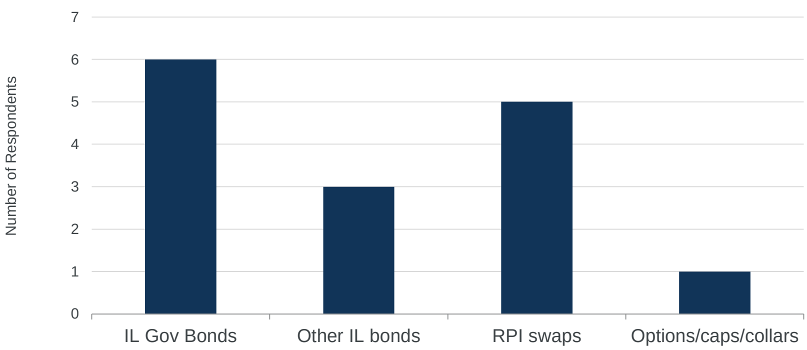
FX Risk

- All participants exposed to FX risk but size of the exposure is low
- FX forwards the most used instrument



Inflation Risk

- Hedging is pragmatic
- Basis risk between RPI and LPI



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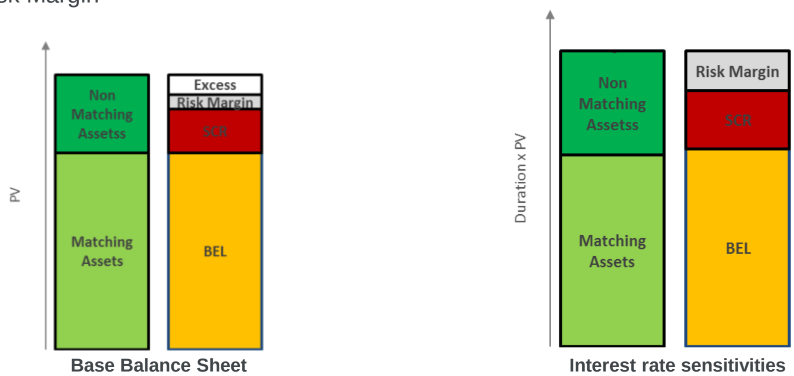
Hedging and Solvency II

Overview

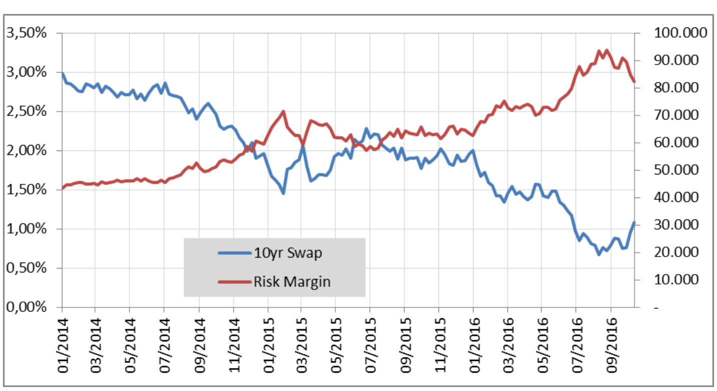
New structure of the SII balance sheet. Significant differences vs the IFRS balance sheet.

- Change in the sensitivities of the BEL (different discounting)
- Change in the sensitivity of the SCR
- Risk Margin



Risk Margin

- The Risk Margin is highly sensitive to interest rates.
- The increase will be partially offset by transitional measures with a few complications: periodically recalculated, does not cover new business.



EXAMPLE:

- Model SF annuity company
- BEL duration = 10yrs
- Initial RM duration = 28yrs
- Period: Jan 14 to Oct 16

- RM almost doubles
- RM duration increases by 3 years

Risk Margin

LIVE POLLING:

What will be the future for the Risk Margin?

1) Companies (and shareholders) will get used to it and absorb its volatility
2) Companies will hedge it
3) The regulator will propose a new methodology that will reduce its size
4) The regulator will propose a new methodology that will reduce its duration
5) As soon as we are out of the EU the RM is gone

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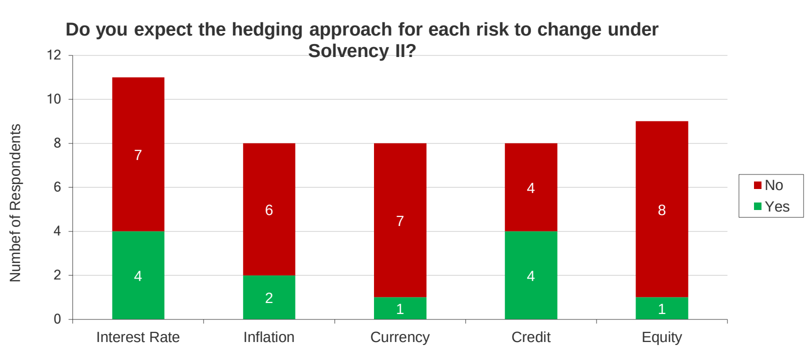
Impact of Solvency II

- The ICA+ regime has already prepared most of the companies for the SII world.
- Most predicted changes to IR and credit hedging.
- Different discounting? Risk Margin? MA?



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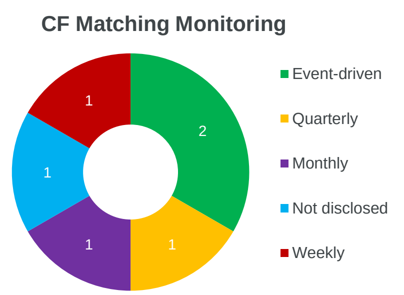
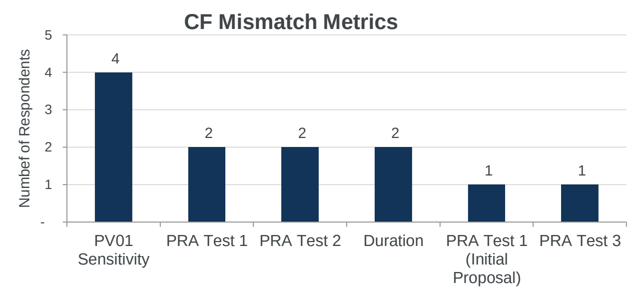
Matching Adjustment

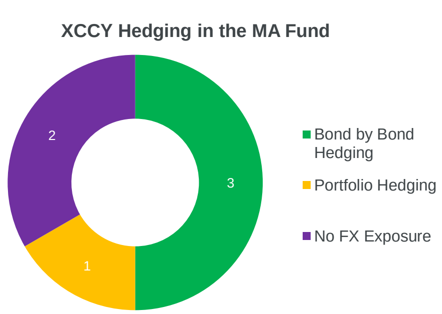
- 6 companies with MA portfolios.
- MA requirements: strict constrain on the managing of liquidity and duration.
- Participants with infrequent monitoring of the CF matching
- Additional metric: legacy from the previous regime?

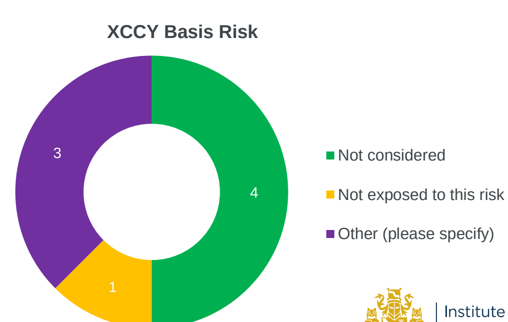




Open issues: FX

- Some technicalities have been addressed (XCCY swaps vs FX forwards).
- Cross currency basis not considered





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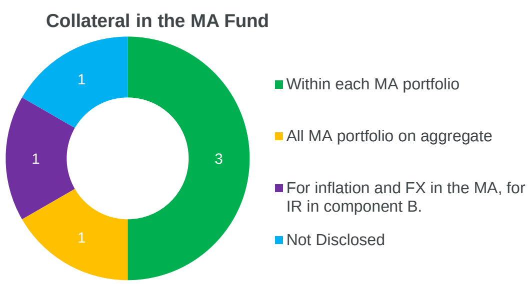
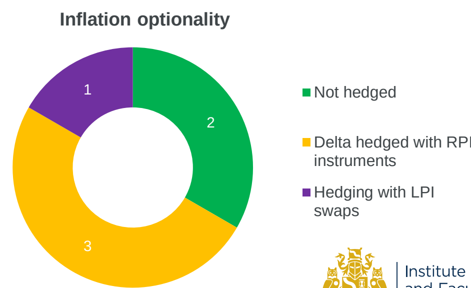
Open issues: Inflation, CRA, Collateral

- No common approach on collateral.
- CRA not hedged (yet).
- Inflation optionality hedged with linear instruments.





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Conclusions

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Conclusions

- Participants showing a wide range of approaches in some areas.
- Some companies have developed a comprehensive hedging approach, in particular VA firms.
- Space for improvement and learning across different areas and companies.

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Next Steps

- Focus on best practices in the hedging space for the Life industry.
- Possible focus on equity hedging and implied vs realised cost of the hedge
- We'd welcome your feedback…

LIVE POLLING:
What would be in your view the most relevant / compelling area of research for the Dynamic Hedging WP?

Ideas
- *Best practices in hedging*
- *Specific topics: equity risk and implied vs realised volatility*
- *Specific topics: hedging in the MA portfolio*

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Questions

Comments

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