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Insurer's hidden risk from reinsurance recaptures – The perspective of UK annuity writers

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Agenda

- Introduction and Background
- Working Party Objectives
- Methodology
- Survey Participants – Pension Risk Transfer writers
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- Materiality of reinsurance recapture risk
- Top reinsurance destinations for annuity risk transfers
- Understanding reinsurance recapture risk exposure
- Non-capital protections to manage reinsurance recapture risk
- Conclusions

Introduction and Background

- Writing annuities – capital intensive under Solvency II
    - Risk Margin: large and sensitive to movements in rates
    - SCR: longevity risk capital calibrations

- Increased incentives for UK insurers to enter into risk transfer arrangements.
    - Introduces new risks to insurers' balance sheets that are not obvious ('hidden')
        - Micro risks (balance sheet impact)
        - Macro risks (limited substitutability)
    - Materiality has increased focus from a range of stakeholders incl. regulators

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Working Party Objectives

- Increase reinsurance recapture risk awareness
  - Low probability & high impact
  - Capital & collateral is helpful – but unlikely to be sufficient
  - Suite of other protections likely to be needed

- Support market practitioners
  - Increase publicly available information repository
  - Contribute to the evolution & development of industry best practice

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Methodology

- **(7) Themes**: used as the lens to assess the topic through

- **(16) Hypotheses***: used to frame the problem & focus questions

- **(58) Questions**: mapped to all themes & hypotheses

Theme	Hypothesis	Question
Current reinsurance counterparty exposures	n/a	Q1-7
Longevity & Quota share recapture provisions	n/a	Q8-10
MI, approach to setting risk limits & monitoring reinsurane exposures	H0: Counterparty risk exposures / recapture risks are monitored and reported on a regular basis	Q11,14-16
	H0: The board / ExCo are aware of the level of reinsurance counterparty risk that the insurer is exposed	Q12-13
	H0: The reinsurance counterparty risk appetite and risk limits are clearly defined	Q17-20
	H0: The setting of reinsurance counterparty risk limits include areas of conservatism in the design / calibration	Q21-23
Collateral exposures and other protections	H0: Collateral is effectively managed and monitored	Q24-30
	H0: Reinsurance contracts include protection provisions if the reinsurer breaches early warning signs	Q31
	H0: Management actions are available to manage reinsurance recapture risks as the risk approaches / breaches early warning signals (e.g. rating deteriorations) and risk limits	Q32-33
Capital Modelling	H0: The ongoing compliance of the internal model including reinsurance recapture / counterparty risk is (re)confirmed by the relevant board / ExCo on a frequent basis	Q34-37
	H0: The modelling of reinsurance counterparty risk includes areas of conservatism within the model	Q38-41
	H0: There is no difference in approach &/or methodology between an insurer's SCR and ORSA capital model	Q42
ORSA (including stress & scenario testing) and decision making	H0: The balance sheet resilience to current and projected reinsurance exposures is assessed in a range of stresses and scenarios consistent with the ORSA / disclosed SFCR sensitivities	Q43-44, 46, 49, 50-52
	H0: Counterparty risk exposures measure the impact on the insurer's balance sheet if a single reinsurer defaults / a combination of reinsurer default	Q45
	H0: The management actions that are available in scenarios consistent with the ORSA and stressed reinsurance markets (following a downgrade / default of a material reinsurer) are clearly set out	Q47-48
Reinsurance default or recapture events within the context of recovery & resolution planning	H0: The failure of a reinsurance counterparty/ies has been explicitly considered, e.g. in scenarios that could threaten an insurer's status as a 'going concern' / reverse stress test	Q53-54
	H0: The management actions that are available at a time where reinsurance markets are stressed to rectify an SCR breach within 6 months are clearly set out	Q55-56
	H0: The management actions that are available at a time where reinsurance markets are stressed to rectify an MCR breach within 3 months are clearly set out	Q57-58

*Hypotheses were not used to form absolute views on survey participants' responses

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Survey Participants – Pension Risk Transfer writers

- Total number of respondents: 6 (5 of the 8 currently active PRT writers were represented)
- Total value of transactions conducted by survey respondents: £110bn or c.75% of the UK market (between 2009 and H1 2020)
- Total number of transactions completed by survey respondents: 1,670 or c.95% of the UK market
- Market share of active PRT writers survey respondents: £22bn or c.55% of the UK market (between H2 2019 and H1 2020)
- Full quoting range represented < £50m to > £2bn including deferred lives
- **Maintaining confidentiality of individual responses was prioritised throughout the data gathering & analysis period**

Reinsurance Recapture Risk

- **Reinsurance recapture risk** describes the point in time when previously reinsured risk is returned to the ceding entity's regulatory balance sheet for recognition purposes. This could occur if:
  - A recapture provision agreed between the ceding entity and the reinsurer is triggered
  - The ceding entity's reinsurance arrangement was deemed, e.g. by the regulator, to no longer meet qualifying criteria as risk mitigation
- The materiality of this risk has increased as insurers have increased their use of reinsurance to support their bulk and individual annuity propositions.

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POLL (1/2)

We asked survey respondents to indicate the loss of solvency coverage that would be incurred if all business to their most material reinsurance counterparty was recaptured.

What range was most frequently selected?

A. 30-40%

B. 40-50%

C. 50-60%

D. 60-70%

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Materiality of Reinsurance Recapture Risk

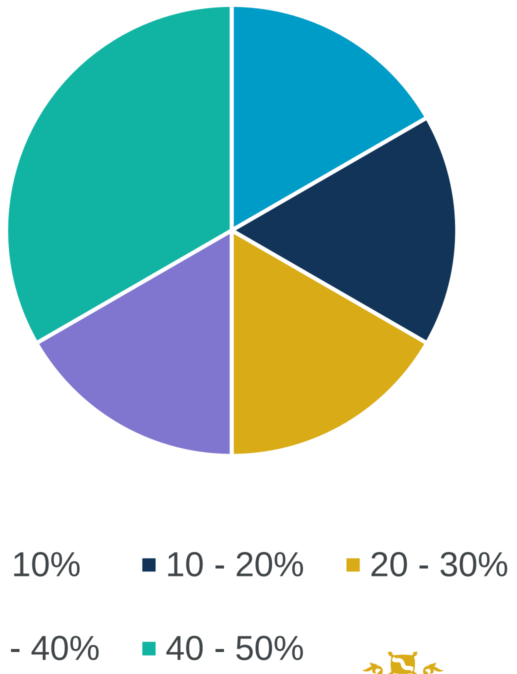
Observations:

- Reinsurance counterparty risk SCR from survey participants was calculated to be c.1% of reported YE 2020 SCRs on average

Commentary:

- The adverse impact on solvency coverage following the recapture of all business ceded to a **single reinsurance counterparty** could be up to 50 times the amount of counterparty risk capital insurer participants are holding **for all** reinsurance counterparty exposures.

Loss of solvency coverage incurred on recapture of all business from each participants' most material counterparty (before management actions)



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POLL (2/2)

Where do you think survey respondents said was their top reinsurance destination for UK annuity risk transfers?

A. US

B. Bermuda

C. EU

D. Switzerland

E. Canada

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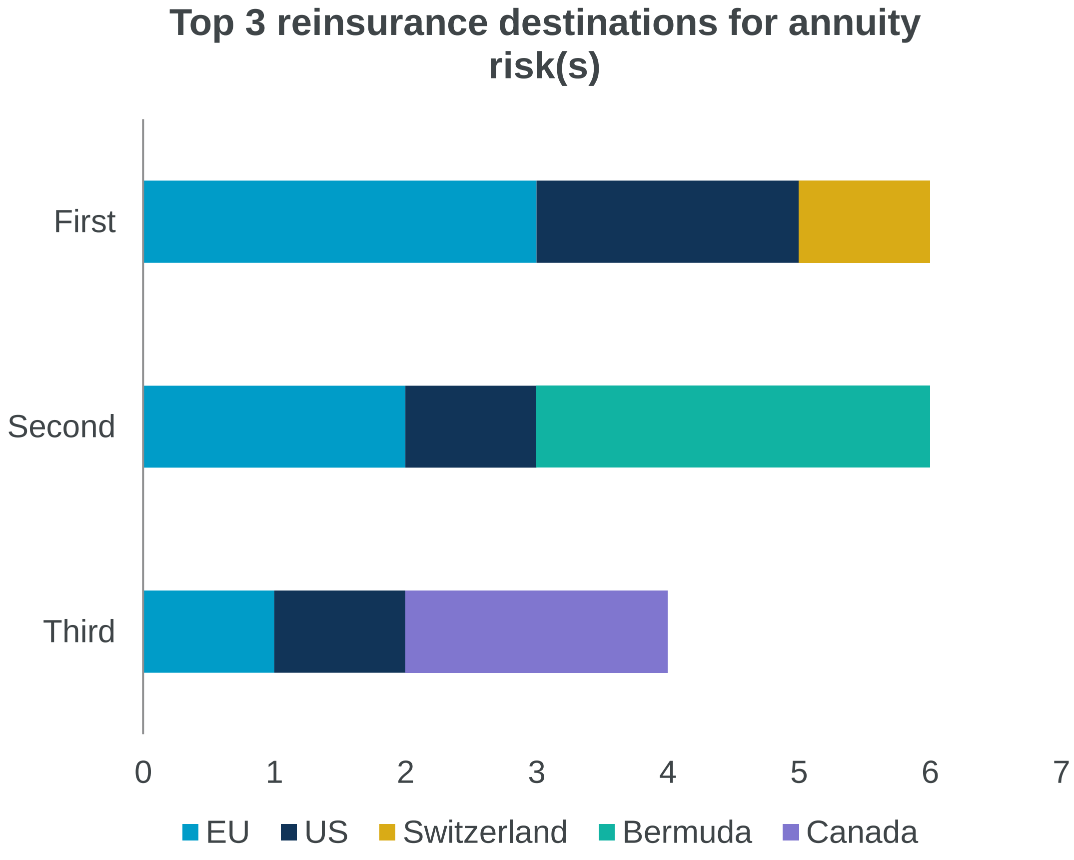
Top reinsurance destinations for annuity risk transfers

Observations:

- Half of respondents ranked the EU as top reinsurance destination
- EU identified as top 2 reinsurance destination for 5/6 respondents
- No respondent identified Bermuda as a top reinsurance destination

Commentary:

- **Observations are surprising?** Motivation for reinsuring UK longevity risk more complicated than pointing to RM alone
- **Other motivating factors?** European regulators may be taking a different view on judgemental aspects of the SII regime.



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Understanding reinsurance recapture risk

- Board & Executive Committee
- Capital modelling – methodology & approach
- ORSA (including stress & scenario testing)
- Reverse stress testing

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Board & Executive Committee

Observations:

- All respondents delegate responsibility for reinsurance counterparty exposures to one or more committees
- Most respondents communicate their exposures relative to a Red, Amber and Green (‘RAG’) status
- Most respondents communicated to Board & Executive Committees on a quarterly basis

Commentary:

- Delegating technical topics to committees leaves more Board time to focus on strategy, culture and setting tone from top
- RAG likely chosen for its visual nature, simplicity, indicator to take actions etc
- Quarterly reporting aligns with the typical number of Board committee meetings held annually.

Capital modelling – methodology & approach

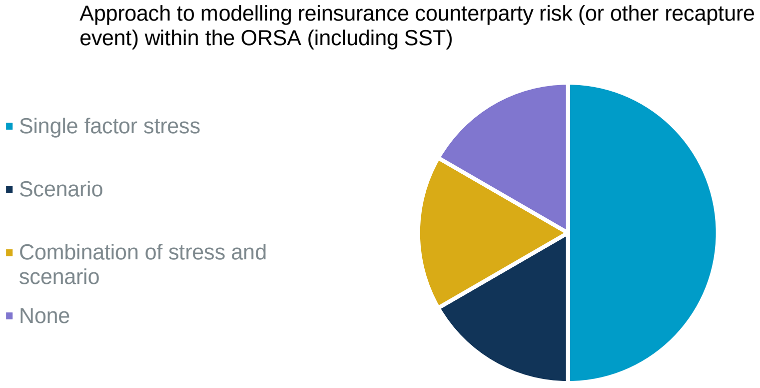
Observations:

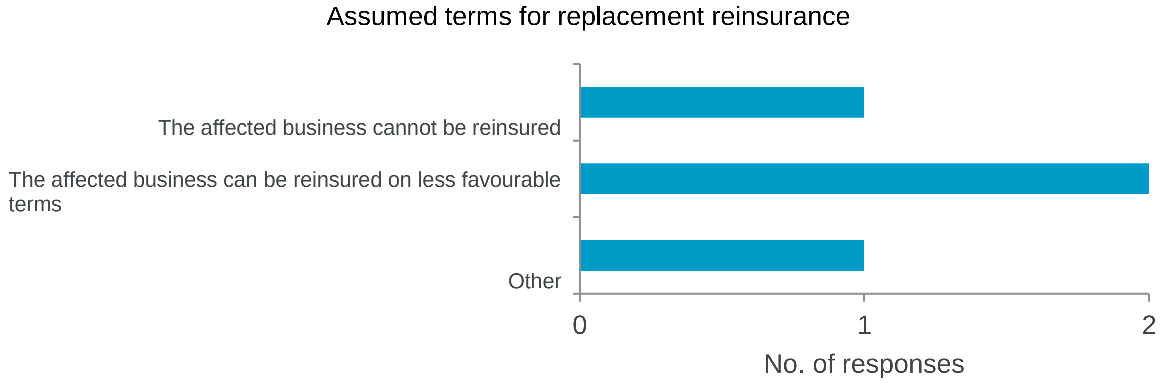
- All respondents model reinsurance counterparty risk within a PRA approved internal model
- All respondents consider reinsurance recapture scenarios and associated financial impacts within the reinsurance counterparty risk model
- Replacement reinsurance was the most frequently assumed management action.
- Regulatory approval to apply TMTP and assuming 'no' management actions were the joint second
- Little differences in approach between respondents SCRs and ORSA capital

Commentary:

- Management actions
  - Replacement reinsurance is likely to materially simplify the capital modelling. Matching Adjustment dilutive?
  - Will a reinsurance recapture event meet the material and sustained test to support a TMTP recalculation application?
- IM SCR vs ORSA capital
  - Majority of areas assessed were the same, as expected
  - Do differences indicate areas most debated between firm & regulator at point of model approval / model changes?

ORSA (including stress & scenario testing)





Observations / commentary:

- Single factor stress most common response
  - Incorporating other stress factors could blur the story / be distracting
  - Are combined stresses too remote to be a plausible but severe ORSA scenario?
- But… a single factor stress could lead to modelled financial impacts understating the true risk exposure. Decision makers attempt to ask right questions frustrated?

Observations / commentary:

- Replacement reinsurance
  - Less favourable terms: suggests respondents are assuming prolonged period of reinsurance market stress
  - Majority assumed it would take longer than 6 months to obtain. One respondent assumed it would take less than 3 months. Unclear whether, and if so ,when reinsurance market would have appetite / capacity to absorb all previous reinsured risk across **ALL** affected insurers.

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Reverse Stress Testing

Observations:

- All respondents considered a reinsurance counterparty default (or other recapture event) as part of reverse stress or scenario test
- Majority identified management actions to rectify a SCR breach within their recovery planning
- Many estimated that their longest identified management action would take more than 9 months to implement

Commentary:

- Including reinsurance counterparty default (or other recapture event) as a RST is credible – solvency impact is large
- Insurers have 6 months following SCR non-compliance to rectify the breach. Can be extended by 3 months (at supervisor's discretion)
- Insurers would need to rely on actions that could be implemented within 9 months in order to continue as a going concern.

Non-capital protections to manage reinsurance recapture risk

- Setting risk limits and risk appetites
- Use of collateral
- Treaty recapture provisions

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Setting risk limits and risk appetites

Risk Limits - Observations

- All respondents assumed that reinsurers default instantaneously when setting risk limits.
- Half did not assume subsequent mgmt. actions
- Remaining respondents assumed between 1 – 3 mgmt. actions.
  - All assumed replacement reinsurance 6-12 months following default.

Risk Limits – Commentary

- Instantaneous default & no subsequent mgmt. actions is conservative.
- Assuming reinsurance replacement 6 – 12 months following default is based entirely on expert judgement. Is it reasonable?

Risk appetite - Observations

- All respondents set their counterparty default risk appetite at counterparty level.
- A third also set their appetite at aggregate level (simply adding the exposures together implies a perfect correlation)
- By contrast, all respondents assumed 0% - 25% correlation between reinsurance counterparties within the SCR modelling.

Risk appetite – Commentary

- One interpretation: a third of respondents take a more conservative approach when setting their risk appetite relative to the scenarios assumed for capital modelling purposes.

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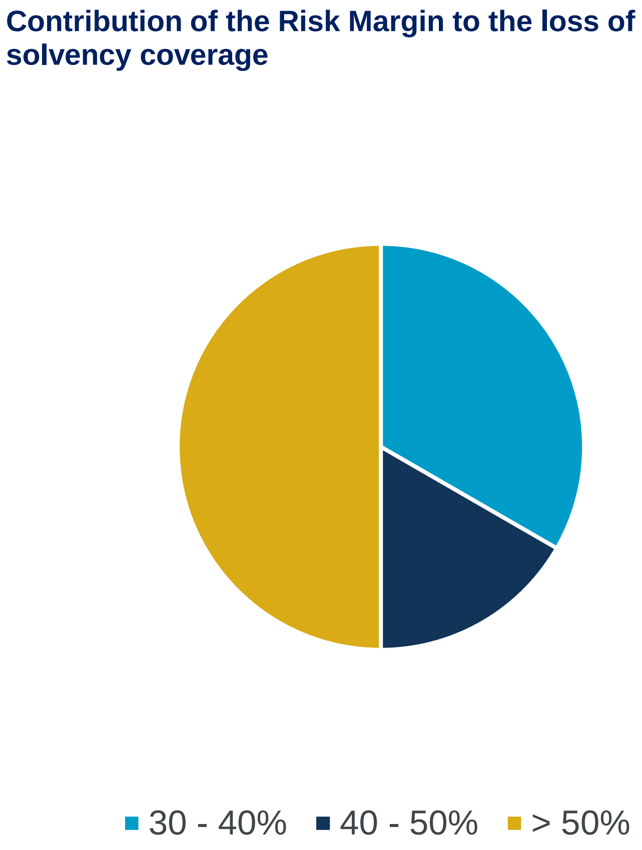
Use of collateral

Observations:

- All respondents have at least one collateralised annuity related reinsurance treaty and allow for collateral in their exposure calculations.
- Provisions to introduce or increase collateral provisions on signs of reinsurer distress are common.
- The majority of respondents identified collateral basis risk from indexation, duration, currency and expected cashflows.

Commentary:

- Collateral reduces insurers’ exposure to reinsurance counterparty risk. However, it only provides partial protection from the impact of a reinsurance recapture event. E.g. does not cover increase in RM or net change in SCR.
- Pre-collateral counterparty exposure for quota share arrangement generally covers the BEL and not only the net exposure
  - Any growth in the market for quota share reinsurance is likely to see an increased focus on collateral.



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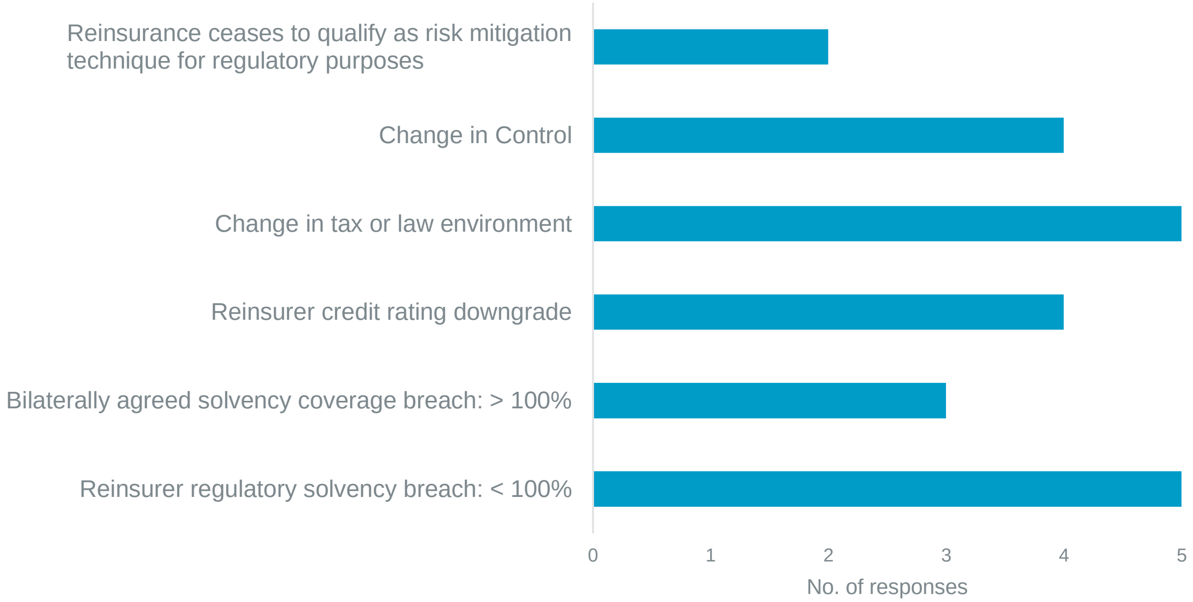
Treaty recapture provisions

Observations / Commentary

- **Reinsurer regulatory solvency breach** is noteworthy given its potential to cause a disorderly market event.
  - Could lead to a 'run on the reinsurers'. And…
  - Have macroeconomic consequences if a single reinsurer was a counterparty to a number of insurers.
- Only 2 of the 6 respondents would be able to recapture reinsurance that had **ceased to qualify** as risk mitigation for regulatory purposes. This suggests that 4 of the 6 respondents could end up recognising losses even if the reinsurer had not technically defaulted or breached their solvency coverage. E.g. following an unfavourable court ruling.

Main recapture provisions contained within two or more longevity and quota share reinsurance treaties



Conclusions

- Impact of a reinsurance counterparty default (or other recapture event) can be material. Levers to manage and control it will be important for all levels including Board to understand.
- Convergence among participants in a number of areas – delegation of responsibility to manage reinsurance counterparty exposures to committees, risk limits, use of collateral
- ORSA analysis could be an area for refinement – single factor stress could oversimplify real world dynamics
- Other areas that could be benefit from refinement:
  - Collateral: basis and other risk taken on following recapture. (Re)consider?
  - Treaty recapture provisions: For majority who do not include recapture clauses in the event reinsurance arrangement no longer qualified as SII risk mitigation for regulatory purposes?
- A disorderly reinsurance recapture could pose a threat to macroeconomic stability. Will likely be an area of interest to policymakers / regulators around the world.

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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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