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Writing Longevity Swaps for Smaller Schemes – Lessons Learnt

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BRAVE IN A WORLD OF RISK

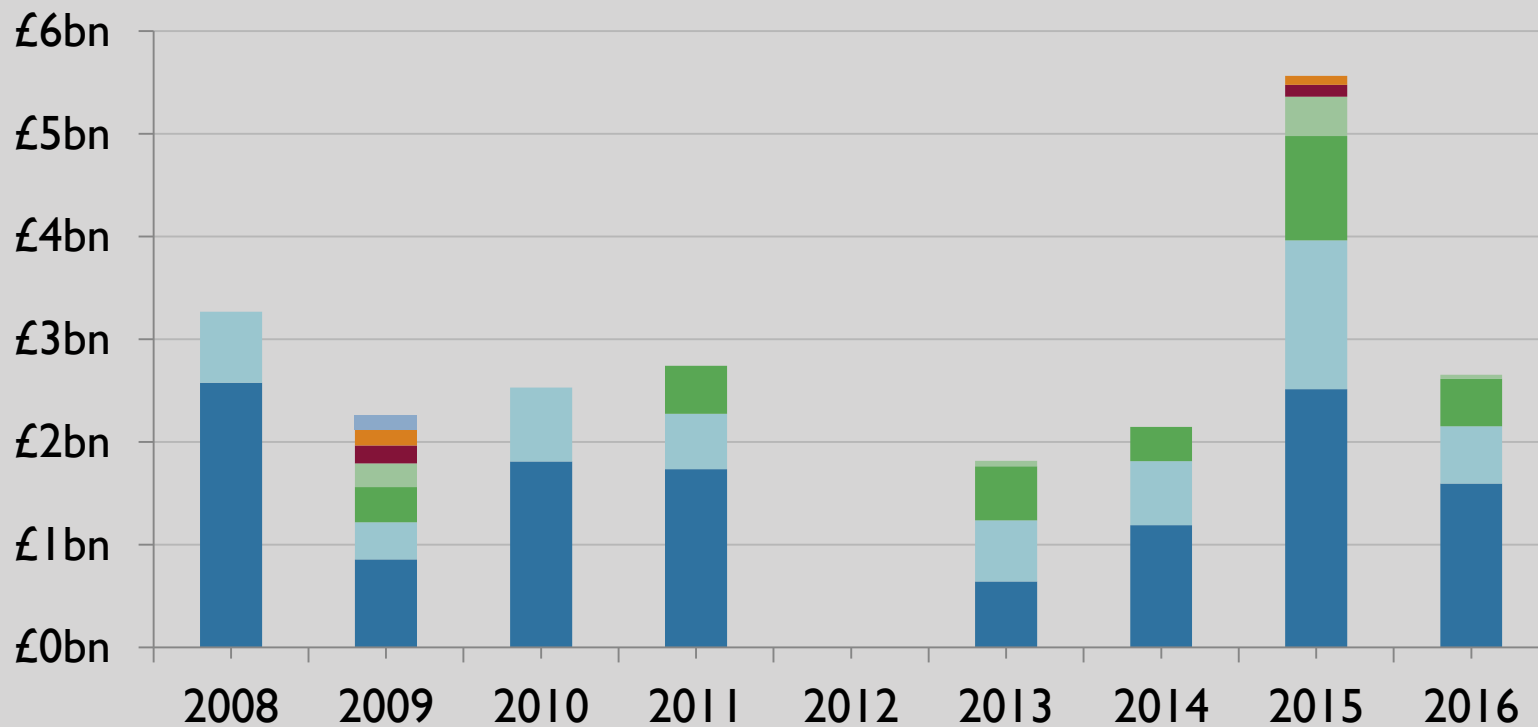


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PL RE LONGEVITY REINSURANCE



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Deal size and annual volumes both volatile



Opportunities

- Small schemes have volatility/idiosyncratic risk that reinsurers don't need to charge for
- Small schemes would like access to the same pricing as larger schemes
- Potential to provide a more regular flow of longevity business

Challenges

- Issues associated with pricing lots of potential small scheme quotations (and pricing without experience)
- Operational issues associated with implementing and managing small quotations
- Negotiating bespoke contracts for each small scheme treaty
- Longevity swaps seen as a barrier to further de-risking

SMALL SCHEME CHALLENGES - PRICING

Challenge

- Issues associated with pricing lots of potential small scheme quotations

EBC filtering

Standardised Transaction Pack

Streamlined pricing process

Transaction Model

Pre-answered Q&A

Demographic info

SMALL SCHEME CHALLENGES - PRICING (2)

Challenge

- Pricing without experience

Assumption	2007 view	2017 view
Base mortality	Insured annuity tables	Socio-economic tables based on credible data sets
Improvements	Cohort improvements	Individual approach or CMI model
Demographics	Standard tables based on ONS data	Member Communication or Tracing exercise

SMALL SCHEME CHALLENGES - IMPLEMENTATION AND MANAGEMENT



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Challenge

- Operational issues associated with implementing and managing small quotations

Mitigation approach

- Single common bordereaux across all small schemes with one cedant
- Standardised internal model implemented on one simplified mortality basis
- Implement several small schemes together
- Align processes and annual events
- MI monitoring to understand risk being written

SMALL SCHEME CHALLENGES - TREATY NEGOTIATION



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Challenge

- Negotiating bespoke contracts for each small scheme treaty

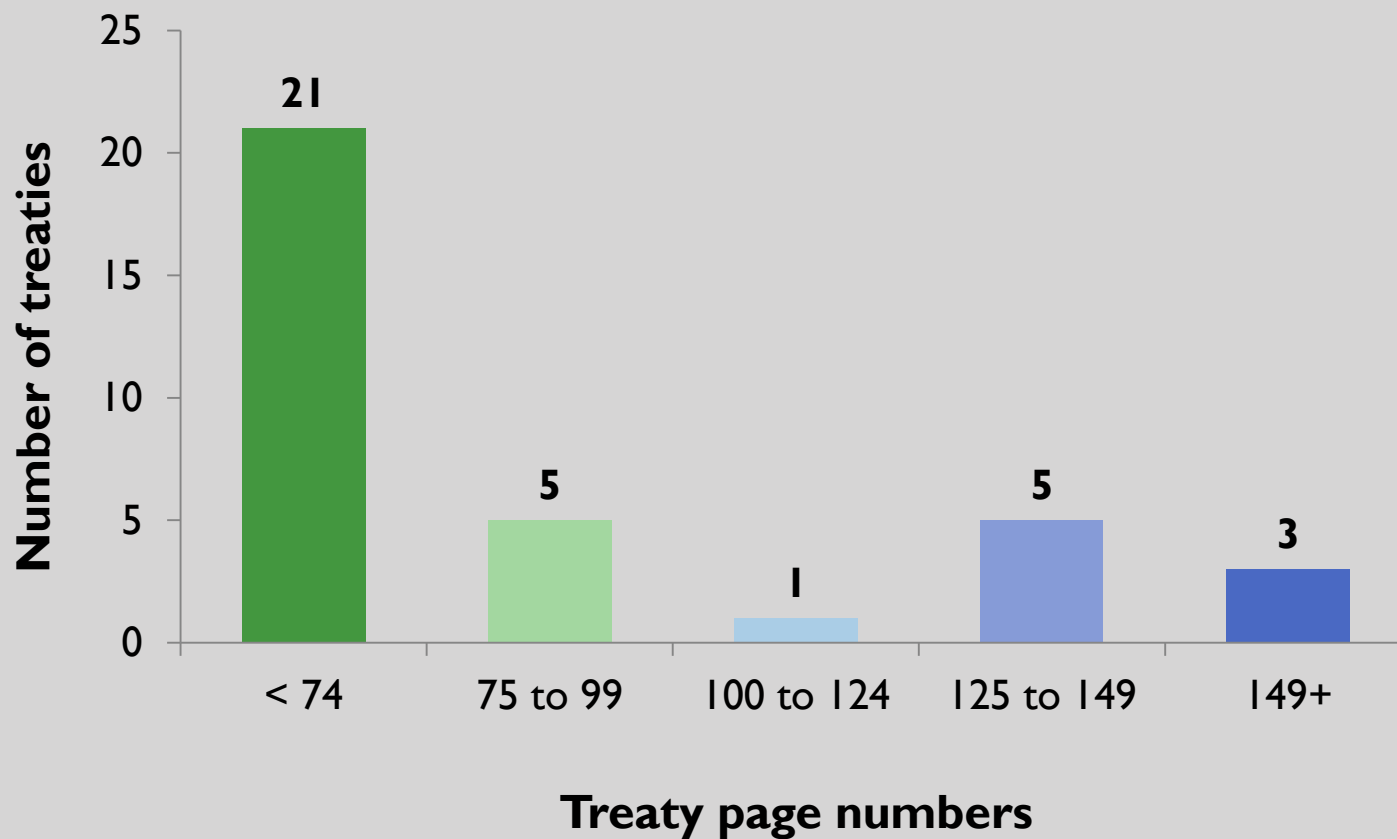
Mitigation approach

- Standardised contract with minimal changes
- Focus on key commercial points
- Emphasis on clarity and brevity

LONGEVITY SWAPS CAN BE SIMPLE



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SMALL SCHEME CHALLENGES

- NOVATION



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- Important for small schemes – a longevity swap may be a step towards buy-in / buy-out
- Key focus in recent longevity swaps - increasing inclusion of process to facilitate novation
- However, not possible to guarantee a future novation as there are potential issues to overcome:
 - Credit rating or security of replacement insurer
 - Counterparty exposure of insurer to reinsurer or vice-versa
- Contract simplicity makes novation easier



- Wide scope of data errors introduces up-front negotiation requirements and future transaction uncertainty
- Simplified data error process
 - No need for re-pricing
 - Demographic errors can be mechanistically adjusted
- Use due diligence to check for systematic problems with data
- PL Re data error experience
 - Absolute number and amount has been small
 - Net change has been trivial

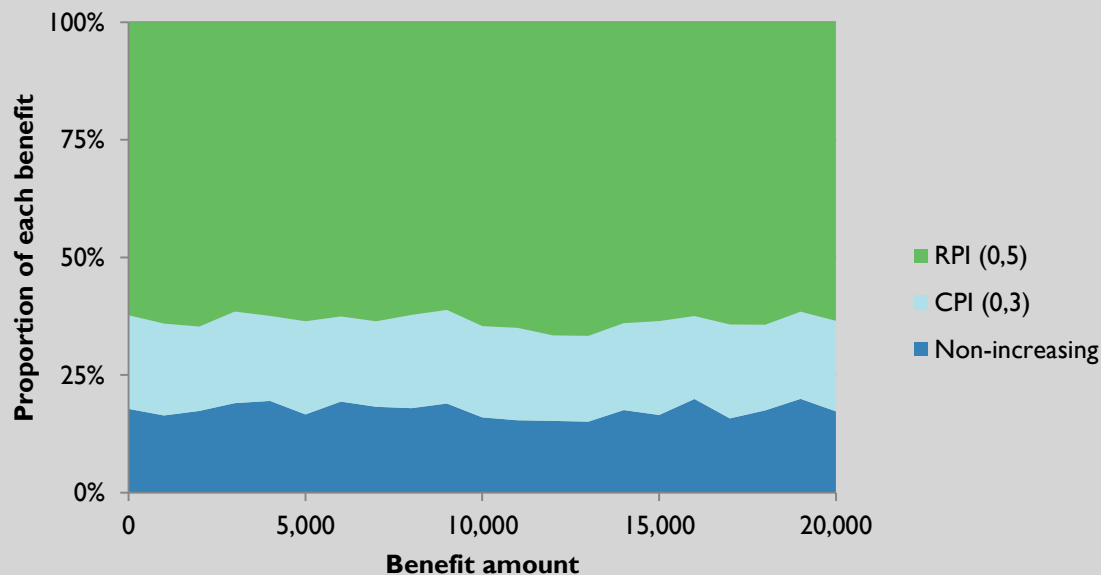
BENEFIT SIMPLIFICATION - HEDGE EFFECTIVENESS



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To what extent can we simplify benefits without diminishing the hedge effectiveness of a longevity swap?

- Consider a small scheme of 300 members with different benefit structures – attempt to simplify the benefits and judge effectiveness

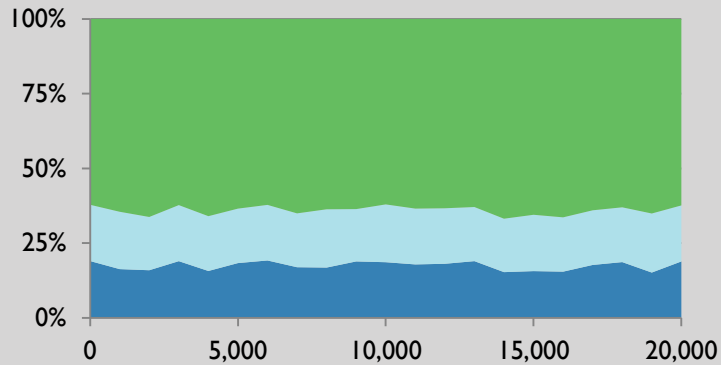


BENEFIT SIMPLIFICATION - HEDGE EFFECTIVENESS (2)

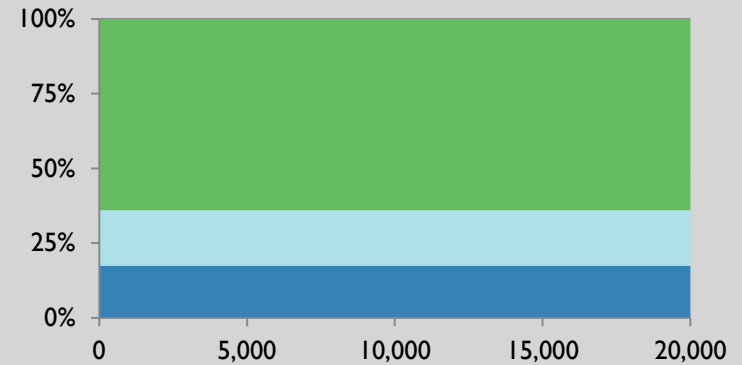


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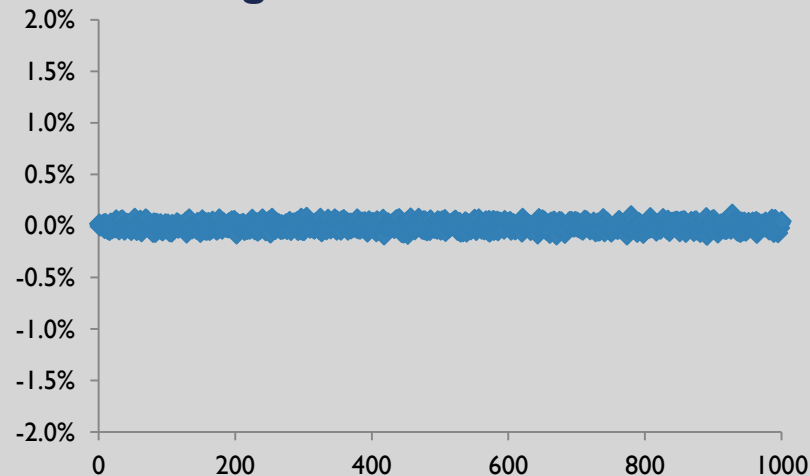
Underlying Scheme Benefits



Simplified Scheme Benefits



Hedge Effectiveness Error

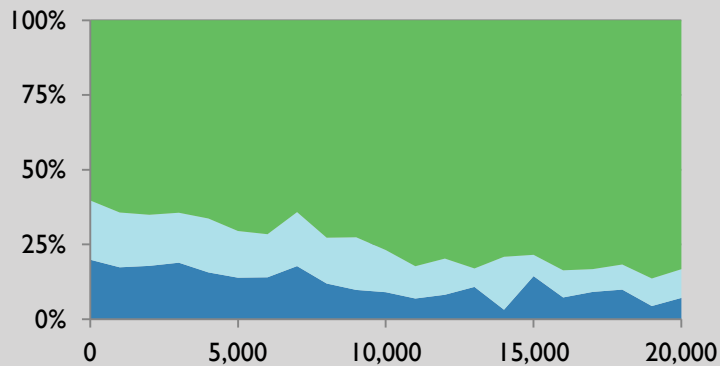


BENEFIT SIMPLIFICATION - HEDGE EFFECTIVENESS (3)

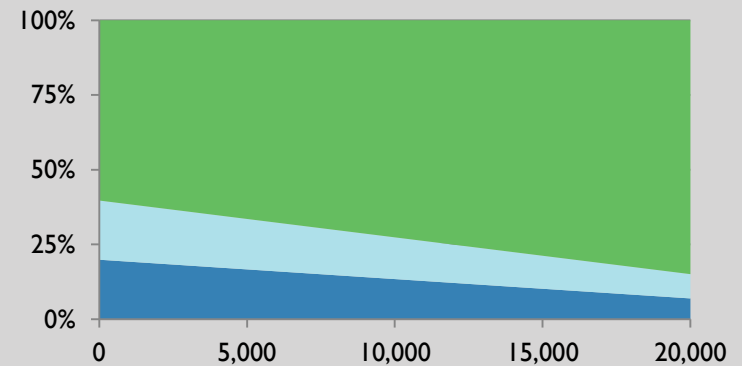


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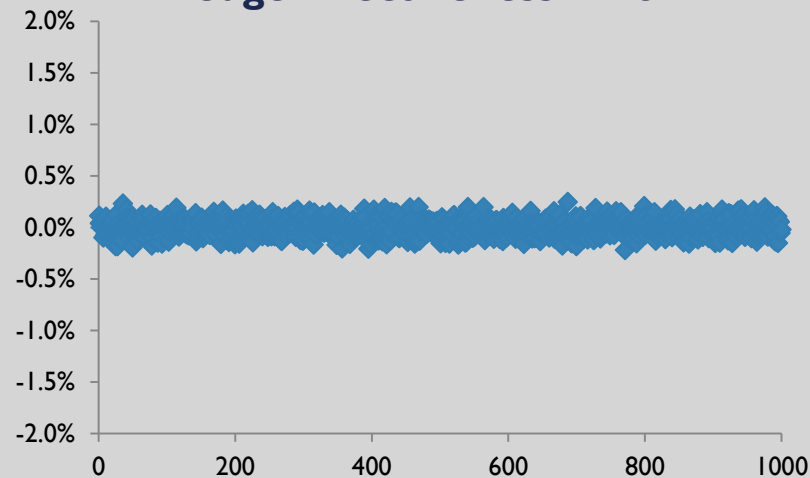
Underlying Scheme Benefits



Simplified Scheme Benefits



Hedge Effectiveness Error



SUMMARY AND FURTHER DEVELOPMENTS



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Further Developments

- Growing interest in smaller scheme longevity swaps internationally – need for alternative socio-economic model in US and Ireland?

Summary

- Challenges still to overcome to make small scheme longevity work for reinsurance companies – simplicity and repeatability is key
- Initial focus was on adapting large scheme swaps to make them work for small schemes – what lessons can we take from small schemes back to large schemes?
- Interest from larger schemes in streamlined processes

FOR MORE INFORMATION PLEASE CONTACT:

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