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PPOs – What's the market doing?

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Presentation to Reserving Seminar 2018
20 June 2018

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Note

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- Although we have used our best efforts, no warranty is given about the accuracy of the information and no liability can be accepted for anybody relying on the accuracy of the information or following the recommendations in this presentation.

These slides were presented at CIGI 2018. They represent views from the perspective of insurers and reinsurers.

If you have any questions, please contact Sharon Cumberbatch at the IFoA who will be able to put you in touch with the IFoA PPO Working Party members. Alternatively get in touch directly, our details are given at the end of the presentation.

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2017 PPO Working Party Qualitative Survey

PPOWP 2017 Survey

- Conducted telephone interviews with senior actuaries and claims staff from various insurers and reinsurers regarding their exposure and approach to PPOs
  - Recent view – interview conducted in early 2018
  - All analysis presented relates to these interviews unless otherwise stated
  - 12 insurers and 7 reinsurers
  - Appendix at back with extra slides

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Agenda

- Actuarial methodology
  - Level of concern
  - Reserving methodology (excluding Ogden discount rate)
  - IFRS
- Ogden discount rate
- Reinsurance and alternative risk transfer
- Conclusions

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Actuarial methodology

Level of concern

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Level of concern regarding PPOs

- Chart showing concern levels between years
- Scale of 1 to 5, with 5 representing most concerned
- The average score for insurers was 2.8 and 2.7 for their Boards
- The average score for reinsurers was 3.6 and 3.4 for their Boards.

Reasons behind insurer / reinsurer concern

- Why no change (12):
  - High uncertainty with regard to the Ogden discount rate
  - Market propensity continues to fall
  - Concerns around investment and return on assets, but happy with methodology.
- Why increase (2):
  - Ogden discount rate change may have prompted claimants and claimants' solicitors to pay greater attention to the risks associated with lump sum settlements.
- Why decrease (5):
  - PPO propensity reduced since Ogden discount rate change.

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Reasons behind Board concern

- Why no change (15):
  - Change in Ogden discount rate has reduced PPO propensity but this is offset by a greater understanding of the capital implications of PPOs
  - Growing focus on Solvency II measures; the volatility that PPOs cause in the balance sheet is an issue.
- Increase (1):
  - Due to changes in the mix of business written.
- Why decrease (3):
  - PPOs are now financially advantageous to settlements at a -0.75% discount rate
  - PPO propensity fallen due to Ogden discount rate change.

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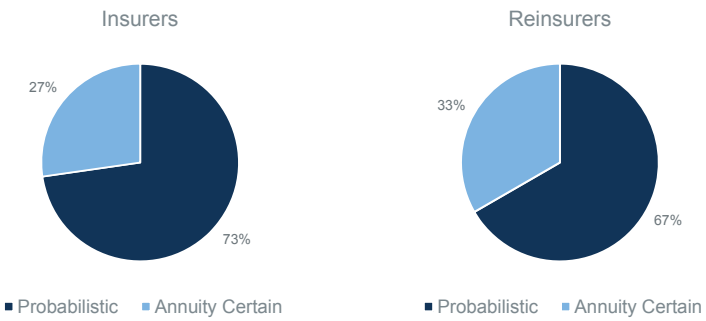
How do you reserve for settled PPOs?



- The majority of those asked based their life expectancy on an average between their own medical expert's view and the view from the claimant's team.
- Almost all those asked had not changed their reserving methodology in the last year.

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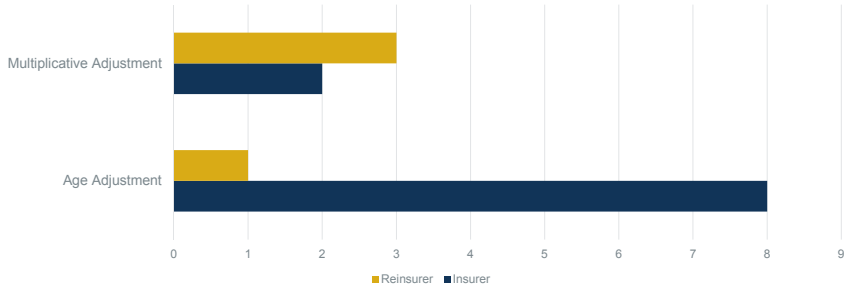
How do you reserve for settled PPOs?

- How do you scale your life table?
  - Multiplicative adjustment: assumed that the claimant had a mortality experience “z” times more than the life tables suggest
  - Ageing adjustment: considered the claimant had the mortality experience of someone “y”-years older than their actual age.



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IBNR PPOs – identification

- All insurers and all but two reinsurers said that they monitored their open claims and assessed the probability of them becoming PPOs.
- Not all claims were monitored by all participants:
  - Some only looked at a certain number by injury outstanding estimate
  - Some only looked at open large claims > £1 million
  - Some did look at every injury claim individually.
- Indicators used included injury type (particularly mental capacity), age, annual care cost.
- Insurers reviewed potential PPOs quarterly, half-yearly and some annually.
- A combination of historical propensity data and IFoA PPO Working Party propensities applied to claims split by large claim threshold was perhaps the most common approach.
- The majority of insurers and reinsurers monitored the accuracy of their predictions.
- The majority of reinsurers noted that their notification rules for PPOs did not differ by cedant.

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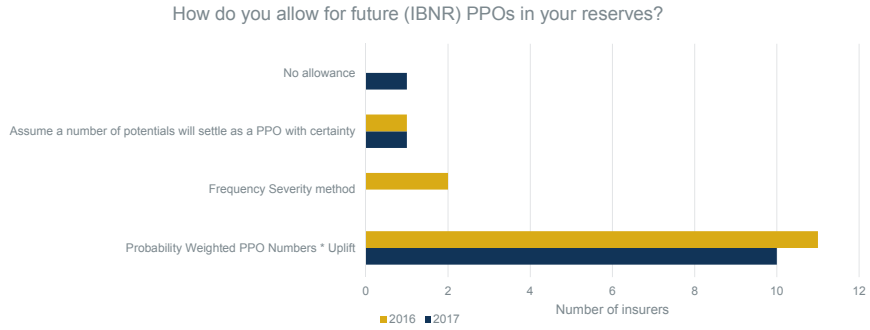
IBNR PPOs – reserving

- The chart below shows the approaches taken by insurers in relation to claims already identified as large claims. The majority of reinsurers used a “Probability Weighted PPO Numbers * Uplift” approach.



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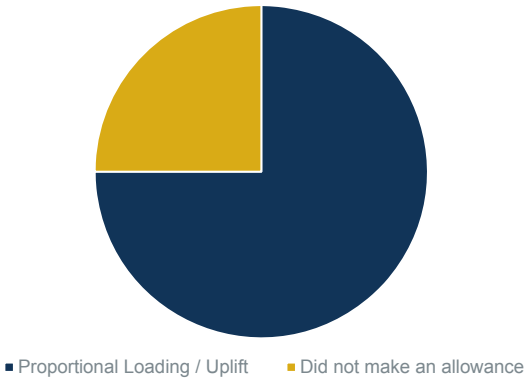
Pure IBNR PPOs – reserving

- The majority of those Insurers asked considered pure IBNR PPOs (in relation to claims not yet reported) and added a proportional loading to the PPO reserves.



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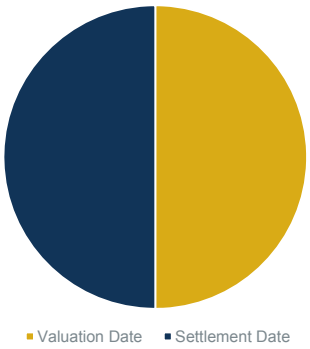
IBNR PPOs – discount to what date?

- 6 Insurers discounted to valuation date and 6 to expected settlement date under UK GAAP or IFRS.
- All those asked said their reserving methodology for IBNR PPOs had not changed in the last year.



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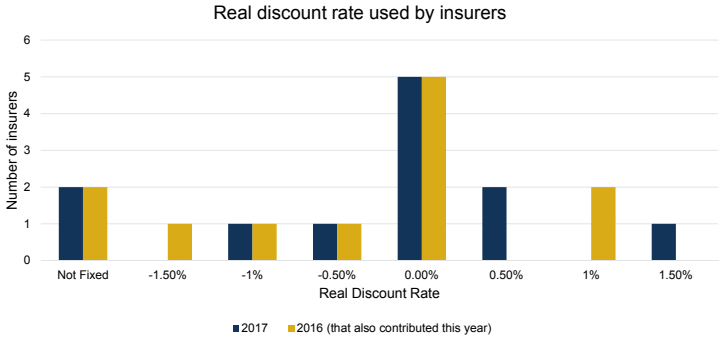
Discounting – real discount rate (GAAP or IFRS)

- For insurers, the most popular real discount rate remained at 0% per annum.
- There has been no significant shift in real discount rates when compared to last year.



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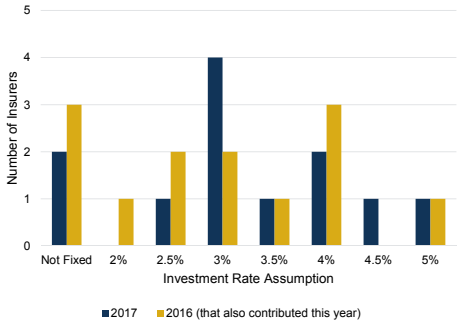
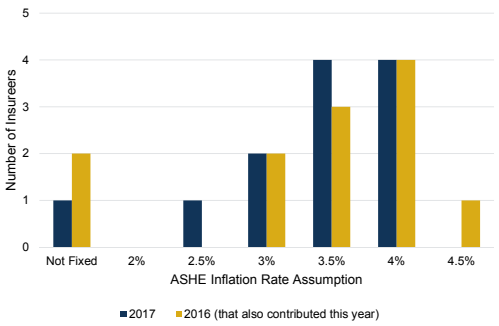
Discounting – components of real discount

Investment return and ASHE inflation assumptions (GAAP or IFRS)

- Rates which weren't fixed tended to follow risk free yield curves or were based on risk free yield curves with an adjustment.
- Long term yields were generally based on the current assets held by the insurers
- Future ASHE was derived using historical ASHE and RPI mostly.





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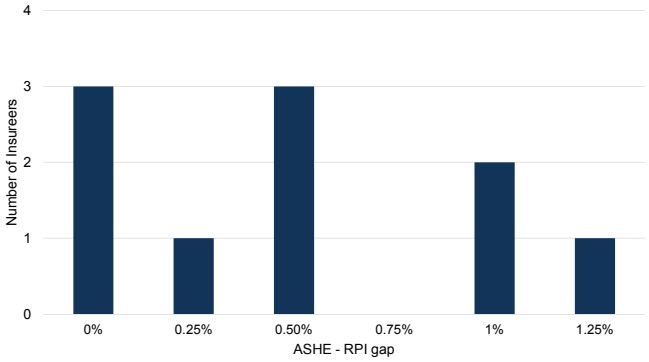
What gap is assumed between RPI and ASHE

- We asked what the gap was between the Insurers' RPI and ASHE inflation long term assumptions
  - Contributors assumed a range of gaps, with the majority between 0% and 0.5%.
  - In all cases ASHE inflation was assumed to be higher than RPI.



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Discounting – reinsurers (GAAP or IFRS)

- Two of the reinsurers did not discount due to US GAAP reporting requirements.
- Of those that did discount:
  - Three had a real discount rate of 0% per annum
  - One had a real discount rate of -0.5% per annum.
- Their long term yields were based on their portfolio of assets.
- ESG projections taking into account historic ASHE and CPI fed their inflation assumptions.

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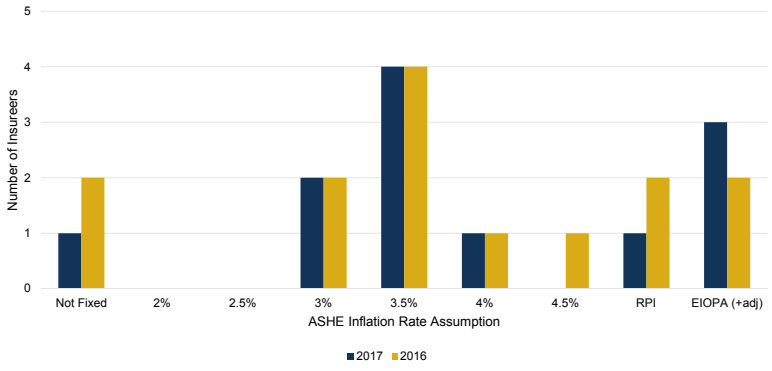
Discounting – Solvency II

- As the EIOPA curve is prescribed, the main question revolves around the inflation rate used
  - All reinsurers used the same ASHE rate for both valuations if applicable.
- **The current real discount rate over 20 to 40 years assuming an ASHE of 3% is ~ -1.8%**



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Discounting – Solvency II and IFRS 17

- Four of the twelve insurers asked had changed either their inflation or investment or both assumptions in the last year.
- None of the insurers or reinsurers asked had any transitional arrangements on technical provisions for the change of discount rate.
- Five out of twelve insurers said they were using a volatility adjustor but none were using a matching adjustment.
- None of the reinsurers used either the volatility adjustor of the matching adjustment.
- The impact of IRFS 17 had not been considered in great detail by the majority of contributors.

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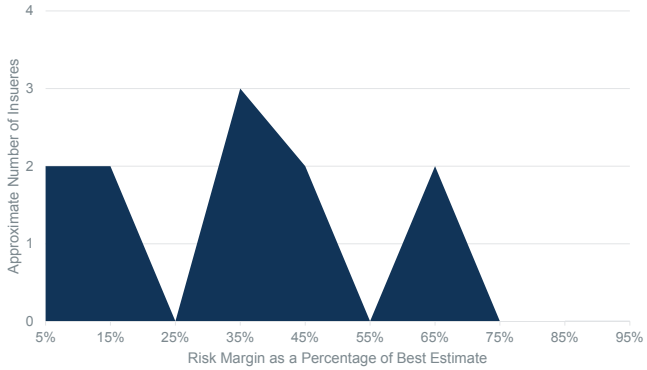
PPO risk margin

- For those who calculated (or could estimate) a PPO risk margin, the distribution of the (approximate) risk margin as a proportion of best estimate for insurers is displayed below.
- The PPO risk margin was calculated in a variety of ways, both implicitly within reserve risk as well as explicitly.



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Variation orders and bad debt

- Although there were a significant number of PPOs with variation orders, and some with indemnity / reverse indemnity guarantees, only two insurers said they allowed explicitly for these when valuing their PPOs.

	Variation Orders	Indemnity Guarantees	Reverse Indemnity Guarantees
Total for Insurers	84	6	8

- Reinsurers that provided this information had 85 variation orders in total and 36 reverse indemnity guarantees, and none of them allowed explicitly for these when valuing their PPOs.
  - N.B. some of the variation orders and guarantees may be in both the insurer and reinsurer totals.
- Two insurers and one reinsurer allowed for bad debt under UK GAAP / IFRS / other, but all must under Solvency II.
  - Those that did allow for bad debt did so using a probability of default * loss given default method

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Uncertainty in reserving

- All insurers quantified the reserve uncertainty in PPOs, about half stochastically and the other half using scenario tests.
- Six of seven reinsurers explicitly quantified PPO reserve uncertainty, five using scenario tests and one using a stochastic method.
- A variety of correlations were assumed with other large losses, varying from no correlation to 100% correlation.
- The CVs for the gross PPO uncertainty ranged from 12% to 100%. The CVs for the net PPO uncertainty ranged from 15% to 85%. There was, however, inconsistency between responses in terms of whether it was settled, potential or pure IBNR PPOs being considered, which gives rise to the wide ranges quoted.
- The majority of settled PPO gross / net CVs were between 20% and 35%.

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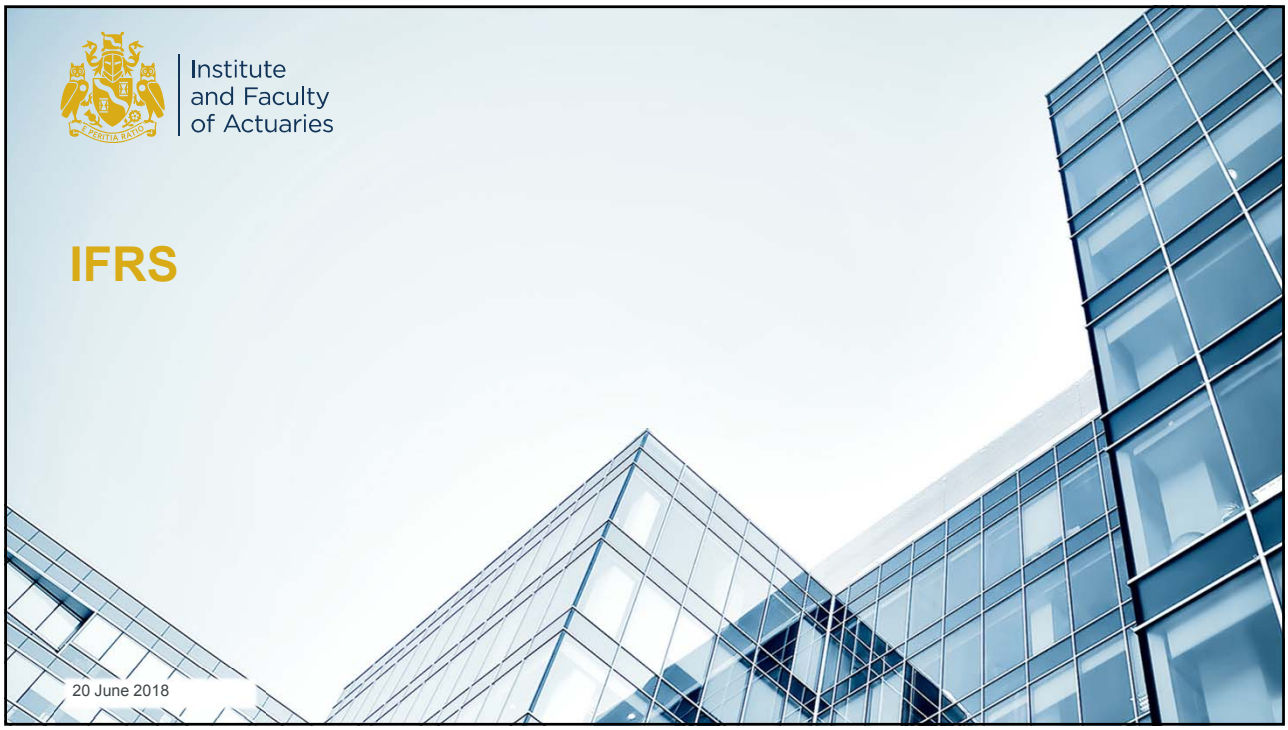

PPOs and IFRS17 – Overview

- IFRS17 live for annual periods starting on or after 1 Jan 2021
  - Aim to better compare insurers' financial statements globally
  - Recognises profit over the period the insurer provides coverage;
  - Presents insurance results separately from investments or expenses
- Measurement model (PAA or BBA) is based on "coverage period" and not settlement period
- Aggregation at 3 levels – portfolio, group and cohort
  - Portfolio: contracts subject to similar risks that are managed together
  - Each portfolio is split into 3 groups (onerous contracts split out);
  - Contracts in a group must be no more than one year apart (ie annual cohorts)

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PPOs and IFRS17 – Discount Rates

- Estimates of future cash flows to reflect conditions at the measurement date including assumptions about the future;
- Estimates of future cash flows to reflect the time value of money and the financial risks related to the cash flows;
- Discount rates based on a bottom-up or top-down approach:

  (a) Bottom up - uses a liquid / risk-free yield curve and adds an illiquidity premium; or

  (b) Top down - uses the gross yield on a reference portfolio and deducts for expected default and differences in the amount, timing and uncertainty of cashflows; i.e. eliminates "not relevant" factors.

- Of those who responded, the bottom-up approach was favoured, albeit there were only a small number of respondents (5 or 6)

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The Civil Liability Bill

- The Civil Liability Bill aims to address the setting of the Personal Injury Discount Rate (Ogden Discount Rate).
- The key features of the Bill are:
  - The assumption of how claimants will invest their lump sum money has changed. Whereas previously the assumption was that the claimant would only invest in a "very low" risk investment, the assumption is now that the claimant will make investments involving "more risk than a very low level of risk" but "less risk than . . . a prudent and properly advised investor".
  - The first review of the rate must take place within 90 days of the Bill coming into force. Once the review has begun a determination of either a new rate or the same rate must be announced within 180 days of the review starting.
  - A review of the rate will take place every three years.
  - Every review process, including the initial review, must consult an expert panel. The expert panel will be made up of an actuary, an economist, an expert in consumer matters that relate to investments and an expert in managing investments.

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The Civil Liability Bill – key concerns

- Will the Bill be passed?
- If the rate changes every three years, what will this mean for reserving exercises?
- Will we see a much greater variation in PPO propensity?
- What will this mean for insurers' data capture and retention, and, in particular, the data maintained by the claims team?

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Quantitative assessment – repeat from GIRO

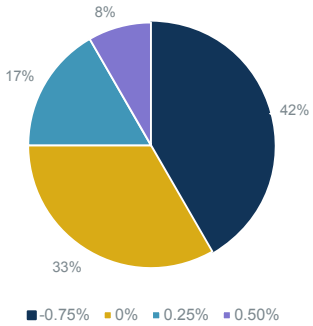
- We received quantitative feedback regarding the number of non-PPO and PPO large claims for 2017, pre- and post-20 March 2017, from 7 participants, as at 31 August 2017.

Quantitative assessment – repeat from GIRO

- Zero PPOs settled in the 2017 period prior to the Ogden discount rate change implementation (20 March 2017) within our data set.
  - In the equivalent period in 2016 we saw ~20% of the year's PPOs settle.
- In the period post the rate change (20 March 2017) to 31 August 2017 the PPO propensity was 12%.
  - This represents a drop in PPO propensity of ~50% from 2016 whole year levels.
- The PPO propensity for 2017 from 1 January to 31 August is 8%.
  - This represents a drop in PPO propensity of 60-70% from 2016 whole year levels.

Actuarial best estimate – discount rate

- Following the change in discount rate a variety of rates are now assumed within Insurers' actuarial best estimates for the non-PPO reserves.



- A few insurers held a margin within booked reserves in respect of a -0.75% discount rate.

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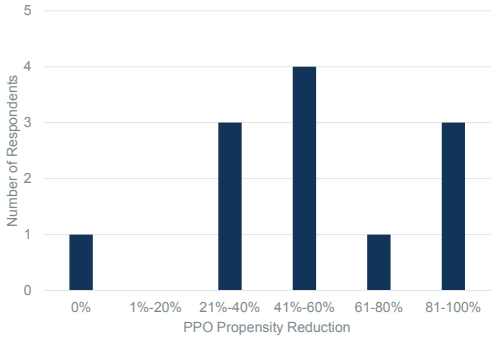
Actuarial best estimate – PPO propensity

- Participants were asked what percentage change in PPO propensity they had assumed as part of their actuarial best estimate calculations, following the Ogden discount rate change
  - One insurer said they had allowed for no change whilst the others all anticipated changes ranging from 30% to 100% reduction in PPO propensity.



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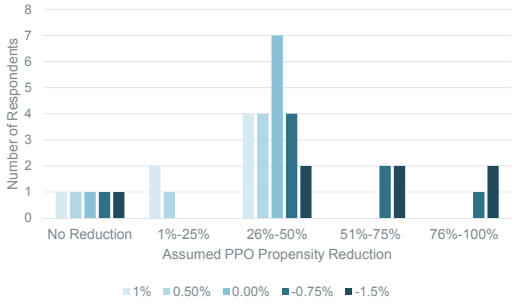
Assumed PPO propensity for different Ogden rates

- Insurers were asked what their assumed reductions in PPO propensity would be, from scenario analyses, had the Ogden discount rate changed from 2.5% to 1%, 0.5%, 0%, -0.75% or -1.5% per annum.
- Generally, the lower the discount rate, the larger the percentage decrease in PPO propensity insurers expected.
- However, some insurers expected the same reduction in propensity in all three scenarios and others expected no change at all.



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Claim settlement speed

- The majority of insurers said that they had noticed a slowing down of claim settlements, particularly in the period running up to the rate change announcement on 27 February 2017
  - Although some insurers did say they had seen no difference.
- The expectation of a beneficial Ogden discount rate change for claimants seems to have been driving these delays.
- Insurers also noted that claim settlement speed has started to pick up as those who were delaying are now settling.

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Claimant and claimant lawyer behaviour

- Insurers anecdotally noted the following:
  - Some claimant lawyers delayed claims anticipating a favourable movement in Ogden discount rate
  - Some claimant lawyers have been unwilling to settle at an Ogden discount rate other than -0.75%
  - Since the announcement that the rate may change again, and likely in a positive direction, lawyers have been willing to settle on a basis higher than -0.75%.
- Some insurers again said they had seen no change.

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Nature of settlements (lump sums vs PPOs)

- Although many insurers said they felt there should now be a shift towards more lump sums being awarded due to their relative attractiveness increasing, they also said there had not been overwhelming evidence in favour of this theory yet due to too few settlements.
- One insurer even said they had seen a marked increase in the number of PPOs settling as PPOs.

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Discount rate large claims are typically settling at

- The majority of insurers said anecdotally that large claims have been settling using a discount rate of between 0% and 1%
  - Although some insurers noted that many of the cases that have progressed to settlement are the ones where settlement was likely to be achieved at higher than -0.75%.

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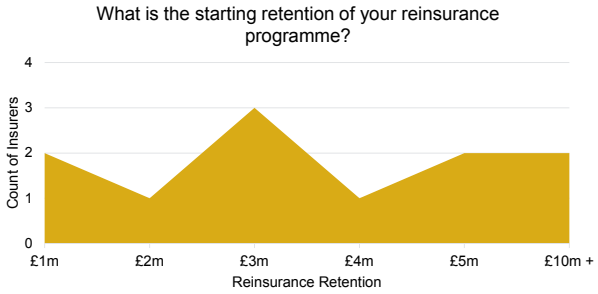
Reinsurance in the market



- Only one of the 12 insurers said that their reinsurance programme had changed as a result of PPOs.
- We also asked insurers whether they took the impact of the cost of capital into account when buying reinsurance – 10 insurers said they did.

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Reinsurance availability

- Four out of the seven reinsurers asked stated that their reinsurance offerings had changed due to PPOs:
  - One also noted that their reinsurance offering had changed as a result of the recent Ogden discount rate change.

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Capitalisation clauses

Capitalisation clause: allows (or even compels) the reinsurer to settle an individual PPO liability as a lump sum with the insurer, on a pre-agreed bases, once such an award has been made / agreed.

Three main contract types offered are:

- **Uncapitalised:** Traditional "Pay as Paid" basis with inflation-linked deductible, recoveries made throughout the lifetime of the claimant.
- **IUA Capitalisation:** Lump sum capitalisation at time of settlement, allows for life impairment typically by way of medical expert opinion. Full and final settlement.
- **Delayed 20 Capitalisation:** "Follow the fortunes" for 20 years then lump sum capitalisation 20 years after expiry of reinsurance treaty. Typically assume unimpaired mortality for lump sum.

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Reinsurers' view on capitalisation clauses

- One reinsurer insisted on capitalisation clauses while two used them on a case by case basis.
- Three reinsurers stated they had capitalisation clauses for the majority of the business written.
- Reinsurers stated that capitalisation clauses are used in order to limit the uncertainty and shorten the tails on business.
- Reinsurers stated a few PPOs had been capitalised already.

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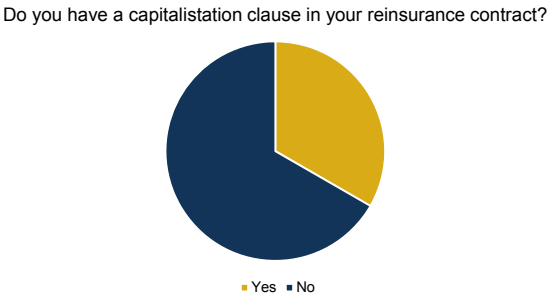
Insurers' view on capitalisation clauses

- Four of the insurers surveyed said that they had a capitalisation clause on their reinsurance contracts.



- Of those that did not have a capitalisation clause, the clear majority stated that they were keen to avoid them.

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Risk transfer – hurdles

- All but one insurer would consider transferring the risk associated with PPOs if the right option arose
  - Some insurers already had arrangements in place to transfer the risk of PPOs other than reinsurance.
- The most significant hurdles mentioned were cost of any options and the lack of solutions on the market.
- We asked respondents, if concerns around anti-selection could be mitigated, would they consider pooling settled PPO cases with other firms. All but one said that they would.

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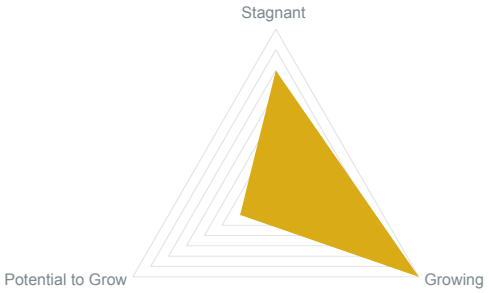
Risk transfer – growing or changing

- A higher proportion of Insurers stated that they felt the risk transfer market was growing than in previous years.



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Conclusions

Conclusions

- There has not been a significant shift in the inflation and discount rates assumed by contributors
  - The majority still assume a 0% real discount rate on a GAAP / IFRS basis.
- Most insurers are assuming a reduction in PPO Propensity following the change in Ogden discount rate when calculating their actuarial best estimates
  - However there is a wide range of assumptions from a 30% reduction to 100%.
- Most insurers have seen a slowing in claim settlements in the period that led up to the change in Ogden discount rate.
- Anecdotally most large claims have been settling using a discount rate of between 0% and 1%.

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Questions

Comments

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Questions

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Appendix

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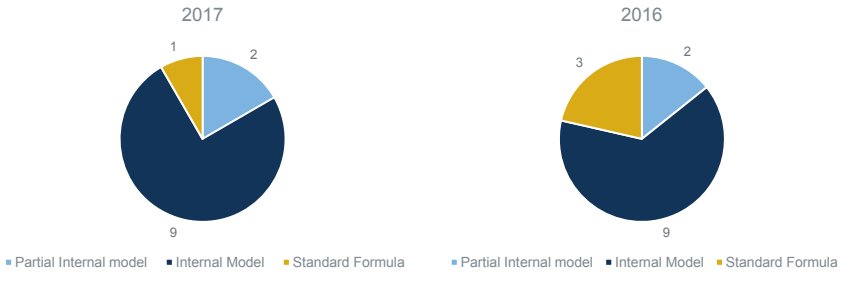
PPOs in SCR

- Nearly all insurers use an internal model or partial internal model when valuing PPOs in their SCR.
- The proportion of participants using the standard formula has decreased from last year.
- All seven reinsurers used an internal / partial internal or separate cashflow model.



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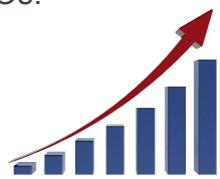
PPOs in capital models

- Around half of the insurers have a separate PPO model for capital purposes as part of their internal / partial internal capital model.
- PPO models allowed for uncertainty in mortality, life expectancy, nominal discount rate, the number of large claims, reinsurance recoveries, payment escalation and the PPO propensity.
- Two reinsurers used separate stochastic models for PPOs.



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Differences between one year and ultimate

- Most insurers / reinsurers said that there was a lower capital requirement for the one year vs ultimate view:
  - Three said that the one year measure of risk was between 25% and 50% of the ultimate measure of risk
  - Two said the one year measure of risk was between 50 and 75%
  - One said there was no difference.
- One insurer said they had different bases for evaluating economic and regulatory capital, using an internal model for economic and standard formula for the SCR.

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Ogden discount rate

- On 27 February 2017, the then Lord Chancellor, Elizabeth Truss, announced the result of the consultation on the discount rate used to calculate Ogden settlements.
- The new Ogden discount rate was set at -0.75% per annum, applicable from 20 March 2017.
- A further consultation in 2017 was announced to consider the methodology used to set the Ogden discount rate, the frequency of review and whether an independent body should set the rate raising the prospect that the Ogden discount rate may change again in the near future.
- On 7 September 2017, the then Lord Chancellor, David Lidington, announced the results of the review. He said that there would be a change in the methodology underlying the determination of the Ogden discount rate, noting that the new discount rate may lie within the range of 0% per annum to 1% per annum when this new methodology has been implemented.
- A Civil Liability Bill was introduced to the House of Lords on 20 March 2018.

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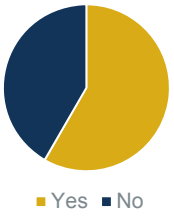
Investment strategy

- Seven of the 12 insurers said that they have changed their investment strategy as a result of PPOs, however only two of these had changed their investment strategy in the past year. Only two reinsurers said that they had changed their investment strategy.



- Two insurers and one reinsurer said that they have ring-fenced assets specific to PPO liabilities, although others have long duration assets to cover all longer term liabilities.
- Insurers held a variety of assets to back PPO liabilities such as long-dated gilts, corporate bonds, equities, hedge funds and property.

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Investment issues

- The two biggest issues relating to PPOs that both insurers and reinsurers said they faced when asked were:
  - The exceedingly long duration associated with PPO liabilities
  - The inability to find assets that track a similar index to ASHE.

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