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PPOs – What's the market doing?

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Note

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These slides were presented at CIGI 2017. 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.

2016 PPO Working Party Qualitative Survey

- Conducted telephone interviews with senior actuaries from various insurers and reinsurers regarding their exposure and approach to PPOs
 - Recent view – interview conducted in winter 2016-2017 (and spring 2017)
 - 14 insurers and 5 reinsurers
- Second round of questions asked in spring 2017 in relation to the change in the Ogden discount rate
 - 11 contributors (mix of insurers and reinsurers)



Agenda

- Actuarial methodology
 - Level of concern
 - Reserving methodology (excluding Ogden discount rate)
 - Capital modelling
 - Pricing and claims management
- Ogden discount rate
- Reinsurance and alternative risk transfer
- Investment
- Conclusions



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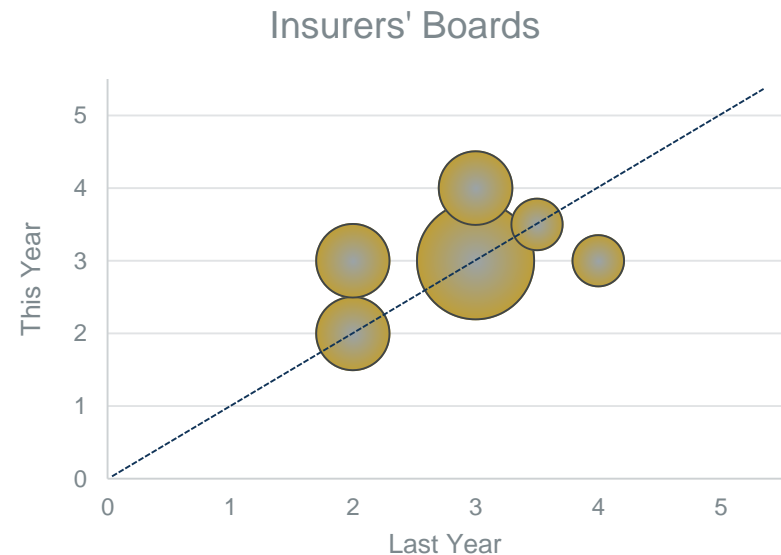
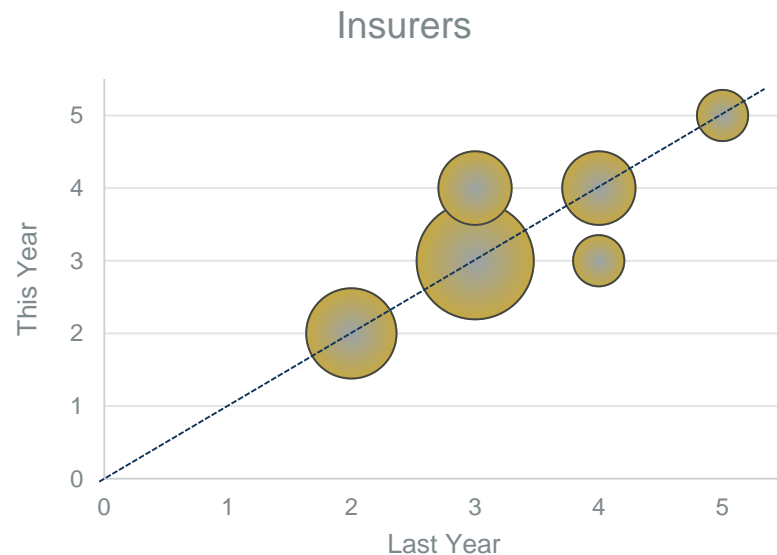
Actuarial methodology

Level of concern

2 May 2017

Level of concern regarding PPOs

- Chart showing concern levels between years.
- Scale of 1 to 5, with 5 representing most concerned.



- None of the reinsurers we asked changed their view from the previous year, and there was only one change in the scoring for a reinsurers' Board (less concerned by one point).
- The average score for both reinsurers and their Boards was 3.8.

Reasons behind insurer / reinsurer concern

- Why no change (16):
 - Propensity and severity in line with expectations
 - Better understanding of the risks and nature of liabilities, but still represent a growing part of the balance sheet
 - [The then] upcoming Ogden announcement adds more uncertainty, Brexit too
- Why increase (2):
 - Investment and inflation assumptions are always changing
 - Difficult to find matching assets
- Why decrease (1):
 - Not as many PPOs compared to predicted

Reasons behind Board concern

- Why no change (13):
 - Fewer claimants demanding PPOs, claimant lawyers aren't pushing as hard
- Why increase (4):
 - Understand now that the risks of PPOs are substantial
 - Sensitivity of SCR / risk margin to volatility in economic market
 - Solvency II world, focus on capital position
- Why decrease (2):
 - Improved mix of business
 - If Ogden discount rate falls, means fewer PPOs

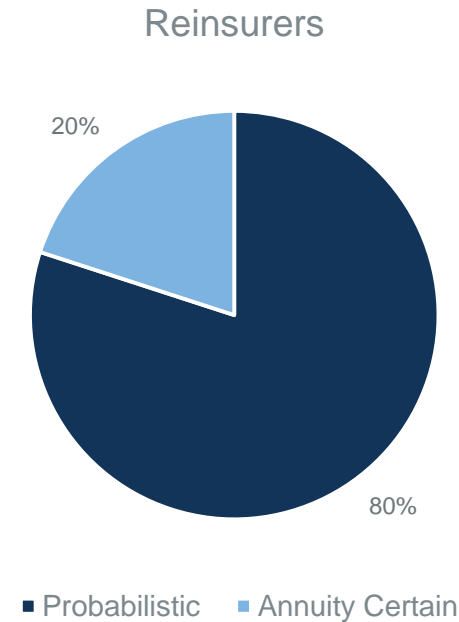
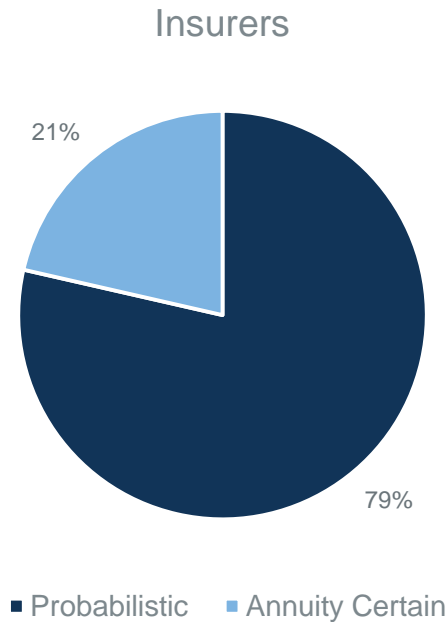


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Actuarial methodology

Reserving methodology

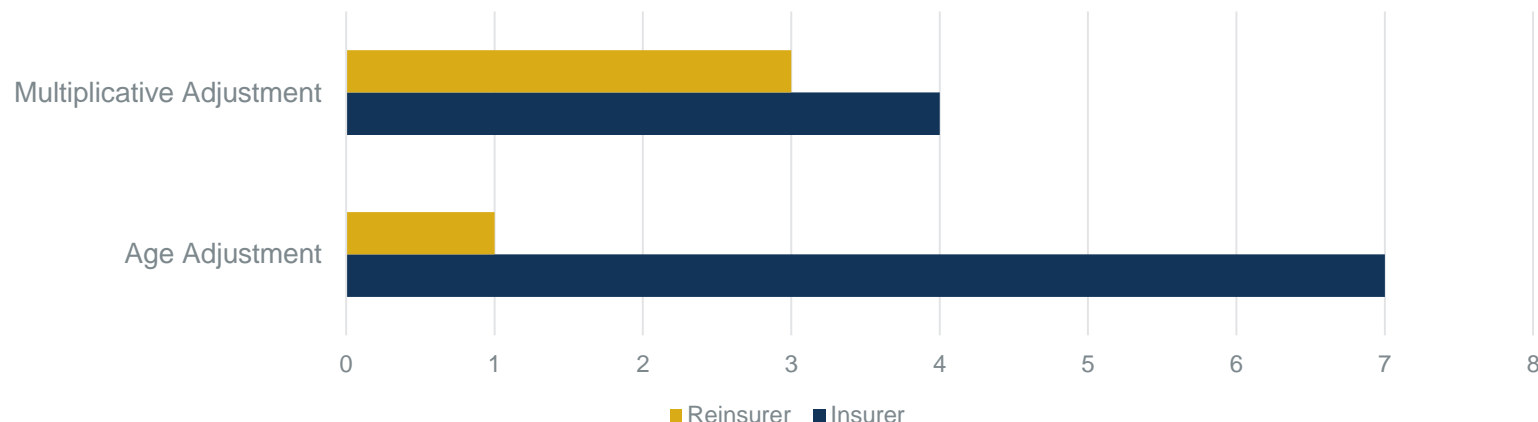
How do you reserve for settled PPOs?



- 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.

How do you reserve for settled PPOs?

- All those taking a probabilistic approach used the ONS mortality rates underlying the Ogden 7 tables or a more recently updated publication of those ONS mortality rates.
- 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.

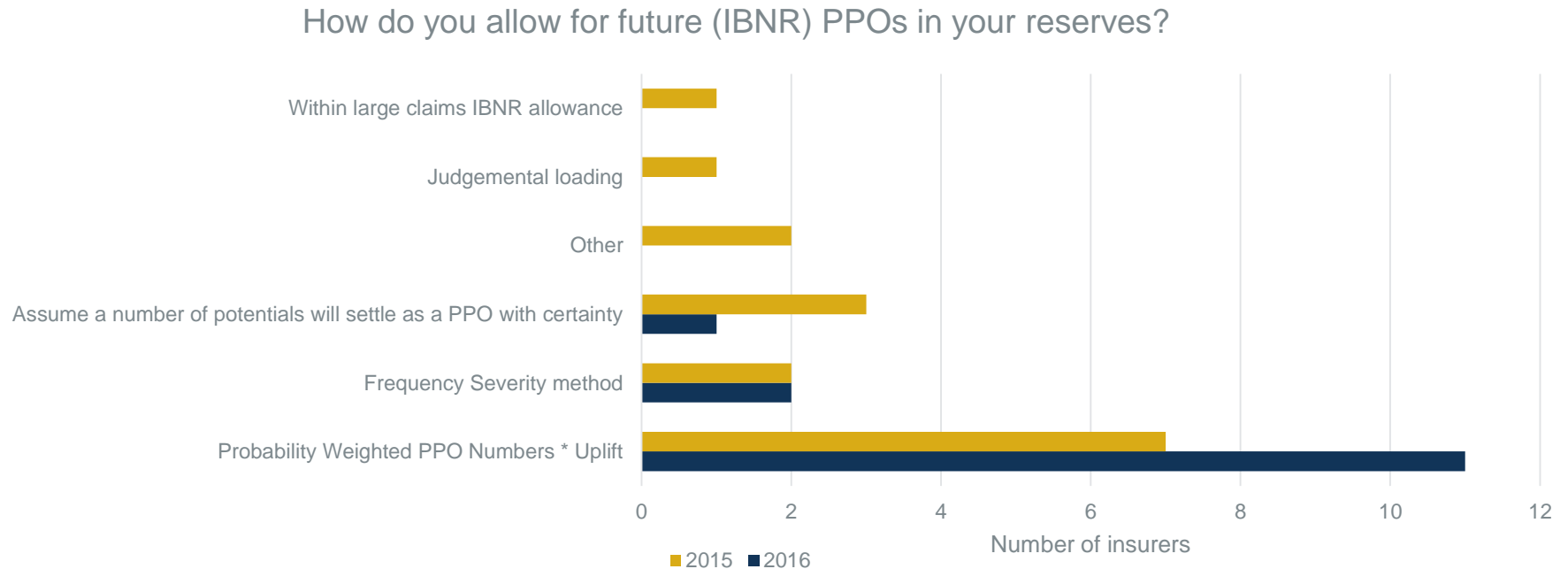


IBNR PPOs – identification

- All insurers and all but one reinsurer 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 monitored the accuracy of their predictions but only one reinsurer did.

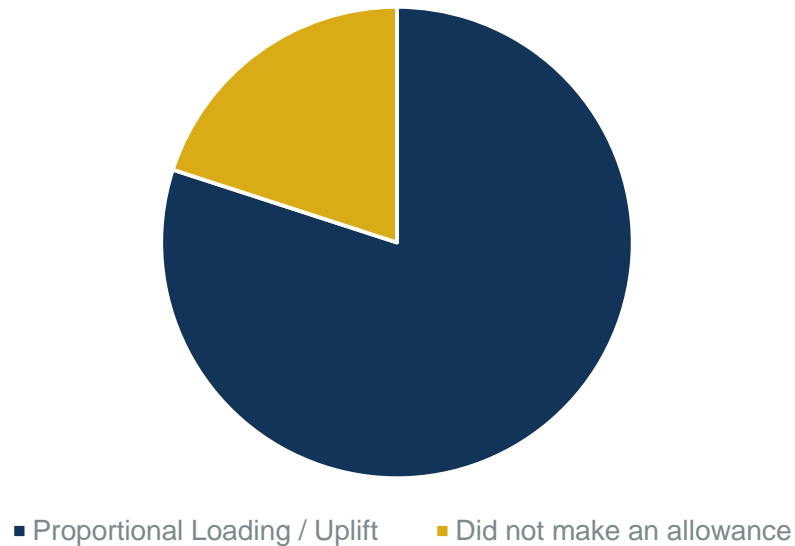
IBNR PPOs – reserving

- The chart below shows the approaches taken in relation to claims already identified as large claims.



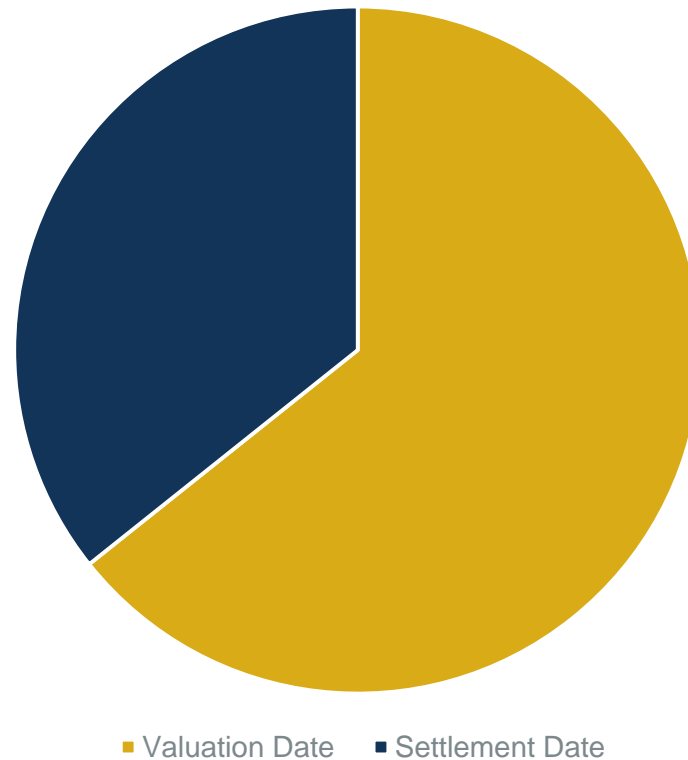
Pure IBNR PPOs – reserving

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



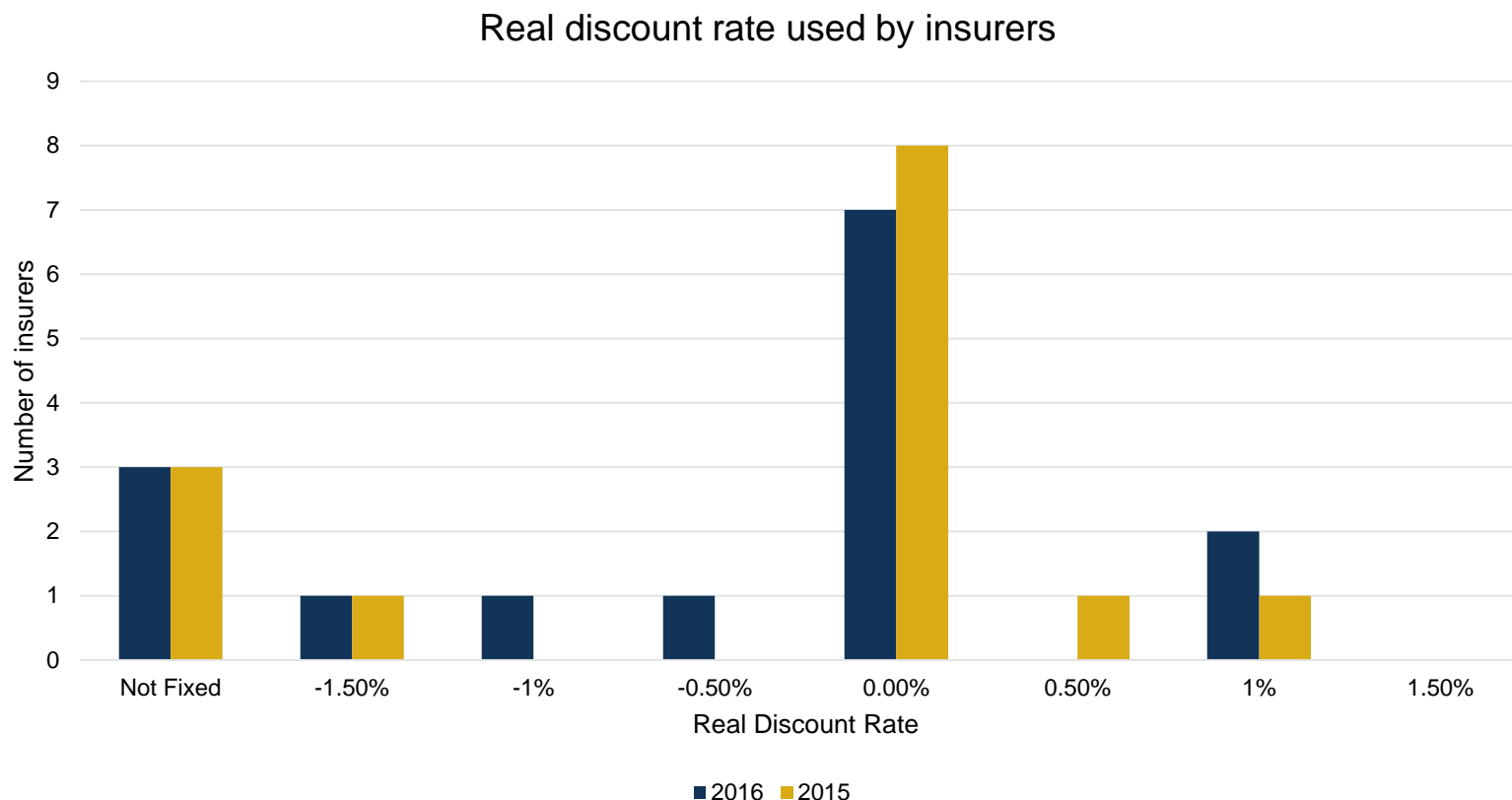
IBNR PPOs – discount to what date?

- 9 Insurers discounted to valuation date and 5 to expected settlement date under UK GAAP or IFRS.



Discounting – real discount rate (GAAP)

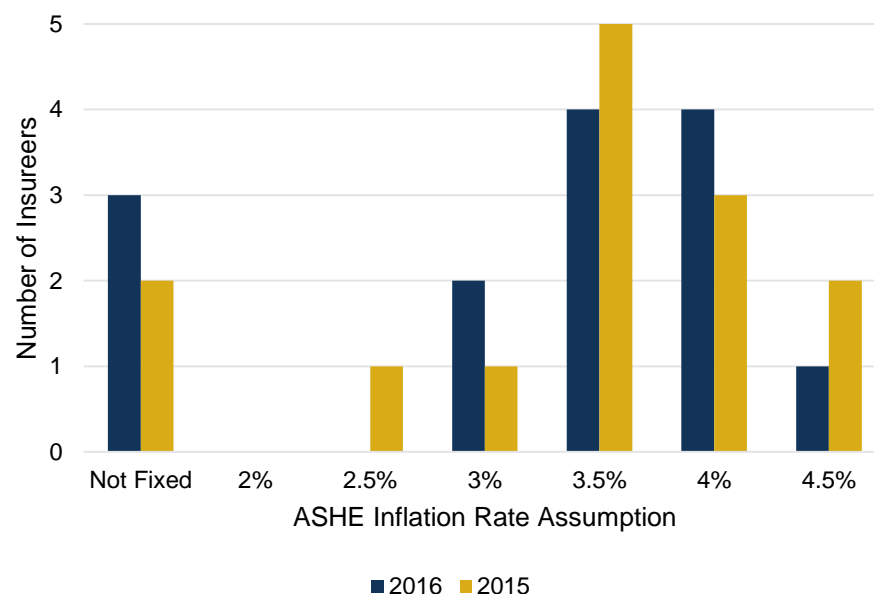
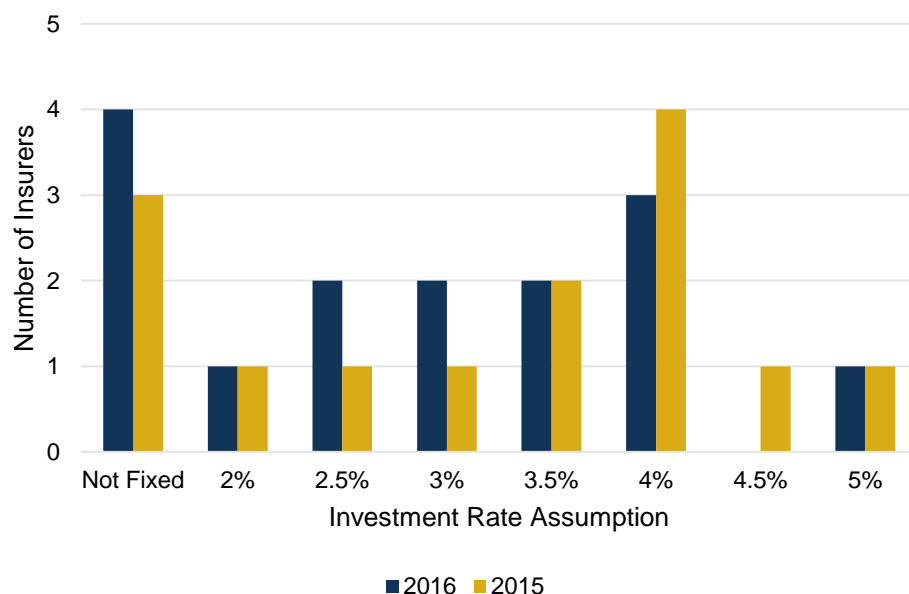
- For insurers, the most popular real discount rate remained at 0% per annum, although the distribution of real discount rates has shifted to more negative rates.



Discounting – components of real discount

Investment return and ASHE inflation assumptions (GAAP)

- 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.

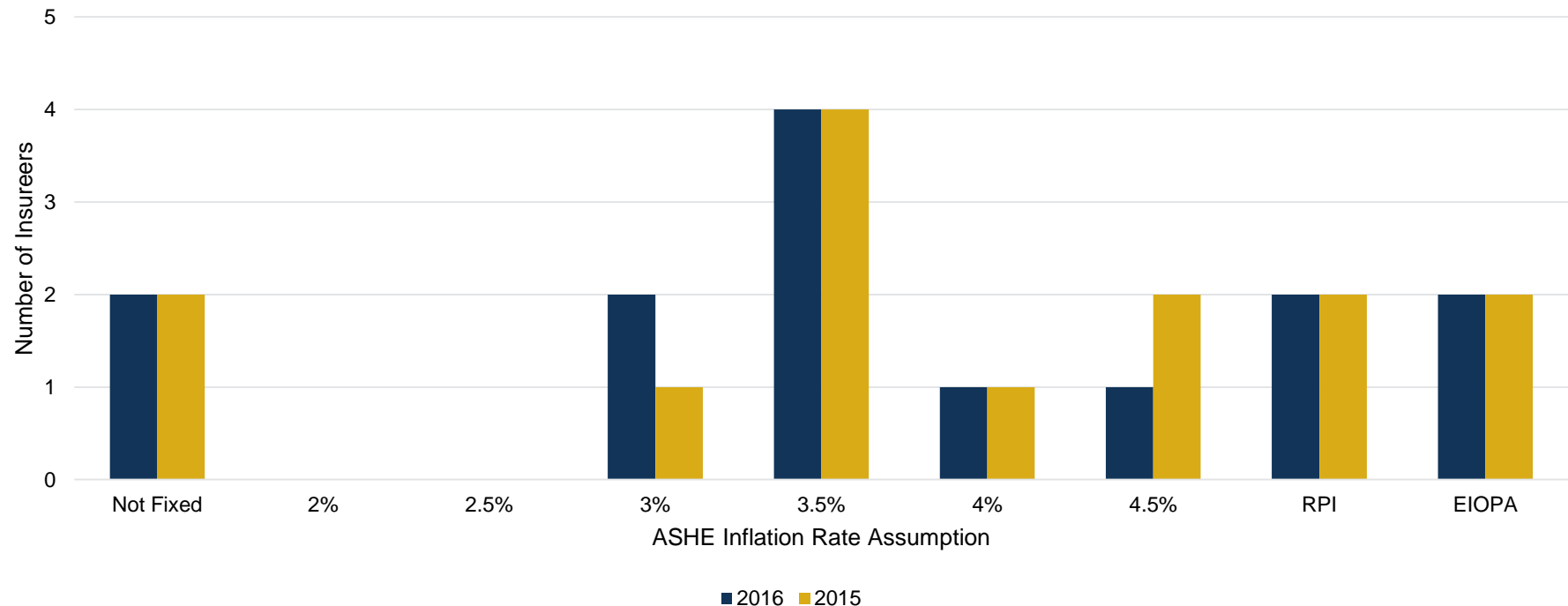


Discounting – reinsurers (GAAP)

- Two of the reinsurers did not discount due to US GAAP reporting requirements
- Of those that did discount:
 - Two had a real discount rate of 0% per annum
 - One had a real discount rate of -1% per annum.
- Their long term yields were based on their portfolio of assets and pre-Brexit corporate bond rates.
- ESG projections taking into account historic ASHE and CPI fed their inflation assumptions

Discounting – Solvency II

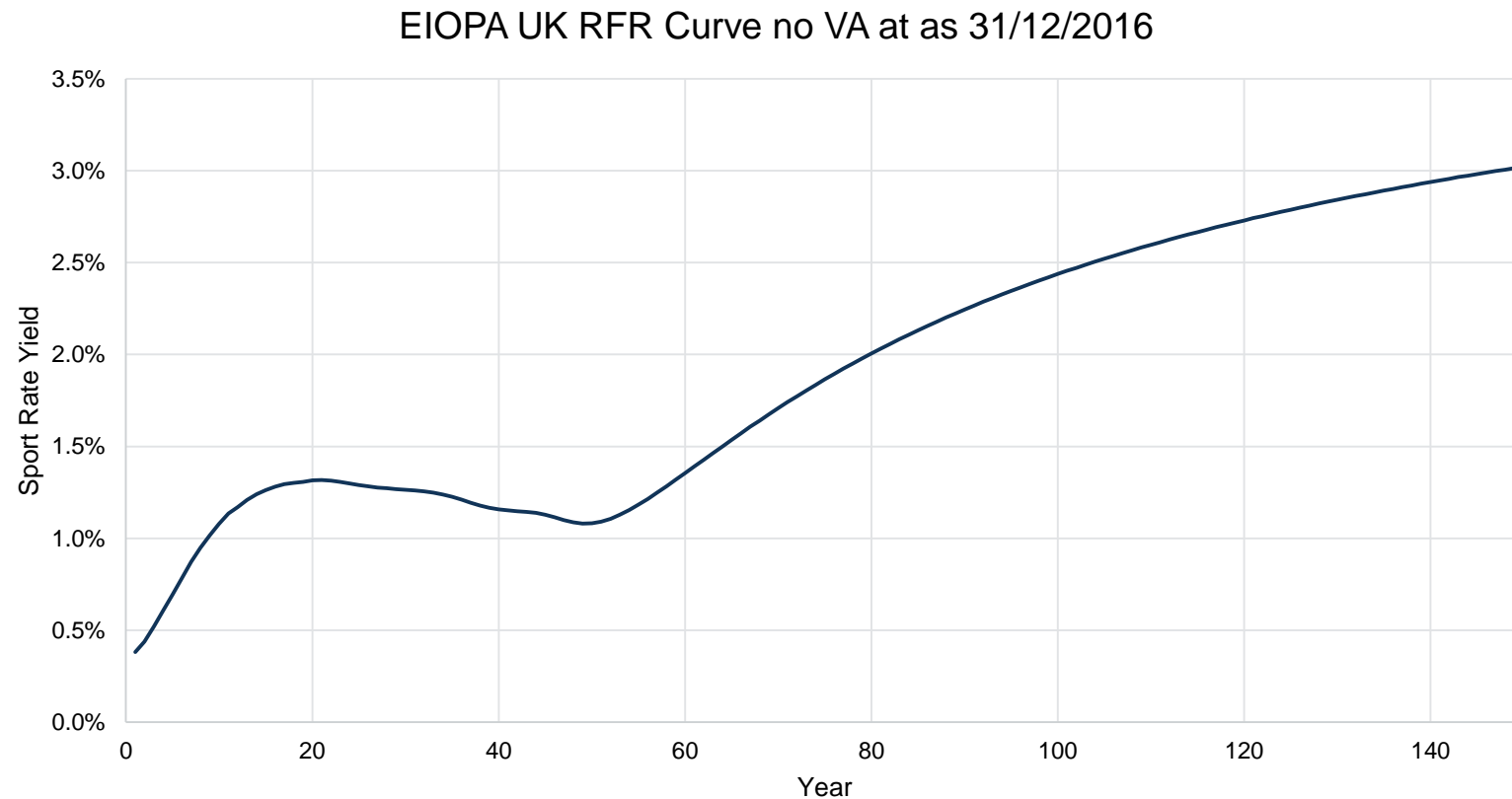
- As the EIOPA curve is prescribed, the main question revolves around the inflation rate used. For insurers:



- All reinsurers used the same ASHE rate for all valuations.

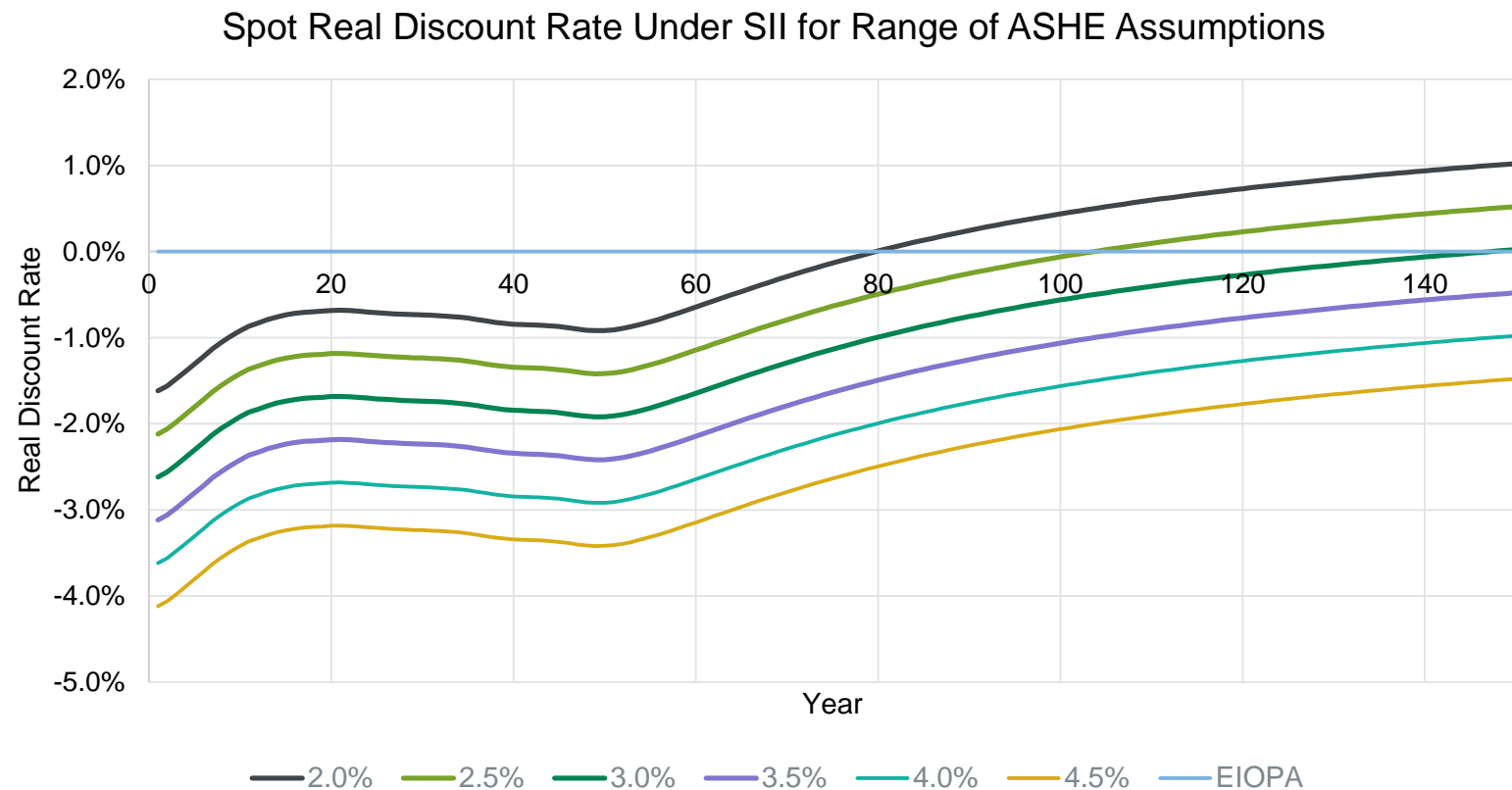
Discounting – Solvency II

- EIOPA spot yield curve:



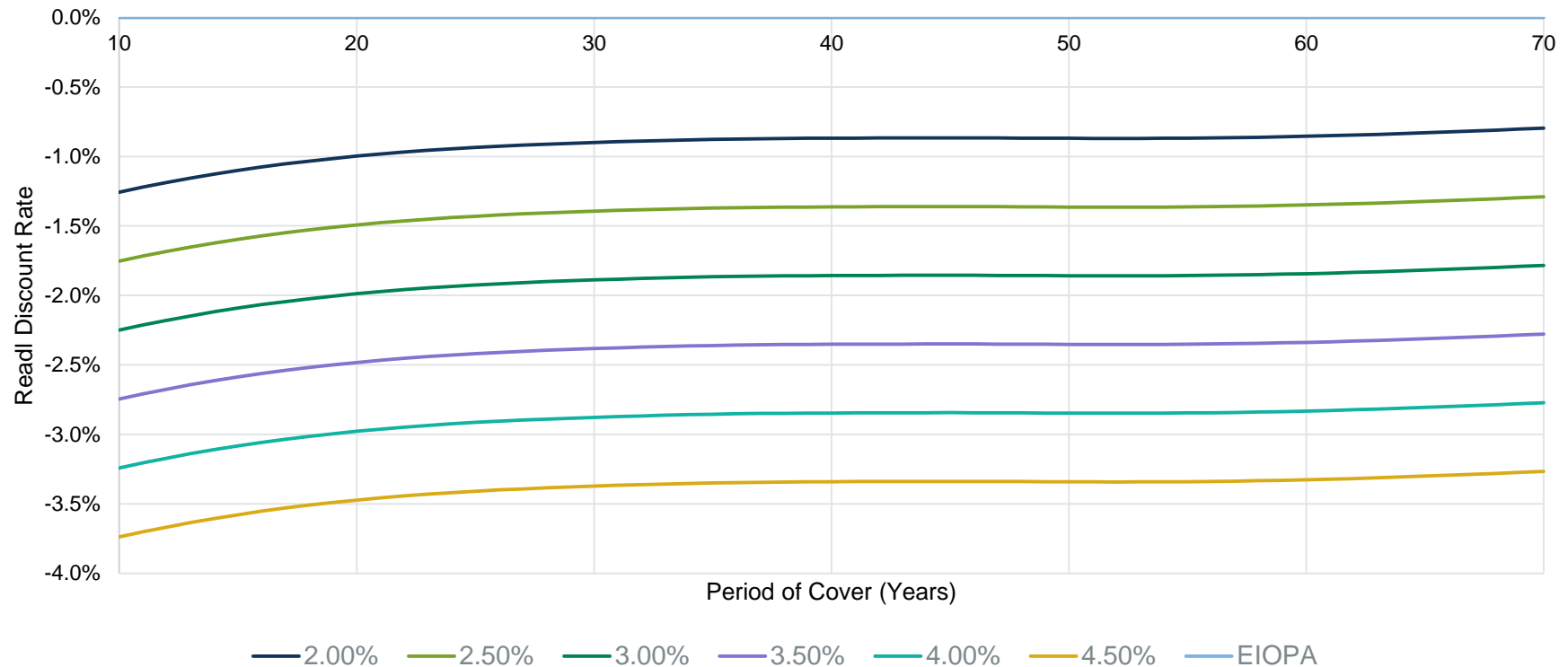
Discounting – Solvency II

- Combining ASHE assumptions with the EIOPA curve to give the spot real discount rate curve:



Discounting – Solvency II

- Combining ASHE assumptions with the EIOPA curve, to give the average real discount rate over different period lengths:

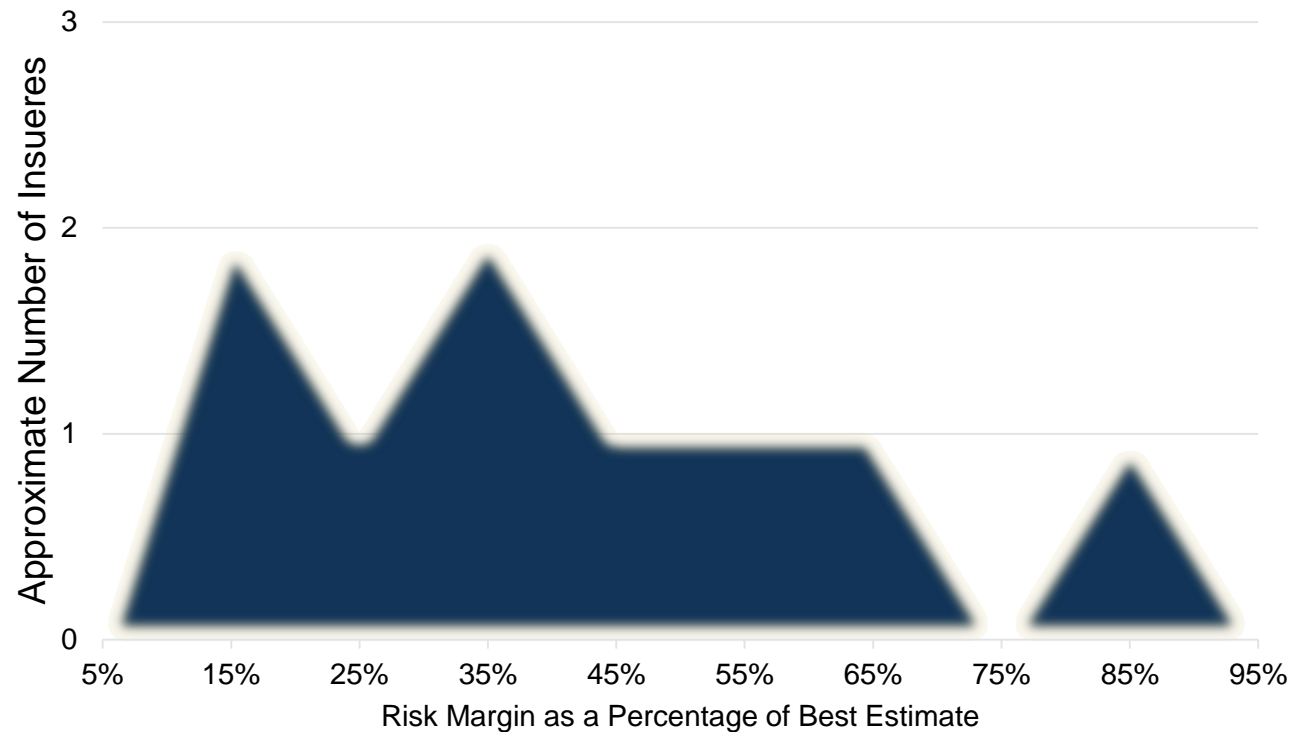


Discounting – Solvency II

- None of the insurers or reinsurers asked had any transitional arrangements.
- Four out of fourteen insurers said they were using a volatility adjustor but none were using a matching adjustment.
- None of the reinsurers used either the volatility adjustor or the matching adjustment.

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:



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 Insurers	94	7	13

- Reinsurers that provided this information had 76 variation orders in total and 25 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.
- Five insurers and one reinsurer allowed for bad debt under UK GAAP / IFRS / other, but all must under Solvency II.

Uncertainty in reserving

- Twelve insurers and all the reinsurers estimated reserve uncertainty for PPOs either stochastically or through scenario testing.
- The CVs for the gross PPO uncertainty ranged from 20% to 156% depending on whether it was settled, potential or pure IBNR PPOs being considered.
- The majority of settled PPO gross CVs were between 20% and 30%.



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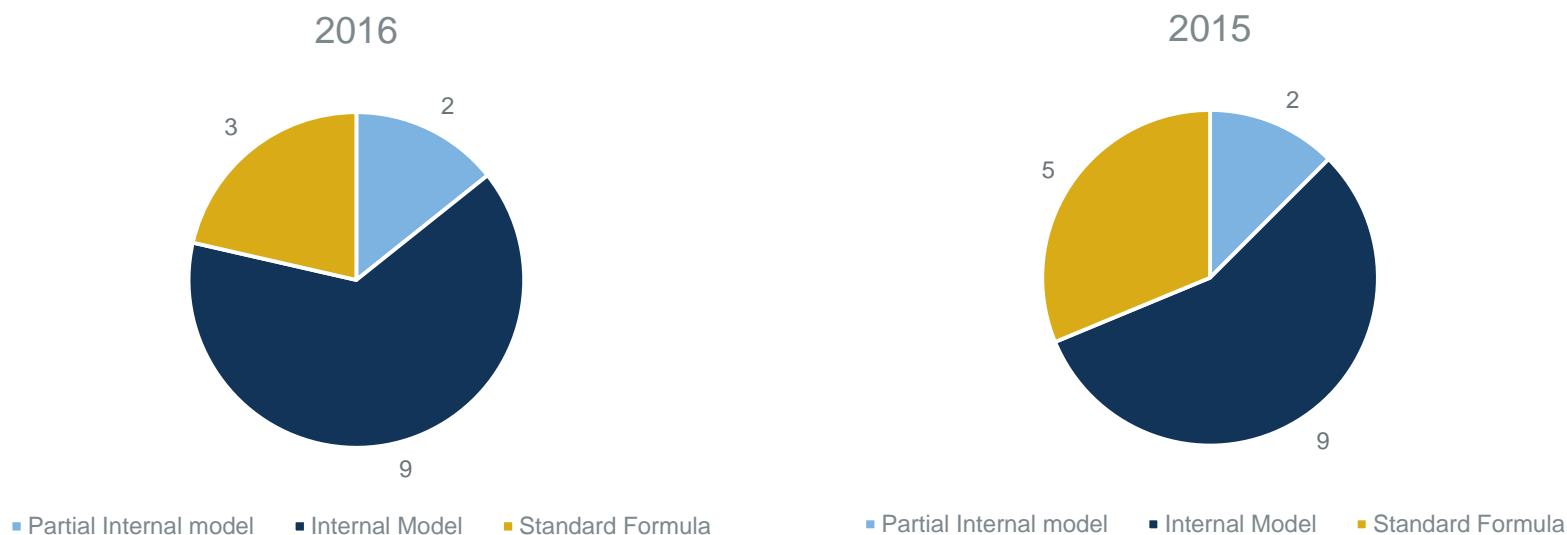
Actuarial methodology

Capital modelling

2 May 2017

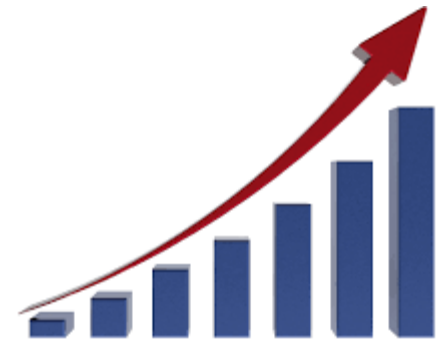
PPOs in SCR

- Around two thirds of 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.
- Four of the five reinsurers used an internal / partial internal model with one using the standard formula.



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.



Differences between Pillar I and III



- Most insurers / reinsurers said that there was a lower capital requirement for Pillar I vs Pillar III:
 - Five said that the one year measure of risk was between 25% and 40% of the ultimate measure of risk
 - One said there was no difference
 - One said the one year measure was only 15% of the ultimate measure.
- Three insurers said they had different bases for evaluating economic and regulatory capital.
 - Two of those that used the standard formula for PPOs in their SCR used an internal model for PPOs in their economic capital.

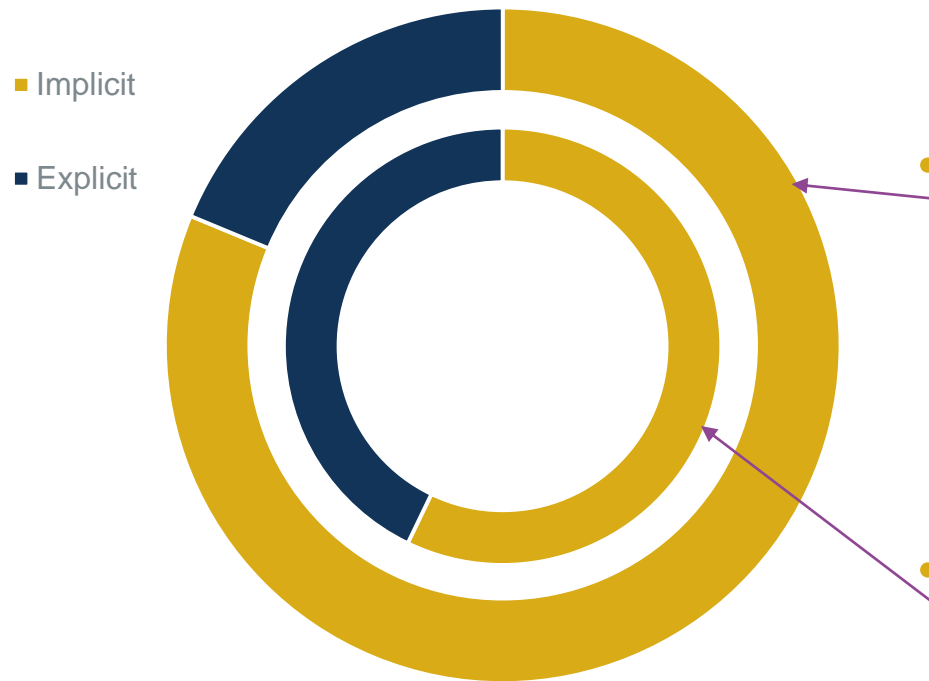


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Pricing and claims management

How are PPOs allowed for in pricing?



- Three insurers said that they apply an explicit load or margin to their prices to cover PPOs, with eleven allowing for PPOs implicitly.
- Six insurers explicitly took into account the cost of capital of PPOs when pricing, with eight saying it was an implicit assumption or did not do so.

Claim management procedures

- Most insurers said that there was no difference in their approach or claims handling procedures to settling claims via a PPO or lump sum and that they didn't use measures to actively encourage / discourage PPO settlements.
- Some insurers responded that they required more information or used specialist teams to deal with potential PPO settlements.



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Ogden discount rate

2 May 2017

Ogden discount rate

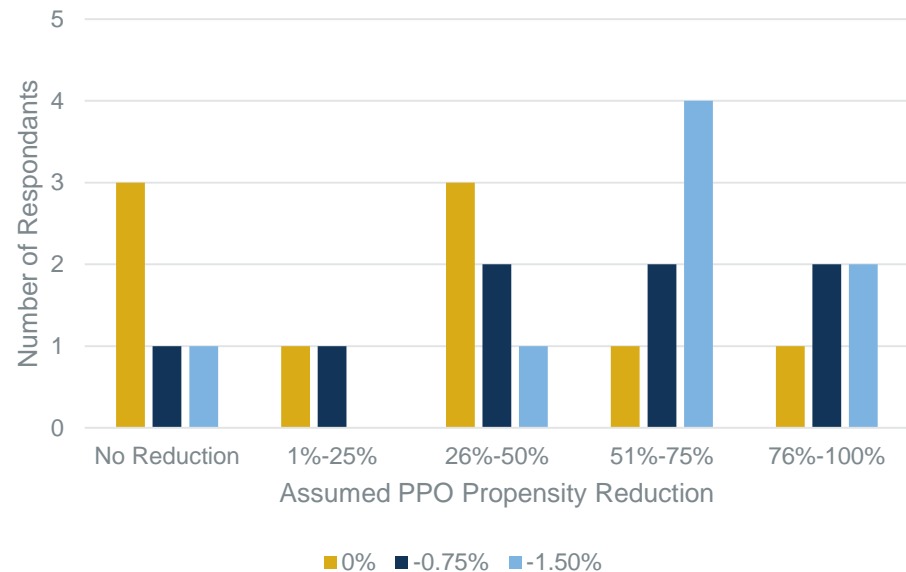
- On 27 February 2017, the Lord Chancellor, Elizabeth Truss, announced the result of the consultation on the discount rate used to calculate Ogden settlements.
- The new Ogden discount rate was set at -0.75% per annum, applicable from 20 March 2017.
- A further consultation in 2017 was announced to consider 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.
- In addition to the telephone interviews (conducted in winter 2016-2017 and spring 2017) which considered the 2016 year-end position with respect to the Ogden discount rate, we issued a second round of questions (in spring 2017) specifically in relation to the change in the discount rate.

Ogden discount rate – 2016 year-end position

- All but two insurers valued non-PPOs within the actuarial best estimate (ABE) on an Ogden 2.5% per annum basis, i.e. the prevailing discount rate.
 - The two insurers that valued ABE reserves on a different basis did so at a rate of 1.5% per annum.
- While the majority of insurers held a margin for a reduction in the Ogden discount rate, this was often as part of a general margin as opposed to a specific margin.
 - There was no consensus in terms of allowance, with various insurers including an allowance for the Ogden discount rate dropping to 2.0%, 1.5%, 1.0% and 0% per annum.
- Of the reinsurers asked, three valued non-PPOs on an Ogden 2.5% per annum basis and one at a 2.0% per annum basis. All four of the responding reinsurers held a margin for a reduction in the Ogden discount rate as part of a general margin.

Ogden discount rate – post the announcement

- Of those insurers and reinsurers for which a response was received:
 - All apart from one are now or will be assuming a -0.75% per annum discount rate for valuing non-PPOs within the actuarial best estimate (ABE). (One reinsurer was waiting for updates from cedants on case estimates, but was setting IBNR at -0.75% per annum.)
 - As part of the revised valuation, two respondents made no explicit allowance for a change in PPO propensity, while others assumed a reduction in the PPO propensity.
- Insurers and reinsurers were asked what their previous assumed reductions in PPO propensity would have been, from scenario analysis, had the Ogden rate fallen to 0%, -0.75% or -1.5%



Ogden discount rate – post the announcement

- In terms of additional margins for further reductions in the Ogden discount rate, this was often as part of a general margin, in some cases being sufficient to cover a reduction to -2.0% per annum.
- Some respondents said that it was too early to comment on any changes in the speed of settlement of claims or claimant / lawyer behaviour, whereas others have noted:
 - Very few (or no) claim settlements since the “announcement of an announcement” in December 2016
 - A general slowing down of settlements
 - Claimant lawyers actively sought to slow down lump sum settlements until after the discount rate announcement.

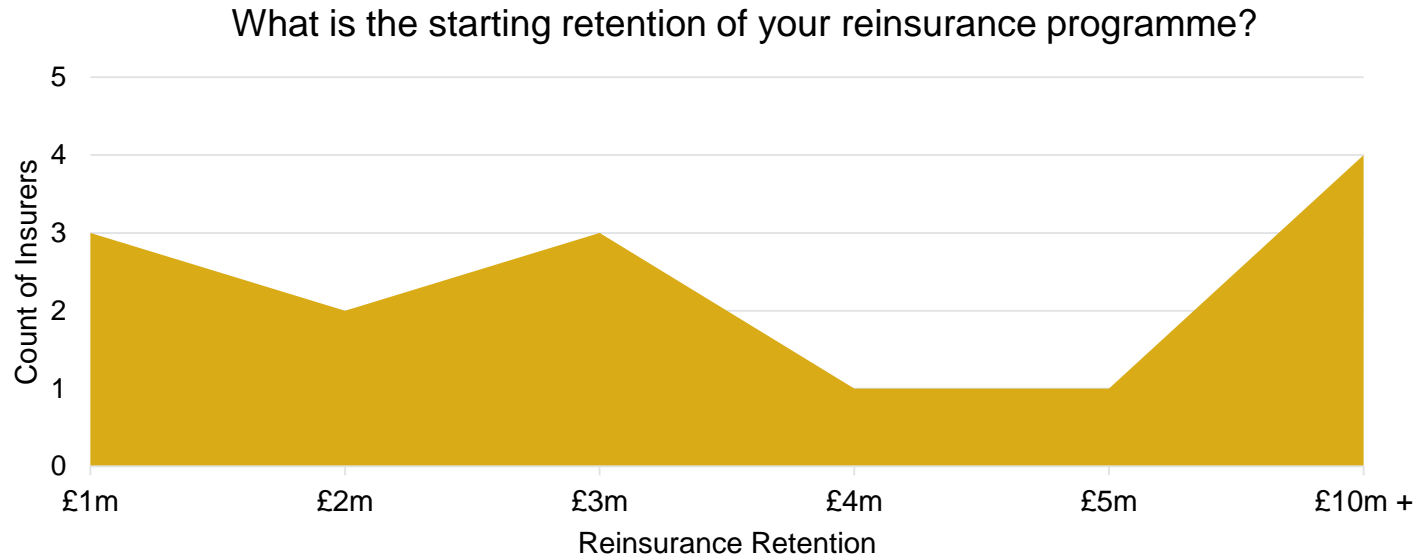


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Reinsurance and alternative risk transfer

2 May 2017

Reinsurance in the market



- Only two of the 14 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, 12 insurers said they did.

Reinsurance availability

- Four out of the five reinsurers asked stated that their reinsurance offerings had changed due to PPOs:
 - One noted that they do not write any Motor RI business anymore due to the cost of capital.
 - Another stated that they no longer wrote uncapped UK / Ireland XoL Motor contracts.
- One reinsurer insisted on capitalisation clauses while three used them on a case by case basis.
- All reinsurers insisted upon an indexation clause in their reinsurance contracts.

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.

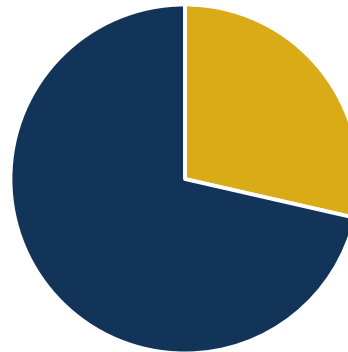
Reinsurers' view on capitalisation clauses

- Reasons for offering capitalisation clauses included:
 - Having to account for PPOs on an undiscounted basis – impacting profit and loss account.
 - The effect of the uncertainty of ASHE and longevity on the profitability of the treaty, the cost of a capitalised cover is less than the cost of a traditional XoL cover.
 - To offer cedants another option
- Only two reinsurers have experienced capitalisation clauses kick in, the others had not experienced any.

Insurers' view on capitalisation clauses

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

Do you have a capitalisation clause in your reinsurance contract?



■ Yes ■ No

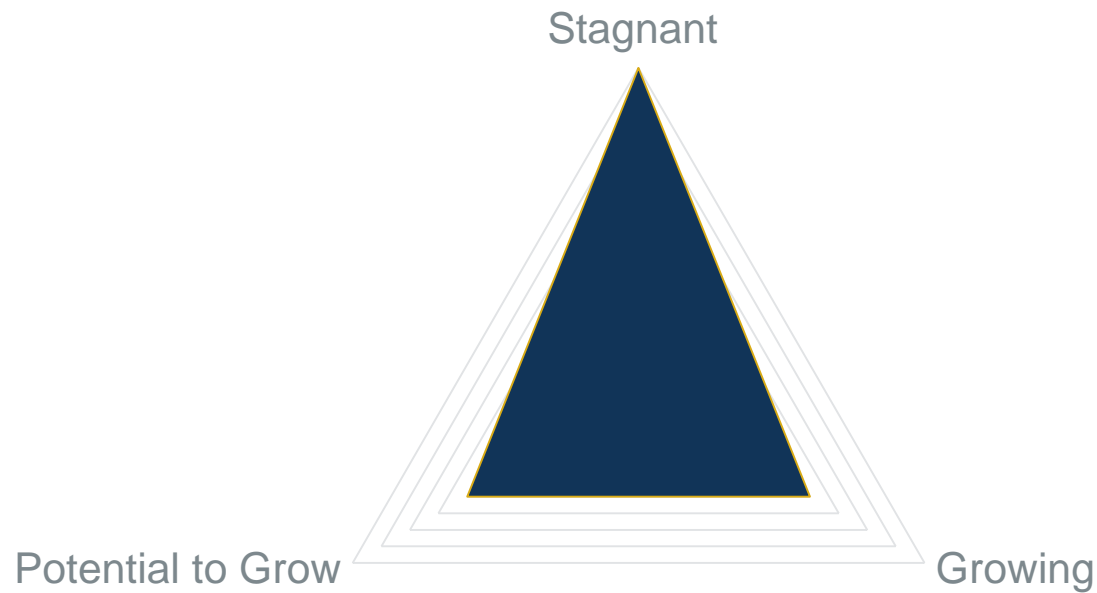
- Of those that didn't have a capitalisation clause, the clear majority stated that they were keen to avoid them.

Risk transfer – hurdles

- All but one insurer would consider transferring the risk associated with PPOs if the right option arose.
- 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 be.



Risk transfer – growing or changing





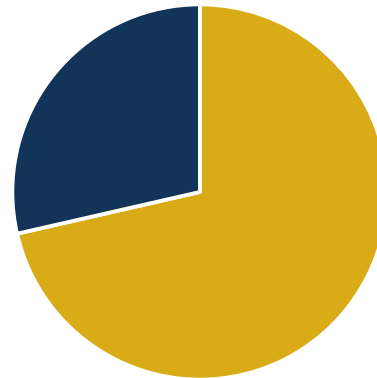
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Actuarial methodology

Investment

Investment strategy

- Ten of the 14 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 one reinsurer said that they had changed their investment strategy.



■ Yes ■ No

- Two insurers said that they have ring-fenced assets specific to PPO liabilities, although others have long duration assets to cover all longer term liabilities.

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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Conclusions

2 May 2017



Conclusions

- **In general, companies' concerns regarding PPOs are not too dissimilar to last year.**
 - This is mainly because this survey was conducted as at year-end 2016.
 - Now that we have seen a large decrease in the Ogden discount rate we should expect even more uncertainty going forward regarding PPOs.
- **We see a range of answers to the limited number of questions we have posed post discount rate change.**
 - The IFoA PPO Working Party intends to monitor any changes in PPO propensity closely.
- **Whatever reasonable ASHE inflation rate is assumed in PPO modelling, the outlook is that a negative average real discount rate will arise under Solvency II.**



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 presenters.



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Questions

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