A quick history of Periodical Payment Orders

- Structured Settlements were originally introduced in the Damages Act 1996.
- The legislation was amended in the Courts Act 2003.
- The “Thompstone” judgement at Court of Appeal (January 2008) was a significant milestone.
- Why are they still topical?
A summary of Periodical Payment Orders

- They can be awarded for future pecuniary loss
  - Cost of care
  - Loss of earnings (Sarwar v Ali & MIB)
- The security of the payment must be reasonably secure
  - Motor Insurers’ Bureau
  - NHS
  - It is protected by a compensation scheme
- A court must consider a PPO and can award one against the claimants wishes.

Bodily injury claims

A bodily injury claim will have several heads of damage:
- General damages
- Hospital costs
- Loss of earnings to date
- Future loss of earnings
  - Pension loss
- Future care
  - Including case management
- Other future costs
  - Transport, assistance, travel
  - Prosthetics
- Housing and adaptation
- Legal costs
Specifics of PPOs

- They are paid for the lifetime of the claimant
- The idea is to match the payments to the care costs incurred by the claimant
- The payments generally increase in accordance with an index
- The court may allow an “order for variation”
- Contributory negligence may reduce the payments.

They are likely to have a very long payment pattern.

Escalation of the payments

- At first it was assumed that that RPI would be used to increase the payments.
- This is consistent with Ogden, although the real rate of return with an Ogden payment is different to that which can be currently obtained in the investment markets.
- The “Thompstone” case allowed for escalation using an index other than RPI.
  - ASHE 6115 (Annual Survey of Hours and Earnings for Carers and care assistants).
Sample values

The table shows sample present values based on cost of care at £100,000 per annum.

The effect of a reduction in the real yield is much greater for younger claimants.

The figures exclude any lump sum payment.

<table>
<thead>
<tr>
<th>Real Yield</th>
<th>20 year old</th>
<th>40 year old</th>
<th>60 year old</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.5%</td>
<td>3.2</td>
<td>2.7</td>
<td>1.8</td>
</tr>
<tr>
<td>1.5%</td>
<td>4.2</td>
<td>3.2</td>
<td>2.0</td>
</tr>
<tr>
<td>0%</td>
<td>6.5</td>
<td>4.4</td>
<td>2.4</td>
</tr>
</tbody>
</table>

All figures £m
Figures based on female with no adjustment for impairment life expectancy (ELT 12).

Valuation of PPOs – Case valuation - Data

You are likely to need
• Date of birth
• Gender
• Last payment, date and amount
• Impairment in life expectancy
• Escalation index to be applied

In addition for XOL reinsurance:
• All previous payments
  – Including lump sum amounts
• Historical escalation indices
• Date of loss / original policy inception date
• Treaty inception date
• Date of PPO award
Valuation of PPOs – Assumptions

- Mortality table
- Allowing for future improvements in mortality
- Assumptions on future escalation index and discount rate
  - Must be consistent with each other
  - The real rate of return is likely to be much lower than the Ogden rate of 2.5%
  - You could use different yields over different terms.

Valuation of PPOs – Calculations

- Remember $l_x$ ....
  - Subject CT5 / 105 / A2 etc.

- The calculations are reasonably straightforward

- Although a friendly Life actuary is very helpful.
Valuation of PPOs – Calculations (2)

There are several complicating factors

• Impaired life mortality
  – Estimates of future life expectancy can vary widely
  – A statistical analysis is limited
    – The cohort of claims with certain injuries is likely to be small

• Variation orders.

Valuation of PPOs – IBNR claims

• Claims notified but not yet settled.
  – These may result in a PPO or may not.

• True IBNR claims need to be allowed for.

• The real rate of return available in the investment market can affect the relative merits of a lump sum against a PPO
  – but “Thompstone” has distorted this

• There is likely to be a knock on effect on lump sum awards.
Valuation of PPOs – IBNR valuation

- Techniques could include
  - Uplift approach to current reserves?
  - Remove all PPO claims?
  - By subdividing the data by size of claim?
  - By capitalising claims at date of settlement?
  - Frequency analysis?

Accounting treatment

The discounting of a PPO significantly reduces its value

- The Companies Act will allow discounting in certain circumstances
- The FSA solvency rules require the discount to be removed
- US GAAP requires the liability to be fixed or reliably determined in order that it can be discounted
- A rate of discount will need to be determined
  - Bond yields on a matched portfolio?
Reinsurance

An insurer should be prepared to have a long relationship with their reinsurers.

- Reinsurer security becomes increasingly important
- There may be multiple claimants on a single event
- Administration of the reinsurance could be onerous.

Reinsurance - Indexation

- XOL treaty limits and deductibles are generally indexed
  - From treaty inception date to settlement date is normally average earnings
  - From Settlement onwards then it will follow the same basis at the claim escalation (e.g. RPI or ASHE 6115)
- The calculation becomes complex as all payments, as well as the associated index values are used in the calculation.
Reinsurance – Indexation example (1)

- £1m lump sum and £200k p.a. PPO
- 40 year old female (simplified with Date of Loss = Date of Settlement)
- 3.5% escalation

Comparison of indexation on XOL layers
40 year old, £1m lump sum, £200k p.a. PPO

Reinsurance – Indexation example (2)

- £2m lump sum and £100k p.a. PPO
- 40 year old female (simplified with Date of Loss = Date of Settlement)
- 3.5% escalation

Comparison of indexation on XOL layers
40 year old, £2m lump sum, £100k p.a. PPO
Reinsurance – Indexation example (3)

- The cashflow is a £2.5m xs £2.5m layer. 3.5% escalation, 5% discount.
- The undiscounted total £3.4m, discounted £1.5m.

![Cashflow with mortality and discount (£2.5m xs £2.5m)
40 year old, £2m lump sum, £100k p.a. PPO](image)

Reinsurance – Indexation example (4)

- The cashflow is a £5m xs £5m layer. 3.5% escalation, 5% discount.
- The undiscounted total £4.2m, discounted £0.5m.

![Cashflow with mortality and discount (£5m xs £5m)
40 year old, £2m lump sum, £100k p.a. PPO](image)
Practicalities

• Understand how the case reserves are calculated
  – An actuary will often need to be involved

• Case reserves reported to reinsurers
  – Mortality assumptions
  – Escalation / discount assumptions
  – Indexation of treaty limits and deductibles

Investment considerations

• It is likely to be difficult to obtain assets which match the liability profile
  – The duration of a PPO can be 60 years+
  – The indexation is likely to be higher than RPI

• The asset side will often be used to calculate a discount rate.
Uncertainty

Significantly more risk is borne by the insurers, and reinsurers.

• Longevity is important
• The asset side is especially important
  – Significant market and credit risks
• These are in addition to the standard non-life reserving risks.

• Does your Solvency II approach allow for PPOs?

Questions or comments?

Expressions of individual views by members of The Actuarial Profession and its staff are encouraged.

The views expressed in this presentation are those of the presenter.