Presentation agenda

- UK bodily injury large claims before PPOs
- What is a PPO?
- PPOs take-off
- Profile of a PPO
- Why worry?
- Solvency II implications
Presentation agenda

- UK bodily injury large claims before PPOs
- What is a PPO?
- PPOs take-off
- Profile of a PPO
- Why worry?
- Solvency II implications

UK Motor market: recent press coverage

Victory for motorists as 'referral fees' which push up car insurance premiums are banned

By JAMES BLACK and RAY MOSELEY
Last updated at 10:15 AM on 8th September 2011

Justice Secretary Ken Clarke will today announce the end of 'referral fees' – a cynical cash-for-contacts scam where insurers trade the details of accident victims with claims-handling lawyers, driving up car insurance premiums in the process.

The insurance racket is blamed for crippling increases in the cost of motor cover and is set to be finally banned. Ministers had previously resisted demands for a ban.
UK Motor market: recent press coverage – relevant to large claims severity

Motor third-party liability insurance in the UK

- Compulsory purchase if you own a vehicle that is not permanently off the road
- Covers physical damage (PD) and bodily injury (BI)
- Required coverage is unlimited for BI
- Motor Insurance Bureau (MIB) for uninsured or untraced drivers

- Main heads of damage:
  - Pain and suffering
  - Immediate costs
  - Loss of future earnings
  - Costs of care
- Contributory negligence
  - in practice burden of proof is with defendant
- NHS & claimants can recoup costs
Motor third-party liability insurance in the UK – salient issues for large insured claims

- Compulsory purchase if you own a vehicle that is not permanently off the road
- Covers physical damage (PD) and bodily injury (BI)
- Required coverage is unlimited for BI
- Motor Insurance Bureau (MIB) for uninsured or untraced drivers
- Main heads of damage:
  - Pain and suffering
  - Immediate costs
  - Loss of future earnings
  - Costs of care
- Contributory negligence
  - in practice burden of proof is with defendant
- NHS & claimants can recoup costs

General liability insurance in the UK

- Compulsory purchase for some entities (e.g. employers)
- Covers physical damage (PD) and bodily injury (BI)
- No requirement for unlimited coverage but minimums apply for compulsory purchase
- No uninsured/untraced back-up
- Main heads of damage:
  - Pain and suffering
  - Immediate costs
  - Loss of future earnings
  - Costs of care
- Contributory negligence
  - in practice burden of proof is with defendant
- NHS & claimants can recoup costs
UK motor & liability market: XL reinsurance highlights

• Protection is unlimited xs retention for motor BI
  – Retention is typically about 0.5% of insurer’s GWP
    – From £0.5m for smaller monolines, up to £5-10m for composite & multinationals
    – Reinsurance cost is typically in the range 5-15% of GWP
• Typical reinsurer share is 5-15% of cession
• Reinsurers usually purchase own retrocession, especially for motor, although unlimited cover not generally available
• Layers are indexed for BI, i.e. they increase over time in line with (usually) wage inflation until date of settlement
• XL market has been relatively stable and conservative, good data, (relatively) long history of actuarial pricing

How large is “large”?
A comparison of UK vs rest of Europe

2006 benchmark case study:
- 30 y.o. male
- Wife, 2 children
- Ave income
- Severe spinal injury
- No ventilation but remains 100% disabled
- No return to work

Lump sum payouts

- Tax-free lump sum to pay immediate damages/costs and fund future care and loss of future earnings
- Finality of settlement for (re)insurers
- Claimant takes mortality and investment risk
  - Ogden tables convert future costs into lump sum based on expected future lifetime and ‘risk-free’ investment return
  - Risks can be positive and negative
- Jackpot!...and possible inheritance
Structured settlements

- Damages Act 1996 allowed annual or semi-annual payments in lieu of lump sum for lifetime future costs
- Had to be agreed by both parties, endorsed by courts
- Usually payments increased in line with RPI and payments were what could be purchased as indexed annuity by lump sum
- Standard XL reinsurance wording altered to include structured settlements: indexation extended

Claimant’s and (re)insurer’s viewpoint on structured settlements vs lump sum

- Good for claimant
  - (Re)insurer takes mortality and investment risk
  - Better targeted compensation
  - Cash flow +ve for (re)insurers; but new credit risk with claimant (but FSCS helps)

- Bad for (re)insurer
  - Lack of finality, extra expense
  - No jackpot, no inheritance

Overall: little take-up
Presentation agenda

- UK bodily injury large claims before PPOs
- What is a PPO?
- PPOs take-off
- Profile of a PPO
- Why worry?
- Solvency II implications

Courts Act 2003

- Introduced Periodical Payment Orders (PPOs), implemented 2005
- Can be imposed by a court even if one or both sides disagree
  - in some circumstances, the judge is required to consider a PPO
- Focus on needs of claimant: lump sum plus ongoing annual or semi-annual payments to meet future costs
- Not simple annuities: indexed payments, can be varied in the future, can build in step change
- Payments determined by expected future costs: no direct link to Ogden lump sum
**Thompstone vs Tameside**

- Courts Act 2003 specified RPI index but permitted other measure if justified
- Judges and claimants concerned that RPI not sufficient to cover future cost inflation
- Thompstone vs Tameside and Glossop Acute Services NHS Trust
  - 2006: court ruled that wage inflation is better link in this case and chose ASHE; Tameside appealed
  - 2008: appeal upheld original court decision; Tameside declined any further appeal
- Other cases generalised ASHE link

**RPI vs ASHE (Annual Survey of Hours and Earnings)**

**RPI**
- Published by ONS
- Monthly index
- Long history
- Able to match investments

**ASHE**
- Published by ONS
- Annual survey, volatile
- Short history (back-dated to 2002), several changes
  - Affected by min. wage although generally higher percentiles used for PPOs
- Difficult to match investments
- Series 6115 = care assistants and home care
Summary: what is a PPO?

- Annuity-style award instead of a lump sum
- Indexed
  - was RPI but court cases established that ASHE 6115 is a better link
- Payments can be varied to meet likely future changes in circumstance
- (Re)insurer now takes on mortality and investment risk
  - and expense of decades-long settlement duration

Presentation agenda

- UK bodily injury large claims before PPOs
- What is a PPO?
- PPOs take-off
- Profile of a PPO
- Why worry?
- Solvency II implications
2008 also saw credit crunch, and dramatic reduction in investment return, hence reduced value of lump sum

Source: GIRO PPO working party update 2011
PPO propensity: proportion of large claims (>£1m) settling as PPO

Source: GIRO PPO working party update 2011

PPO propensity: variation between insurers

Source: GIRO PPO working party update 2011.
Qualification: minimum 20 settled large claims in 2008-10
Presentation agenda

• UK bodily injury large claims before PPOs
• What is a PPO?
• PPOs take-off
• Profile of a PPO
• Why worry?
• Solvency II implications

Profile of a PPO: distribution of lump sum

Source: GIRO PPO working party update 2011
Motor only; excl MIB
Profile of a PPO: distribution of first annual payment

Source: GIRO PPO working party update 2011
Motor only; excl MIB

Profile of a PPO: number of PPOs by injury type

Source: GIRO PPO working party update 2011
Motor only; excl MIB
Profile of a PPO: number of PPOs by age at settlement

Source: GIRO PPO working party update 2011
Motor only; excl MIB

Profile of a PPO: number of PPOs by estimated future life expectancy

Source: GIRO PPO working party update 2011
Motor only; excl MIB
Profile of a PPO: number of PPOs by age of driver

Apparent spike because it's a wider band of drivers

Source: GIRO PPO working party update 2011
Motor only; excl MIB

Profile of a PPO: relationship between age of claimant and age of driver

Source: GIRO PPO working party update 2011
Motor only; excl MIB: ages at time of accident
Presentation agenda

- UK bodily injury large claims before PPOs
- What is a PPO?
- PPOs take-off
- Profile of a PPO
- Why worry?
- Solvency II implications

Reinsurance recovery

Example claim

Claimant details
- Male, 18 at incident, 25 at settlement
- Normal life expectancy (say 55 years, deterministic)

Settlement
- £2m lump sum and £50,000 p.a. for life linked to ASHE 6115

Reinsurance
- Unlimited excess £2m, indexed using standard LMIC clause

Market Assumptions
- AWI of 4%, ASHE of 4.5%
- Real discount rate of 2.5% over AWI.
Reinsurance recovery
Cumulative cash flows for example claim

<table>
<thead>
<tr>
<th>Year from Loss</th>
<th>Cumulative Gross Payments</th>
<th>Indexed Excess</th>
<th>Cumulative Reinsurance Payments</th>
<th>Cumulative Net Payments</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0.0</td>
<td>1.0</td>
<td>2.0</td>
<td>3.0</td>
</tr>
<tr>
<td>1</td>
<td>0.0</td>
<td>1.0</td>
<td>2.0</td>
<td>3.0</td>
</tr>
<tr>
<td>2</td>
<td>0.0</td>
<td>1.0</td>
<td>2.0</td>
<td>3.0</td>
</tr>
<tr>
<td>3</td>
<td>0.0</td>
<td>1.0</td>
<td>2.0</td>
<td>3.0</td>
</tr>
<tr>
<td>4</td>
<td>0.0</td>
<td>1.0</td>
<td>2.0</td>
<td>3.0</td>
</tr>
<tr>
<td>5</td>
<td>0.0</td>
<td>1.0</td>
<td>2.0</td>
<td>3.0</td>
</tr>
<tr>
<td>6</td>
<td>0.0</td>
<td>1.0</td>
<td>2.0</td>
<td>3.0</td>
</tr>
<tr>
<td>7</td>
<td>0.0</td>
<td>1.0</td>
<td>2.0</td>
<td>3.0</td>
</tr>
<tr>
<td>8</td>
<td>0.0</td>
<td>1.0</td>
<td>2.0</td>
<td>3.0</td>
</tr>
<tr>
<td>9</td>
<td>0.0</td>
<td>1.0</td>
<td>2.0</td>
<td>3.0</td>
</tr>
<tr>
<td>10</td>
<td>0.0</td>
<td>1.0</td>
<td>2.0</td>
<td>3.0</td>
</tr>
<tr>
<td>11</td>
<td>0.0</td>
<td>1.0</td>
<td>2.0</td>
<td>3.0</td>
</tr>
<tr>
<td>12</td>
<td>0.0</td>
<td>1.0</td>
<td>2.0</td>
<td>3.0</td>
</tr>
<tr>
<td>13</td>
<td>0.0</td>
<td>1.0</td>
<td>2.0</td>
<td>3.0</td>
</tr>
<tr>
<td>14</td>
<td>0.0</td>
<td>1.0</td>
<td>2.0</td>
<td>3.0</td>
</tr>
<tr>
<td>15</td>
<td>0.0</td>
<td>1.0</td>
<td>2.0</td>
<td>3.0</td>
</tr>
<tr>
<td>16</td>
<td>0.0</td>
<td>1.0</td>
<td>2.0</td>
<td>3.0</td>
</tr>
<tr>
<td>17</td>
<td>0.0</td>
<td>1.0</td>
<td>2.0</td>
<td>3.0</td>
</tr>
<tr>
<td>18</td>
<td>0.0</td>
<td>1.0</td>
<td>2.0</td>
<td>3.0</td>
</tr>
<tr>
<td>19</td>
<td>0.0</td>
<td>1.0</td>
<td>2.0</td>
<td>3.0</td>
</tr>
<tr>
<td>20</td>
<td>0.0</td>
<td>1.0</td>
<td>2.0</td>
<td>3.0</td>
</tr>
<tr>
<td>21</td>
<td>0.0</td>
<td>1.0</td>
<td>2.0</td>
<td>3.0</td>
</tr>
<tr>
<td>22</td>
<td>0.0</td>
<td>1.0</td>
<td>2.0</td>
<td>3.0</td>
</tr>
<tr>
<td>23</td>
<td>0.0</td>
<td>1.0</td>
<td>2.0</td>
<td>3.0</td>
</tr>
<tr>
<td>24</td>
<td>0.0</td>
<td>1.0</td>
<td>2.0</td>
<td>3.0</td>
</tr>
<tr>
<td>25</td>
<td>0.0</td>
<td>1.0</td>
<td>2.0</td>
<td>3.0</td>
</tr>
<tr>
<td>26</td>
<td>0.0</td>
<td>1.0</td>
<td>2.0</td>
<td>3.0</td>
</tr>
<tr>
<td>27</td>
<td>0.0</td>
<td>1.0</td>
<td>2.0</td>
<td>3.0</td>
</tr>
<tr>
<td>28</td>
<td>0.0</td>
<td>1.0</td>
<td>2.0</td>
<td>3.0</td>
</tr>
<tr>
<td>29</td>
<td>0.0</td>
<td>1.0</td>
<td>2.0</td>
<td>3.0</td>
</tr>
<tr>
<td>30</td>
<td>0.0</td>
<td>1.0</td>
<td>2.0</td>
<td>3.0</td>
</tr>
<tr>
<td>31</td>
<td>0.0</td>
<td>1.0</td>
<td>2.0</td>
<td>3.0</td>
</tr>
<tr>
<td>32</td>
<td>0.0</td>
<td>1.0</td>
<td>2.0</td>
<td>3.0</td>
</tr>
<tr>
<td>33</td>
<td>0.0</td>
<td>1.0</td>
<td>2.0</td>
<td>3.0</td>
</tr>
<tr>
<td>34</td>
<td>0.0</td>
<td>1.0</td>
<td>2.0</td>
<td>3.0</td>
</tr>
<tr>
<td>35</td>
<td>0.0</td>
<td>1.0</td>
<td>2.0</td>
<td>3.0</td>
</tr>
<tr>
<td>36</td>
<td>0.0</td>
<td>1.0</td>
<td>2.0</td>
<td>3.0</td>
</tr>
<tr>
<td>37</td>
<td>0.0</td>
<td>1.0</td>
<td>2.0</td>
<td>3.0</td>
</tr>
<tr>
<td>38</td>
<td>0.0</td>
<td>1.0</td>
<td>2.0</td>
<td>3.0</td>
</tr>
<tr>
<td>39</td>
<td>0.0</td>
<td>1.0</td>
<td>2.0</td>
<td>3.0</td>
</tr>
<tr>
<td>40</td>
<td>0.0</td>
<td>1.0</td>
<td>2.0</td>
<td>3.0</td>
</tr>
<tr>
<td>41</td>
<td>0.0</td>
<td>1.0</td>
<td>2.0</td>
<td>3.0</td>
</tr>
<tr>
<td>42</td>
<td>0.0</td>
<td>1.0</td>
<td>2.0</td>
<td>3.0</td>
</tr>
<tr>
<td>43</td>
<td>0.0</td>
<td>1.0</td>
<td>2.0</td>
<td>3.0</td>
</tr>
<tr>
<td>44</td>
<td>0.0</td>
<td>1.0</td>
<td>2.0</td>
<td>3.0</td>
</tr>
<tr>
<td>45</td>
<td>0.0</td>
<td>1.0</td>
<td>2.0</td>
<td>3.0</td>
</tr>
<tr>
<td>46</td>
<td>0.0</td>
<td>1.0</td>
<td>2.0</td>
<td>3.0</td>
</tr>
<tr>
<td>47</td>
<td>0.0</td>
<td>1.0</td>
<td>2.0</td>
<td>3.0</td>
</tr>
<tr>
<td>48</td>
<td>0.0</td>
<td>1.0</td>
<td>2.0</td>
<td>3.0</td>
</tr>
<tr>
<td>49</td>
<td>0.0</td>
<td>1.0</td>
<td>2.0</td>
<td>3.0</td>
</tr>
<tr>
<td>50</td>
<td>0.0</td>
<td>1.0</td>
<td>2.0</td>
<td>3.0</td>
</tr>
</tbody>
</table>

© 2011 The Actuarial Profession - www.actuaries.org.uk

Reinsurance recovery
NPV for example claim

<table>
<thead>
<tr>
<th></th>
<th>Ogden Equivalent</th>
<th>PPO Equivalent</th>
<th>Change +/-  %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gross</td>
<td>3,522,841</td>
<td>3,580,674</td>
<td>57,832 1.6%</td>
</tr>
<tr>
<td>Reinsurance</td>
<td>794,635</td>
<td>511,900</td>
<td>-282,735 -35.6%</td>
</tr>
<tr>
<td>Net</td>
<td>2,728,207</td>
<td>3,068,774</td>
<td>340,568 12.5%</td>
</tr>
</tbody>
</table>

Impact

- The impact is a slight deterioration at a gross level, due to ASHE inflation being higher than AEI
- However, the key impact is the reinsurance
  - The reinsurer’s position improves significantly due to indexation
  - The insurer’s net position is significantly worse
- These results are will vary by situation (e.g. initial lump sum vs retention) and many will be worse for reinsurers instead
- Uncertainty: has implications for reserving, pricing and capital

© 2011 The Actuarial Profession - www.actuaries.org.uk
Reinsurance recovery
Other factors

Additional risks: investment, longevity, credit and expense \rightarrow higher capital

Each year’s incremental payment is a full reinsurance recovery process

PPO: 14 more years before first RI recovery

Liability limits – the problem

- GIRO working party survey results for 21 liability PPOs:
  - Average lump sum = £1.3m
  - Average initial annual payment = £80k
  - Average future life expectancy at settlement = 26 years
- Therefore, “average case” total payment = £5.1m (*)
- This will increase for new loss events happening today
- Typical PL limits are £1m-5m; EL at £10m
- These are just the average, there is a wide range of values
- **Current liability limits are not sufficient for PPOs**

(*): Assuming 4.5% p.a. ASHE inflation, annuity certain
Liability limits – potential solutions

• Don’t award PPOs
  – Claimants’ needs are not always addressed
  – This is largely current practice by the Courts
• Increase limits generally
  – Liability market is very soft; no-one will pay for higher limits and insurers won’t give them away for free
• Index/increase limits for PPOs
  – Complex wording issues, different interpretations, may “invite” PPOs
  – Possibly the best solution, but nothing happening yet

Presentation agenda

• UK bodily injury large claims before PPOs
• What is a PPO?
• PPOs take-off
• Profile of a PPO
• Why worry?
• Solvency II implications
**QIS5 technical specifications:**

“Annuities stemming from non-life contracts”

- **TP.1.13:**
  "In particular, annuities stemming from non-life insurance contracts (for example motor vehicle liability insurance) are life insurance obligations"

- **TP.2.49 & TP.2.55:** *substance* (nature of liability) over *form* (legal form of original contract)

- **TP.2.58:**
  “…value technical provisions [for annuities] separately from…remaining non-life obligation…should apply appropriate life insurance valuation techniques…consistent with valuation of life insurance annuities with comparable technical features.”

- **TP.2.63-67:** Lump sum reserves allowable in run-off triangles before “annuitisation” (i.e. before becoming obligated to pay an annuity)

---

**Timeline of a PPO claim: best estimate reserving**

- **Claim not yet notified:** IBNR
- **Claim notified but not settled, might be a PPO:** IBNER
- **Claim settled as PPO:** in payment

**Reserving basis**

- Traditional methods plus load for PPOs not yet in prior year experience
- Summary valuations, e.g. Ogden table lump sum assuming reduced (risk-free) discount rate (*)
- Life insurance techniques: projected cash flows and discounting (*)

Note (*): See last year’s PPO paper for details
Timeline of a PPO claim: Solvency II capital

- Claim not yet notified: IBNR
- Claim notified but not settled, might be a PPO: IBNER
- Claim settled as PPO: in payment

Capital basis
Current S2 methods plus load for PPOs not yet in prior year experience

Enhance own model, or apply life insurance standard formula

Solvency capital requirement for life insurance contracts – standard formula

- Reminder: SCR = Basic Solvency Capital Requirement + Op Risk + adjustment for risk-absorbing effect of technical provisions and deferred taxes
- BSCR for life insurance consists of a series of stresses:
  - Market risk (bond spreads, interest rate and term structure, illiquidity premium, etc)
  - Life underwriting risk (mortality/longevity, morbidity, expense overrun, revision risk, etc)
- Op Risk as for non-life but different factors apply
- No discretionary PPO benefits, so TP adjustment assumed to be nil
Summary

- PPOs are annuity-style payments for bodily injuries
- Indexed, can be varied in some circumstances
- Better match for many claimants’ future needs
- Eliminate investment and mortality risk for claimants
- But no “jackpot” or inheritance
- (Re)insurers now have much (decades!) longer run-off and additional risks/capital
- Uncertainty over impact on NPV, reserves sensitive to assumptions
- Can’t match investments
- Liability limits not adequate
- Solvency II complications

Questions or comments?
...and a plug for the GIRO PPO working party

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.