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Periodical payments

Observations from the UK experience

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Terminology

- Periodical Payment Order (PPO) = annual payment to plaintiff /claimant for life
- ASHE Index = Annual Survey of Hours & Earnings
- ASHE 6115 Index = collates carer earnings
- ASHE 6115 Percentile Index = closest matching carer rates for that specific plaintiff /claimant
- Annuity = life insurance product to fund PPO

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Lump sum v PPO rationale

- PPO rationale: lump sum is inevitably the wrong amount due to risks borne by the plaintiff / claimant:
  - investment risk
  - inflation risk
  - life expectancy risk
- Courts Act objective - above risks should rest with the defendant
- PPOs provide the solution !
- Around 1000 PPO cases in the UK, to include 800+ MIB and NHS cases. Swiss Re has around 60 cases

PPO features

- Scope / features of a PPO
  - any age / type of injury with future losses (although typically catastrophic injuries)
  - applies to future care, and can apply to earnings
  - other future heads can be PPO'd, subject to a suitable index being available
  - variability option (upon specified medical deterioration, or improvement)
  - Can be imposed by the court against the wishes of one or both parties

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Courts Act 2003

- Introduced in April 2005
- The Act aims for PPOs to be made inflation proof by indexing them to the Retail Price Index (the default position)
- Plaintiff / claimant solicitors argue the Retail Price Index does not reflect cost of care (wage) inflation and therefore a more accurate index should be used
- The Courts Act does allow for an alternative index to be used
- The choice of an alternative index is either agreed between the parties or imposed by the court
- All PPOs are retrospective

Key developments

2006

- **Flora v Wakom, House of Lords**
- Discretion to use a wage related index as an alternative to RPI confirmed. Defendant's Strike Out application failed

2006

- **Thomptone v Tameside and Glossop Acute Services NHS Trust, High Court**
- Awarded earnings indexation for care PPO (ASHE6115 75th percentile), rather than RPI

Key developments

2007

- **Waseem Sarwar v Kamran Ali and MIB, High Court.**
- PPO with different indices for earnings and care; Earnings = ASHE aggregate, at the 90th percentile, for full time male employees. Care = ASHE 6115 at the 90th percentile

2008

- **Rowe v Dolman, Appeal Court.**
- Defendant sought a PPO because of a dispute over life expectancy. Appeal Court awarded a lump sum because contributory negligence (20%) would have resulted in a PPO shortfall to the injured party

2009

- **Eeles v Cobham Hire Services, Appeal Court.**
- Guidance regarding the impact of interim payments on the court's discretion to award a PPO. See next slide

Key developments

- Lower court accepted claim would probably settle on a PPO basis
- Interim payments of circa £500k already made (= past losses)
- Plaintiff wanted another £1m for a new home to house him + carers
- Judge agreed, saying the claim on a fully capitalised basis was way in excess of the interim payments made / requested
- Defendant appealed – they disputed the value of the accommodation claim, saying that if the court ultimately decided the value was considerably less than £1m, it would impact the judge's discretion to award a PPO
- Court of Appeal agreed. In likely PPO cases, the value of interim payments should not exceed past losses + interest and general damages + interest
- Accommodation claims could be capitalised but they must be valued conservatively
- All other future losses must be ring fenced since they could be PPO'd

The qualities of a suitable index according to "Thompstone"

- Reliable
- Accessible
- Consistent over a long period of time
- Can be reproduced in the future
- Is simplistic and consistent in its application

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Reserves

- Long term difference of earnings above RPI = circa 1.7% (over last 40 years)
- Market reserving: varies between a 0% and 2.5% discount rate

Cedant Reserving of PPO Cases	
Discount Rate Applied	% of PPO Cases
0%	6%
1.5%	9%
2%	13%
2.5%	72%

- Setting reserves on a 1.5% basis, or higher, given the historical performance of RPI v Earnings, is arguably unrealistic – problems ahead!

Financial impact

- 25 year old male
- No reduced life expectancy . ***3.789m @ 2.5% v 7.2m @ 0%***
- **Future care costs 150k pa**
- On lump sum basis (2.5% discount rate used) = 3m
- At 1.5% = 3.8m
- At 0% = 5.9m
- **Future loss of earnings 30k pa to age 70**
- On lump sum basis (2.5% discount rate used) = 789k
- At 1.5% = 948k
- At 0% = 1.3m

Settlement strategy

- Claims Co-Op – PPO specified in Extended Loss Clause – cedant to consult with R/I before agreeing PPO and annual updates required
- No lump sum uplift to buy off PPO risk
- No objection to PPO settlement if appropriate
- Annuity market: Only Alico (AIG) – very expensive and therefore uneconomic
- More likely to self fund
- Pay no more than quarterly in advance

Paying in advance

- 50 year old male
- Life expectancy reduced to 74 years of age
- Assume a PPO of 300k pa
- Assume an investment vehicle paying interest at 3%pa
- Paid annually in advance, the lifetime benefit is 163k at today's prices
- Paid quarterly in advance, the lifetime benefit is 30k at today's prices
- Consequently, if the PPO is to be paid annually in advance, the defendant should reflect that in their settlement offer

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SwissRe PPO trends: average FGU amount

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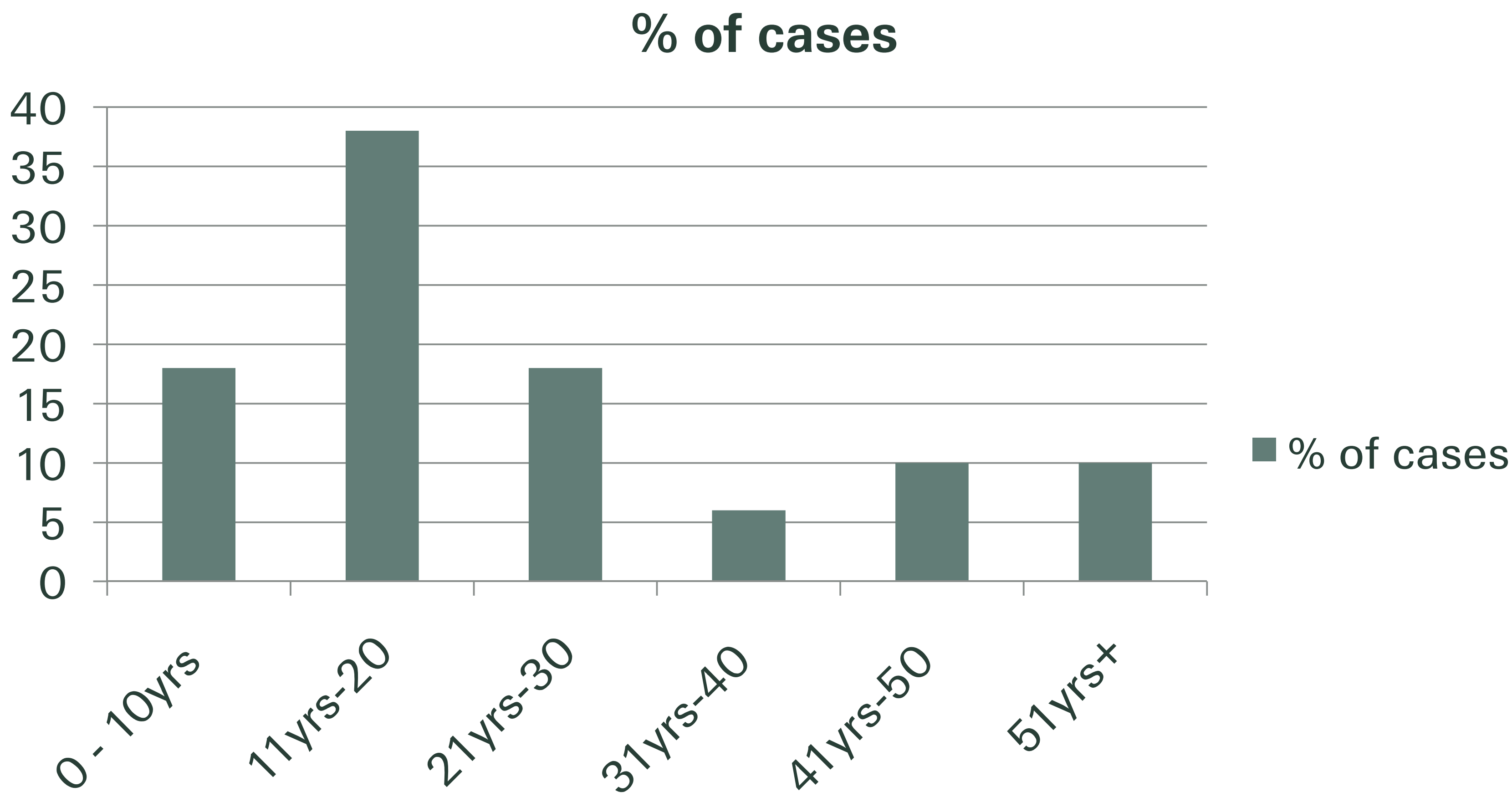
SwissRe PPO trends: average age of claimant



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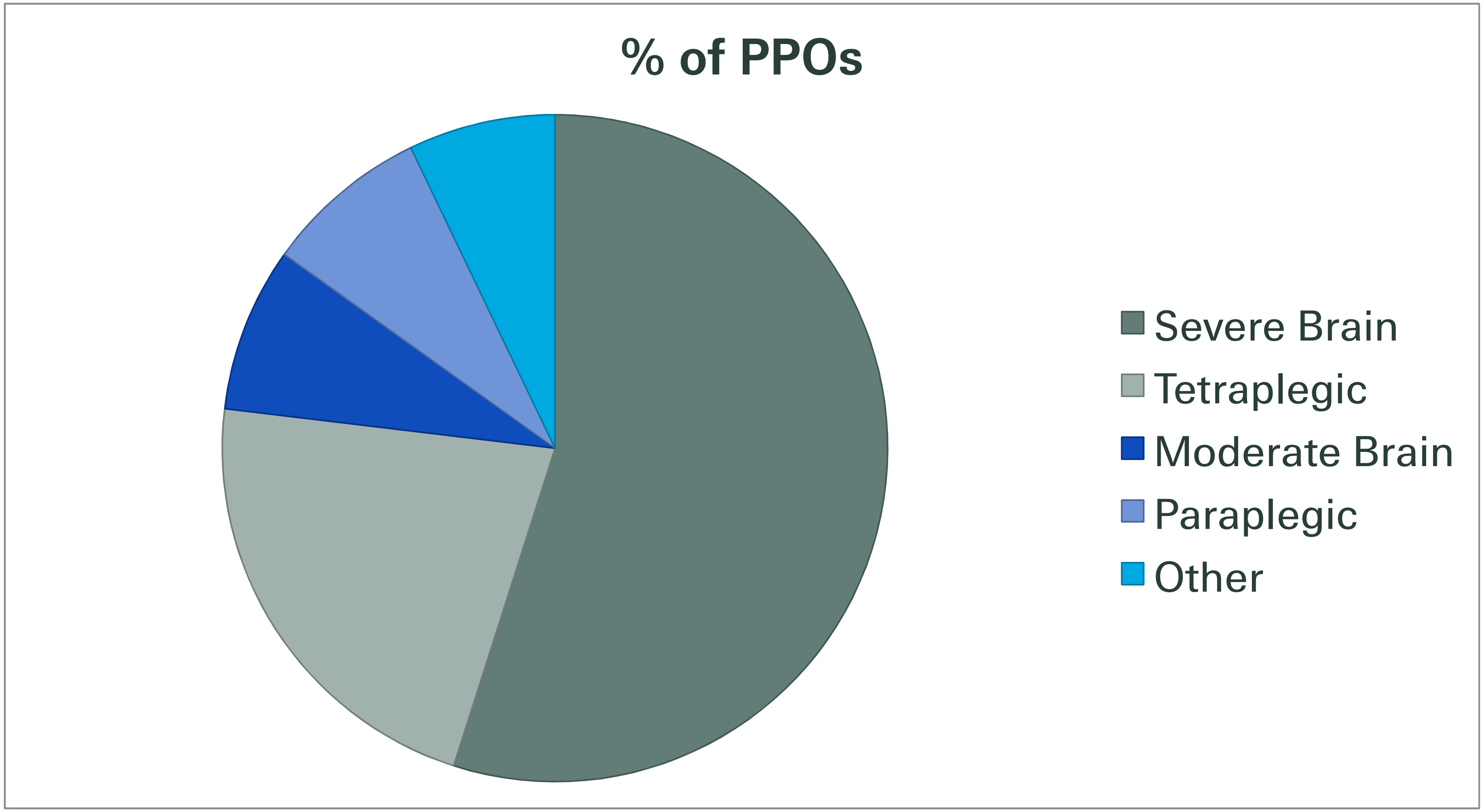
SwissRe PPO trends : PPO settlements per injury type



Warning , warning , danger, danger!!!

- IRISH PPOs MAY WELL BE RETROSPECTIVE

- UNREALISTIC RESERVING WILL CAUSE PROBLEMS FOR ALL OF US

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Implications of PPOs for insurers – risks

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Additional Risks Generated for the Insurer by PPO Order

- Uncertainty over number of PPOs
- Inflation risk
- Longevity/impairment uncertainty
- Increased net retention uncertainty
- Hedging risk -> Lack of suitable matching assets for ASHE 6115
- Reinsurer credit risk -> insurer exposed to reinsurer default for significantly longer
- Variation orders -> possibility to revisit claim if highlighted at time of settlement

Increased uncertainty + longer duration of liabilities

means

More **risk capital** required for a much longer duration

Implications of PPOs for insurers – Solvency II position

Solvency II QIS5

Allocation to the individual lines of business

TP.1.151. Where non-life and health insurance policies give rise to the payment of annuities, following the principle of substance over form, such liabilities should be valued using techniques commonly used to value life insurance obligations. Such liabilities should be assigned to the relevant line of business for life insurance obligations.

- Requires non-life actuaries to brush up on life insurance techniques
- Classification as life liabilities requires a more sophisticated evaluation approach using more information and explicit assumptions
- Recommendation is to split losses between annuity based and non-annuity based losses

Source: http://ec.europa.eu/internal_market/insurance/docs/solvency/qis5/draft-technical-specifications_en.pdf

Implications of PPOs for insurers – information requirements

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Information required to evaluate a PPO on a gross basis

- Age of claimant(s) at settlement
- Gender(s)
- Mortality table
- Life impairment(s)
- Retirement age
- Annual cost of care/earnings (if applicable)
- Timing of payments
- Indexation basis of payments (historical and assumed future rates)
- Discounting assumptions

Additional information needed to evaluate net of reinsurance position

- Details of stabilisation clause (e.g. Fully Indexed (FIC))
- Timing and amounts of all payments (including non PPO payments)
- Indexation basis of RI deductible up to settlement
- Indexation basis post settlement

- Note: Reinsurance deductible continues to be indexed post settlement at time of each payment.

Lump sum v PPO assumptions

Gross reserving comparison for lump sums v periodical payment orders

Lump sums

- RPI escalation basis for care and earnings
- Discounted at RPI +2.5%
- Real yield is fixed at 2.5% currently
- Ogden tables based on ELT
- No indexation of deductible post settlement

Periodical payments

- ASHE 6115 escalation basis for care costs
- Discounted at:
  - Bond yield of relevant term
- Approximate rule of thumb:

  Real yield = Y% -X%
  - Y = long term nominal yield
  - X = long term ASHE 6115 assumption
  - A discount rate close to zero is not unrealistic
- Mortality basis not prescribed
- Indexation of deductible post settlement

Reserving implications - gross and net of reinsurance

Base sample claim

Claim Profile	Detail
Age at Accident	18
Sex	Male
Type Of Injury	Severe Brain Injury
Life Impairment	5
Annual Loss of Earnings	£25k
Annual Cost of Care	£150k
Retirement age	65
Non PPO settlement	£1.75m
Reinsurance Attachment Point	£2m

- Only cost of care is subject to PPO in this example

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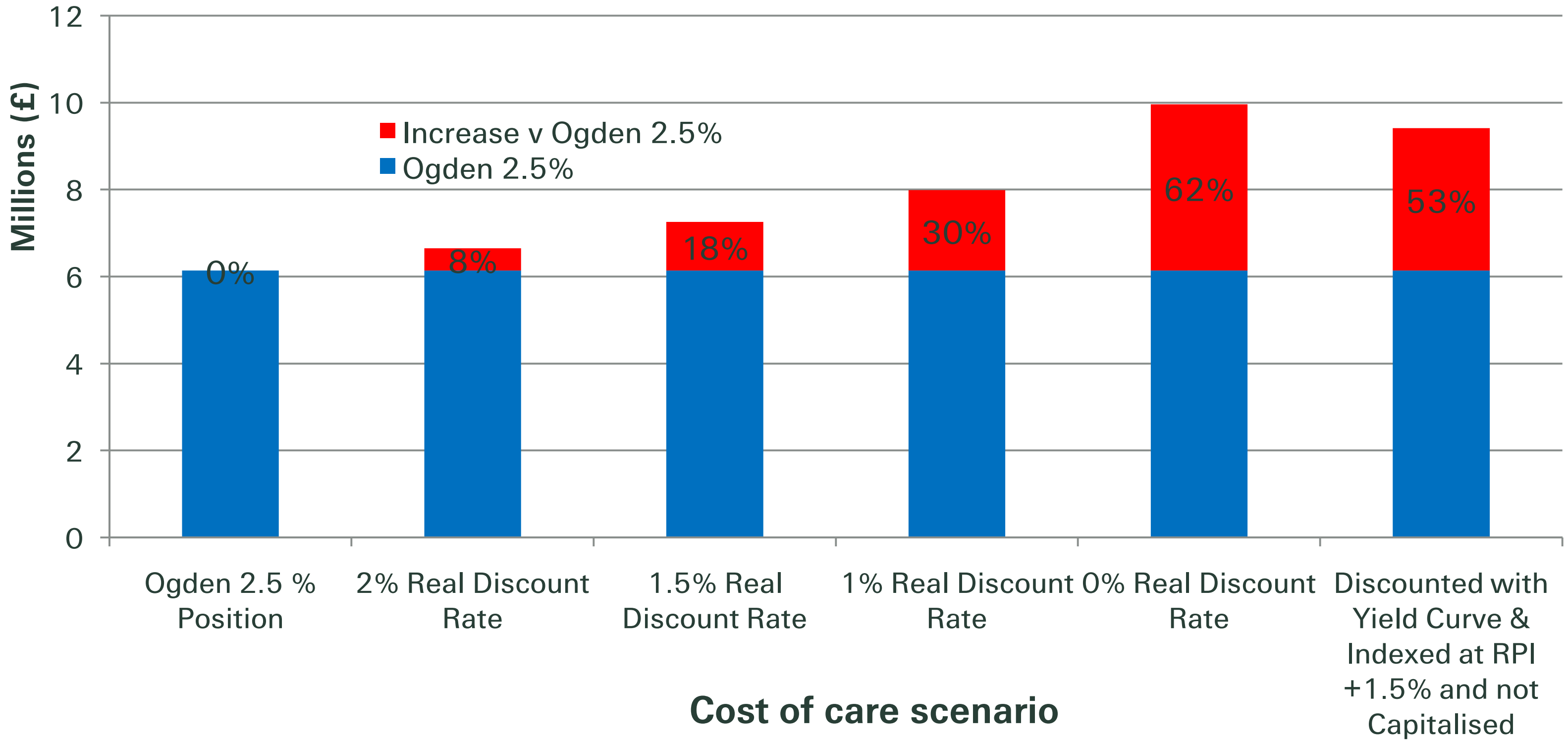
Impact of different cost of care scenarios on gross claim - lump sums v uncapitalised PPO



- The uncapitalised PPO scenario is over 50% higher than the base Ogden 2.5% discount rate

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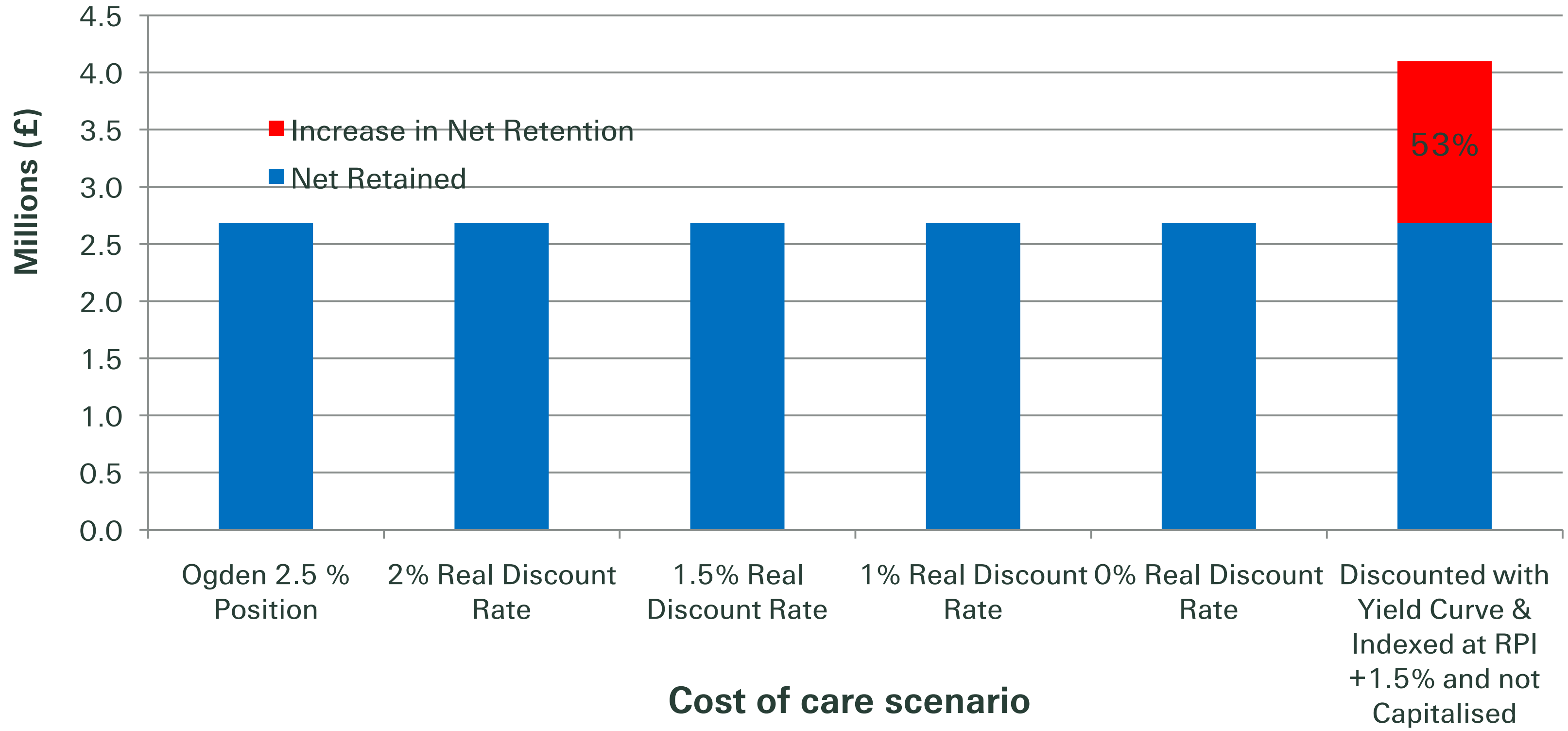
Impact of different cost of care scenarios on net claim - lump sums v uncapitalised PPO



- Increase in expected net retention in excess of 50% for uncapitalised PPO

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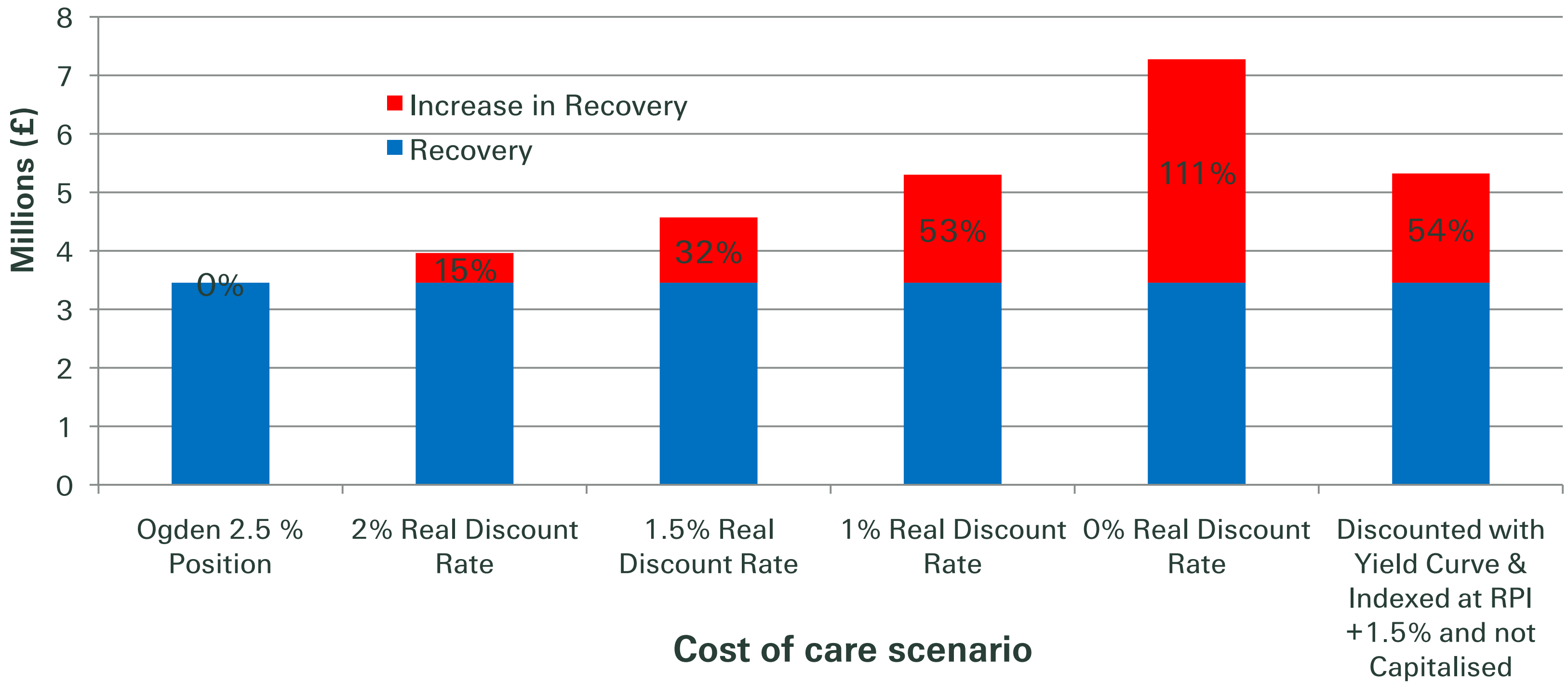
Impact of different cost of care scenarios on reinsurance claim - lump sums v uncapitalised PPO



- Expected reinsurance recoveries increase by more than 50% v the base Ogden 2.5% position

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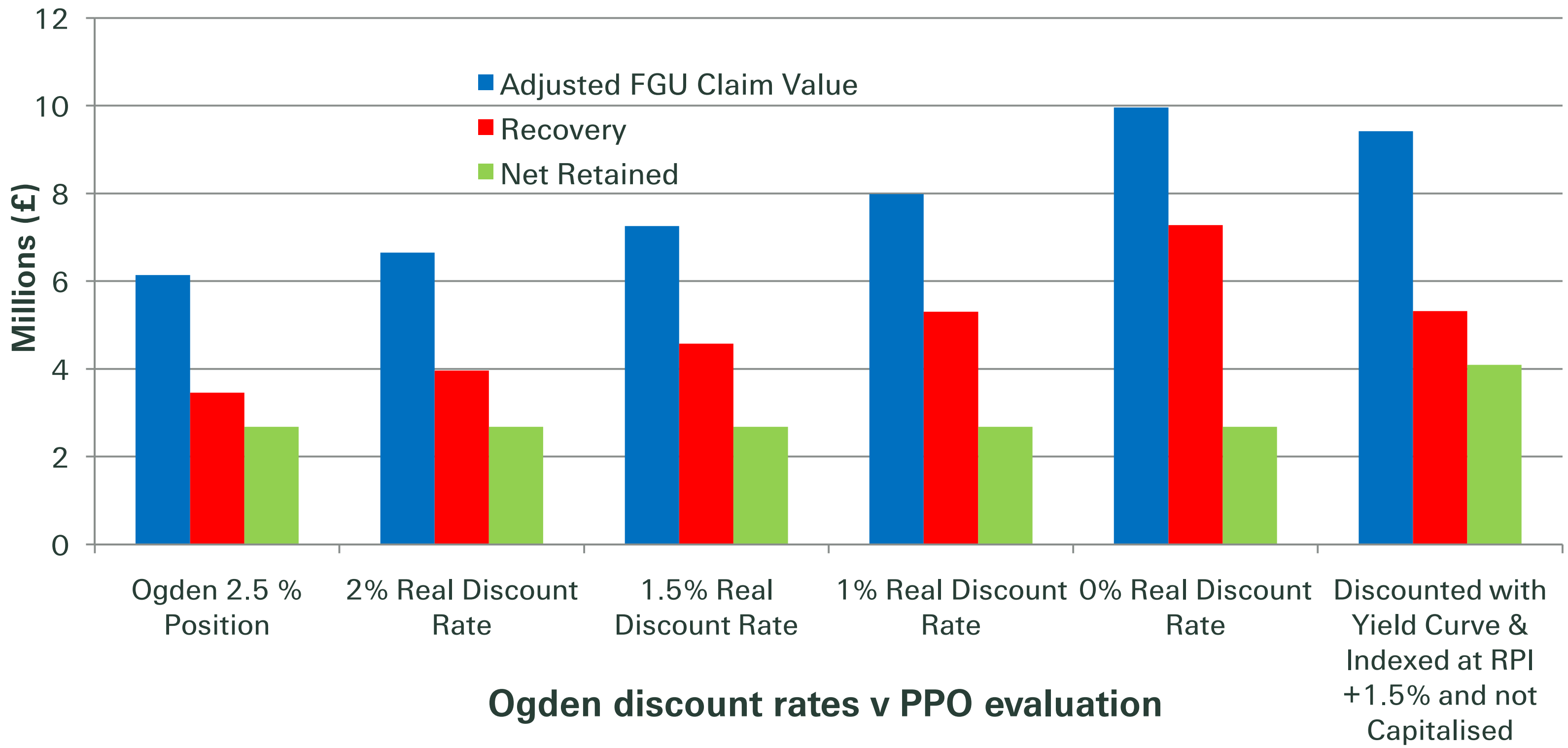
Impact of different cost of care scenarios xs £2m deductible - lump sums v uncapitalised PPO



- Both reinsurer and insurer are significantly impacted by PPOs due to the way the deductible increases post settlement
- Changes in discount rates transfer all the increase to reinsurers

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Reinsurance cash flows

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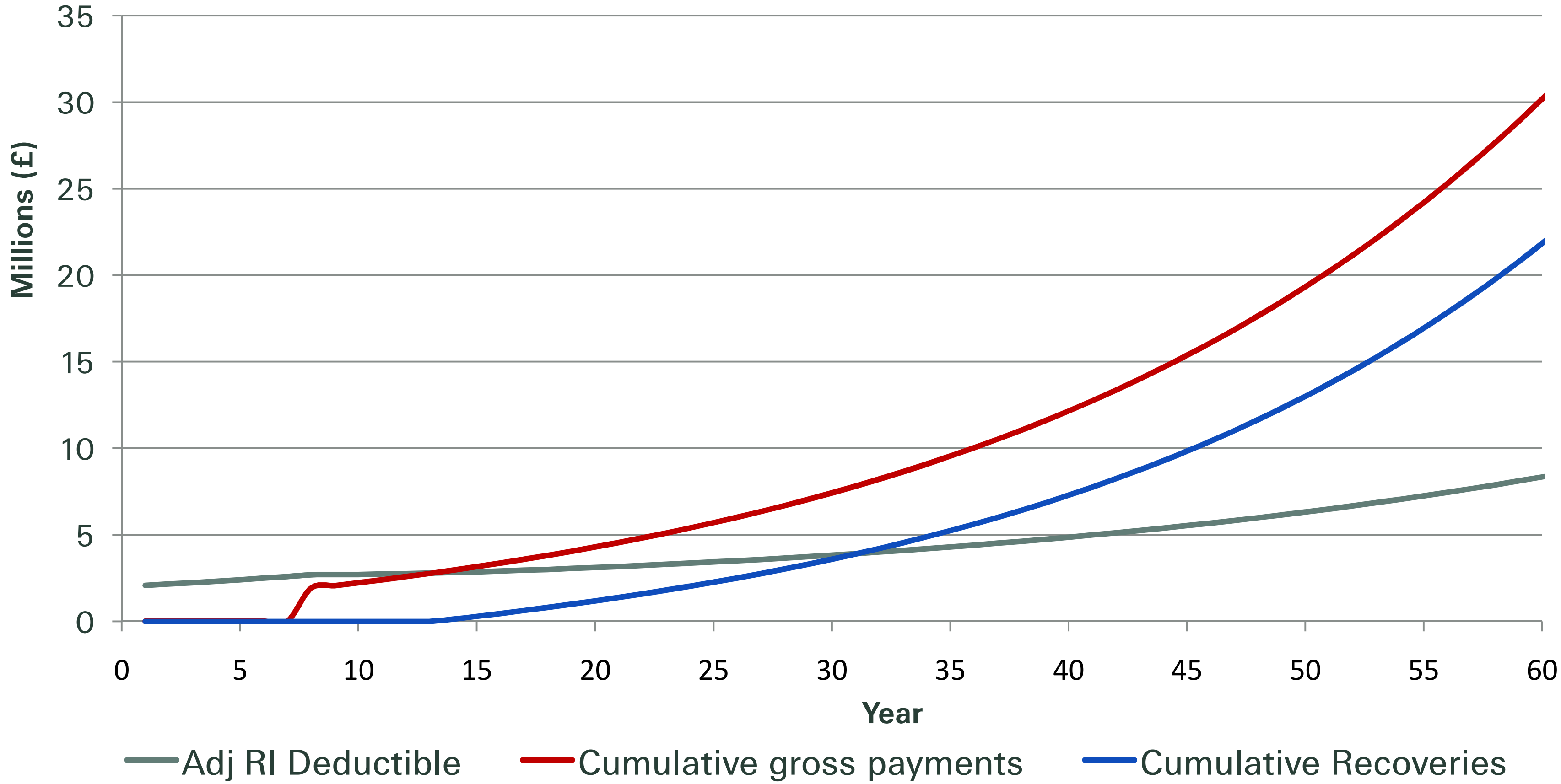
Cash flows for sample claim with reinsurance deductible xs £2m



- Reinsurance recoveries start after 13 years for a £2m deductible

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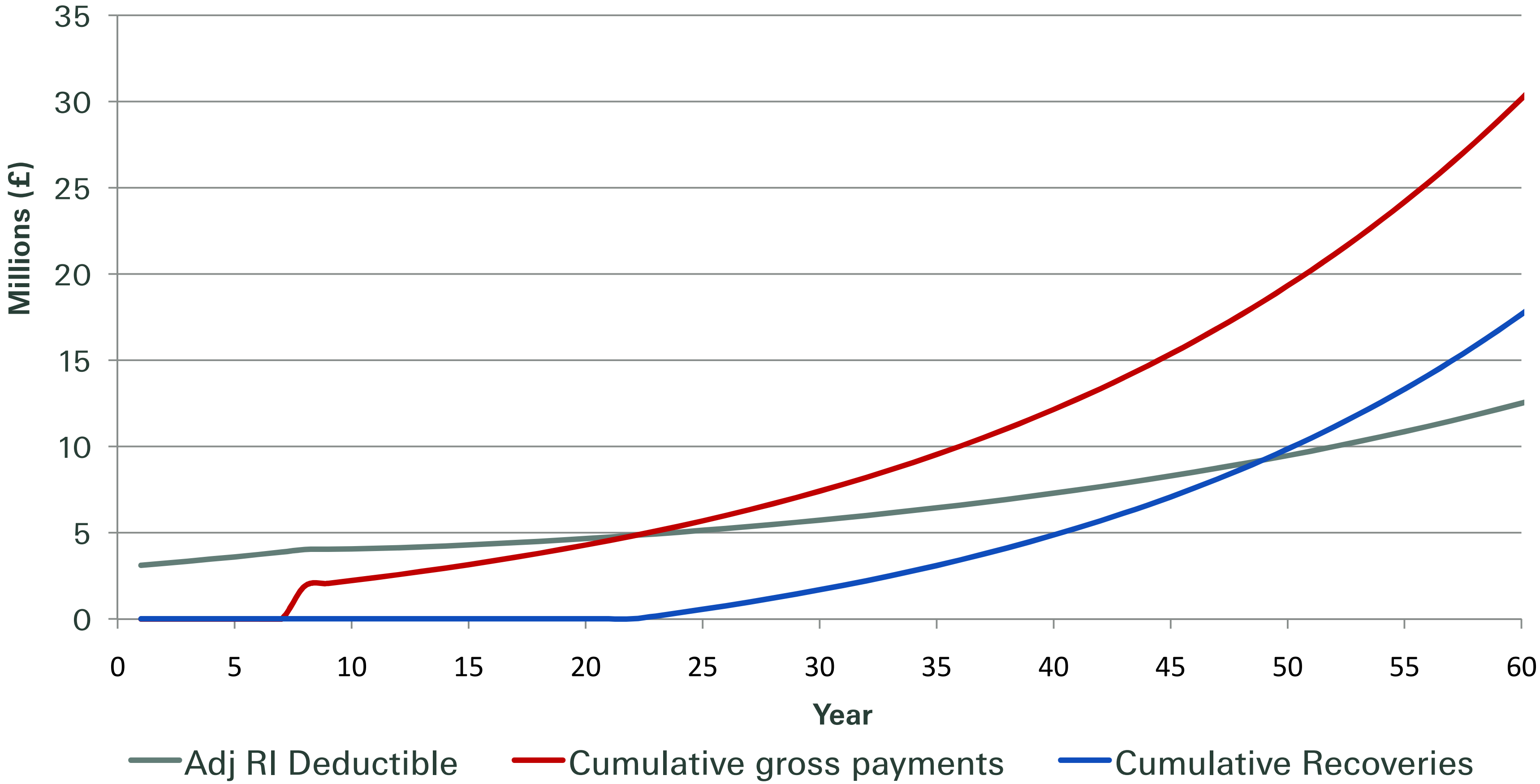
Cash flows for sample claim with reinsurance deductible xs £3m



- Reinsurance recoveries start after 23 years for a £3m deductible

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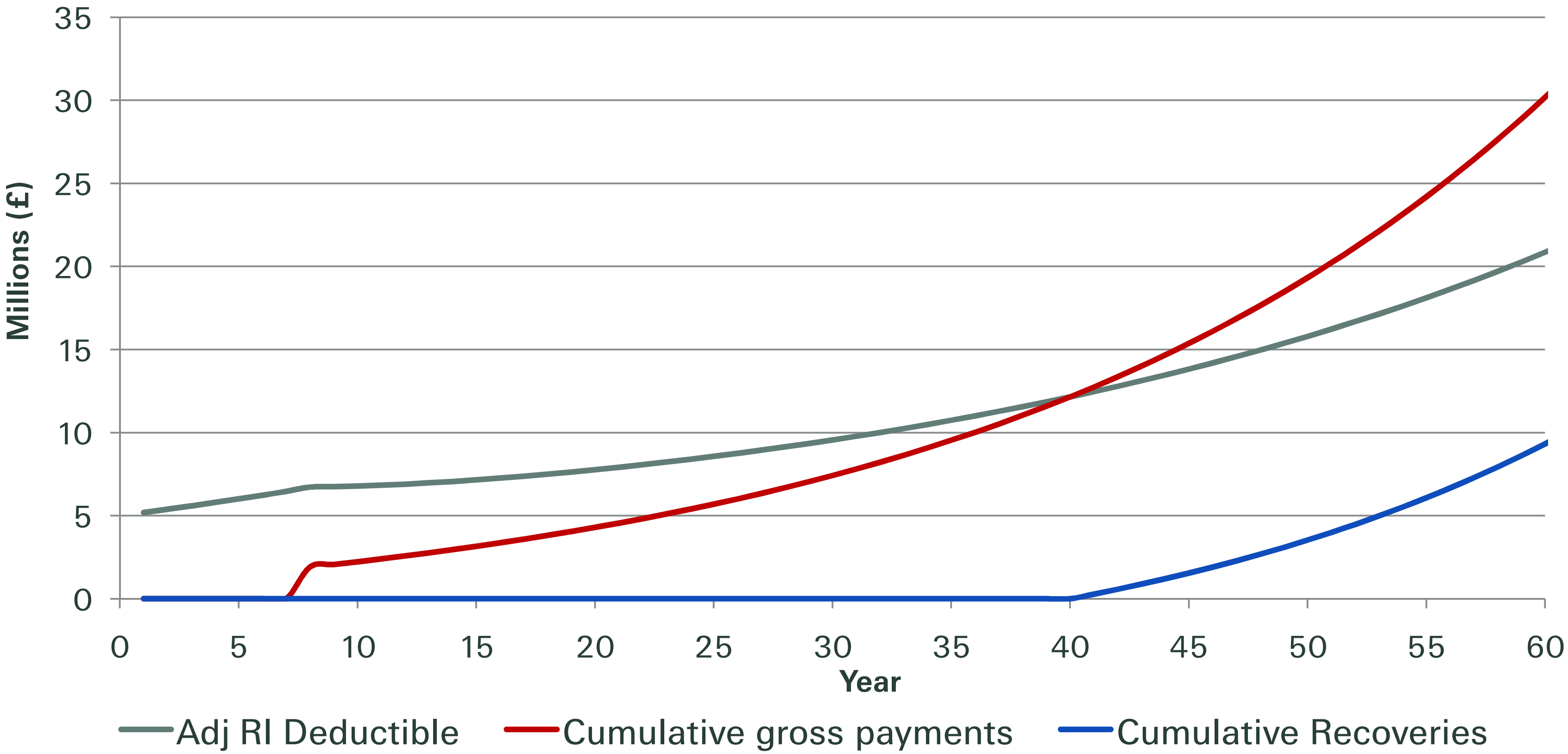
Cash flows for sample claim with reinsurance deductible xs £5m



- Reinsurance recoveries start after 40 years for a £5m deductible
- Higher deductibles increase recovery time in a PPO environment

Reserve sensitivity – life impairment scenarios

Impaired life assessment

- Suitable impaired life tables not available
- Impairment often based on medical expert opinion
- Life impairment used to be a defendant v insurer issue
- Now -> insured view v reinsurer view (can be up to 20yr divergence)
- Life impairment uncertainty may reduce over time
- Possible approaches:
  - Fixed life expectancy
  - Fixed addition (based on expert evidence) to claimant age at settlement and unimpaired thereafter
  - Heavier annual mortality assumption (e.g. 150% of normal life)

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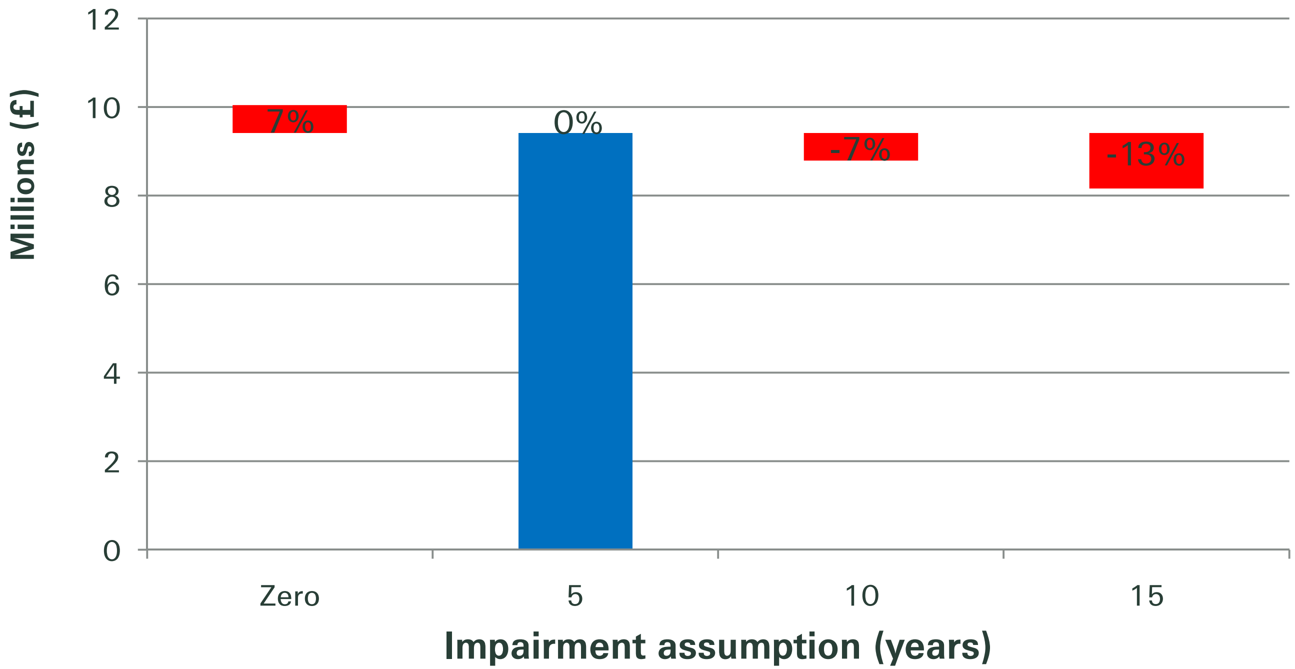
Impact of varying life expectancy assumptions on gross claim



- Life impairment assumptions can significantly impact the gross value
- A 10 year variation in impairment can cause a 13% change in claims cost (e.g. 15 v 5)

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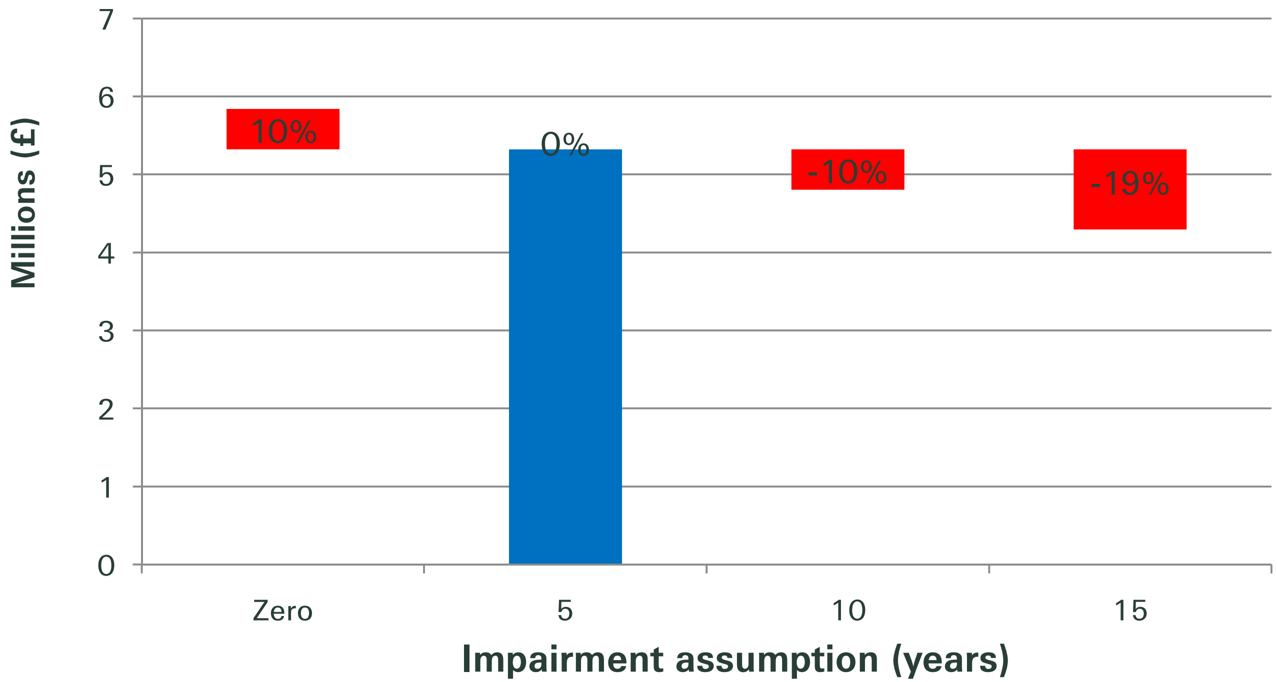
Impact of varying life expectancy assumptions on reinsurance recoveries



- Life impairment assumptions can significantly impact expected reinsurance recovery position
- Poses challenges for efforts to capitalise

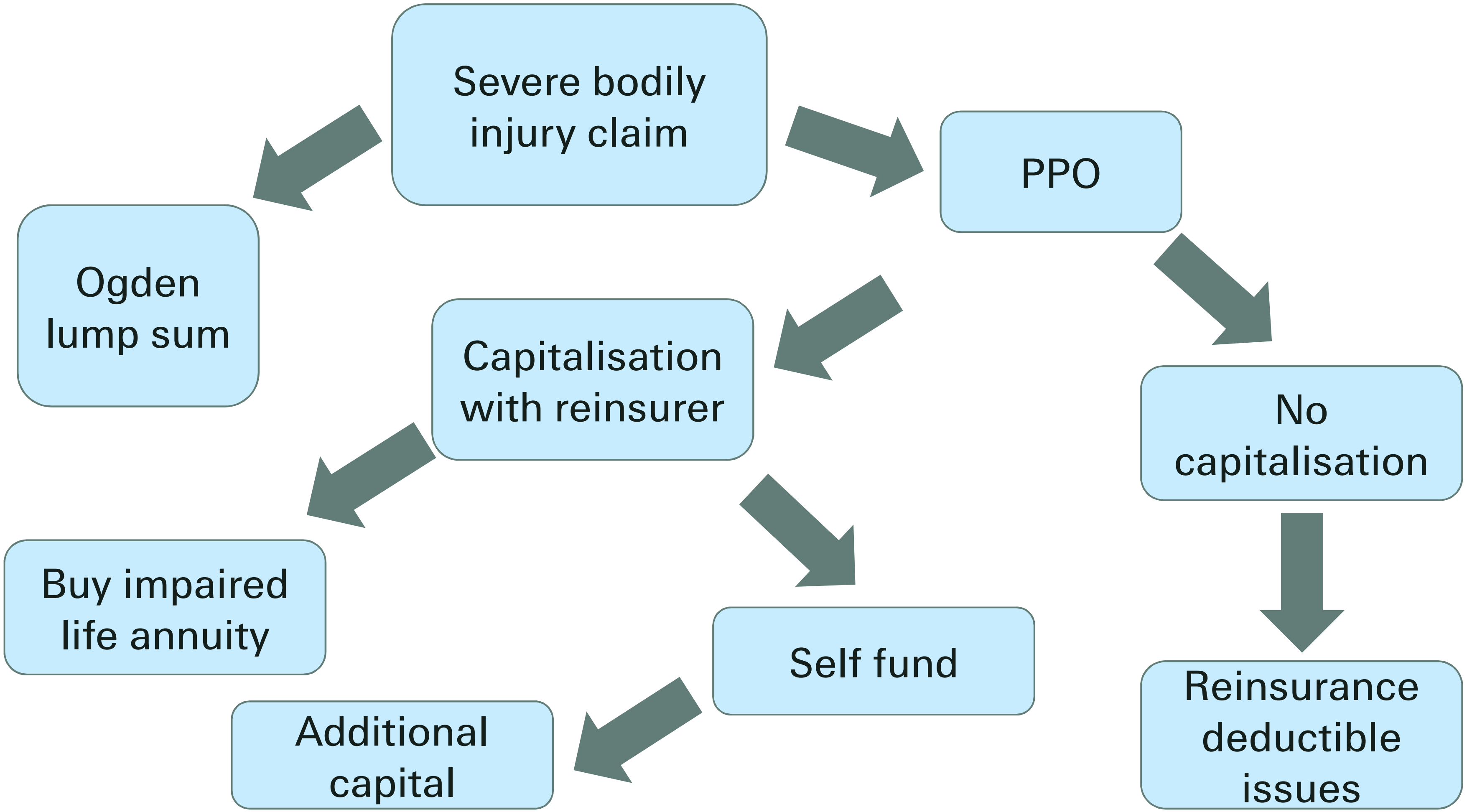
PPO related IBNER

Valuation of PPO related IBNER for unsettled claims

- Possible bottom up approach:
- Provide claims handlers with a simple tool which based on previously described inputs:
  - Evaluates the claim on an Ogden 2.5% basis
  - Evaluates the claim assuming a PPO basis (possible allowance for variation order)
  - Applies additional expected uplift (can be recorded as an ACR) based on the weighted average outcome where the weights reflect the lump sum likelihood and the PPO likelihood.
  - PPO likelihood is likely to depend on age (e.g. minor), life expectancy uncertainty, economic environment, severity of injury etc. High value claims are more likely to end up as PPOs
- Note: Reinsurers need to understand how cedants reserve to avoid any double counting of potential PPO impacts

Options for the insurer

Large claim scenarios



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Summary

Summary

- PPOs have a retrospective impact on prior underwriting years
- PPO awards significantly increase both gross and net reserves
- Substantial increase in uncertainty over suitable level of reserves
- Possible to hide under reserving for a significant period
- Capital will required for much longer to run off these liabilities (up to 60 years)
- Reinsurance security more important than before

Thank you

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