Towards Optimal Reserving Process
Solvency II Technical Provisions
Sharing the Pain

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GIRO, Dublin
Introduction

• TORP working party background

• Main survey conclusions considered by TP adjustment

• Discussion points (very interactive)

• Summary
The Towards Optimal Reserving Party aims to develop practical thoughts around the design and operation of the reserving process to share current practices and issues.

This is to promote and spread the expertise gained from those further along the process, to those not as far advanced.

Previous projects include Actual v Expected techniques in 2013, Fast close options and Reporting in 2014 and last year we focused on the Materiality limits and thresholds and Reinsurance options through the fast close.

The party looks to tackle a series of common problems that firms face, in order to move towards a robust and risk focused reserving process given the reserving and reporting pressures we all face.

Always open to suggestions for future papers.
Headlines

- Still a wide range of methods in market for producing TPs
- Lloyd's and London Market more consistent
- Mostly TPs made up of bolt on calculations from core reserving
- Different assumptions updated at different times
- Various Risk Margin methodologies used
Background for survey

Overall we had 124 responses, with about half completing the survey in full.

Good spread with 28% London market (two thirds of which were Lloyd’s Syndicates)

Just under 40% GI Non-London Market
Review Process

Survey showed...

- Varied (8% of firms use most common)
- Actuarial junior, review, finance, board
- Still heavily driven by actuarial

This may raise questions...

- Process appears robust however is it practical?
- Effect of shortening timetables with Pillar 3
- Consistency needs maintained between bases
Frequency of updates

- Bad Debt loading
  - Annually: 40%
  - Half Yearly: 20%
  - Quarterly: 40%
  - Other: 0%

- ENID loading
  - Annually: 60%
  - Half Yearly: 20%
  - Quarterly: 20%
  - Other: 0%

- Expense Provision
  - Annually: 40%
  - Half Yearly: 20%
  - Quarterly: 40%
  - Other: 0%

- B.E RI ultimate claims
  - Annually: 20%
  - Half Yearly: 40%
  - Quarterly: 40%
  - Other: 0%

- B.E gross ultimate claims
  - Annually: 20%
  - Half Yearly: 40%
  - Quarterly: 40%
  - Other: 0%

- Cashflow patterns
  - Annually: 20%
  - Half Yearly: 40%
  - Quarterly: 40%
  - Other: 0%

Gross Ultimate Claims mainly updated quarterly. Similar proportion with Nets

Volatile and material assumptions updated more regularly

Larger firms tended to update more regularly

Note: Order of ranking reversed from questionnaire
Calculation basis - Overall

- Over half of participants either use a non-TP calculation to derive their TP calculation, or use last quarters TP calculation with a roll forward process.

- Firms are still heavily reliant upon GAAP/IFRS, implying less confidence in SII process from first principles.

Importance of Information Source

<table>
<thead>
<tr>
<th>Rating</th>
<th>Information Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.50</td>
<td>Ground up calculations independent of other reserving exercises</td>
</tr>
<tr>
<td>3.00</td>
<td>Previous non-TP reserving exercise, no allowance for actual experience</td>
</tr>
<tr>
<td>2.50</td>
<td>Derived from a non-TP reserving process performed as at the same period end</td>
</tr>
<tr>
<td>2.00</td>
<td>Previous non-TP reserving exercise, allowance for actual experience</td>
</tr>
<tr>
<td>1.50</td>
<td>High level adjustments to a previous TP calculation</td>
</tr>
<tr>
<td>1.00</td>
<td>Other</td>
</tr>
</tbody>
</table>

Note: Order of ranking reversed from questionnaire
Calculation basis – Premium Provisions

Most common methodology used was applying constant patterns to accident or underwriting year ultimate claims.

Just under half of respondents use ground up calculation by policy with 23% ranking it number 1. Of these over 80% have UK plus EU/US operations.

76% of respondents use more than one method to calculate premium provisions.

The majority of Standard Formula firms with no IM use accident year patterns, consistent with non-Lloyd’s entities not considering results on an underwriting year basis. This is similar for Standard Formula firms that do have an IM available.

### Methodology for Premium Provisions

<table>
<thead>
<tr>
<th>Methodology for Premium Provisions (rank priority 5 = most important)</th>
<th>5</th>
<th>4</th>
<th>3</th>
<th>2</th>
<th>1</th>
<th>Average response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ground up calculations by policy</td>
<td>23%</td>
<td>7%</td>
<td>12%</td>
<td>5%</td>
<td>53%</td>
<td>2.42</td>
</tr>
<tr>
<td>Applying constant patterns to underwriting year ultimates</td>
<td>23%</td>
<td>17%</td>
<td>8%</td>
<td>1%</td>
<td>51%</td>
<td>2.60</td>
</tr>
<tr>
<td>Applying constant patterns to accident year ultimates</td>
<td>27%</td>
<td>27%</td>
<td>7%</td>
<td>4%</td>
<td>36%</td>
<td>3.08</td>
</tr>
<tr>
<td>Applying seasonal/specific patterns based on the premium writing pattern and the quarter being reported</td>
<td>23%</td>
<td>20%</td>
<td>12%</td>
<td>5%</td>
<td>40%</td>
<td>2.81</td>
</tr>
<tr>
<td>Other</td>
<td>8%</td>
<td>15%</td>
<td>15%</td>
<td>23%</td>
<td>38%</td>
<td>2.29</td>
</tr>
</tbody>
</table>

Note: Order of ranking reversed from questionnaire
Calculation basis – Gross Claims Provision

Of 68 respondents, 22 (31%) use one method (including 13 firms using an approved IM).

Of the 46 that use two or more methods (23 use 2, 8 use 3, 11 use 4 and 4 used all five methods, including ‘Other’).

The most popular type of method is to apply patterns (58 or 85%).

In terms of dealing with PPO liabilities, 44% (17 of 39) used the same method as for non-PPOs. PPO liabilities should be considered based on their materiality.

Note: Order of ranking reversed from questionnaire
Calculation basis – Reinsurance

Of the 67 respondents, the most popular method allows for correspondence – ranked 5 or 4 by 96%

Method of RI Calculation

Note: Order of ranking reversed from questionnaire
Calculation basis – Reinsurance BBNI

The question was asked if an allowance was made to the RI BBNI if there were contract boundary differences between the RI contracts and the gross contracts.
ENIDs

67 respondents to question, with scenarios still most prevalent method. Within Lloyd’s Syndicates/ London Market, use of truncated distribution was most common.

Most that vary the load by class also vary it by premiums and claims provisions.

It is evident from responses that many have used multiple calculation approaches.
Discounting

Vast majority of Lloyd’s respondents use underwriting year patterns...

Outside Lloyd’s accident year patterns are most common...

60% of those who have PPOs do discounting the same for PPOs as for other business – this is true for nearly all Lloyd’s and London Market firms with other firms taking a more mixed response
## Risk Margin Analysis

<table>
<thead>
<tr>
<th>60 respondents – perhaps reflective of more complicated question</th>
</tr>
</thead>
<tbody>
<tr>
<td>L2 models are most popular (82%), with L3 second (57%) and L1 least used (40%).</td>
</tr>
<tr>
<td>Life companies seem to be most likely to use L1 (small sample), with London Market least likely. Firms with a Life element are also most likely to only calculate RM annually.</td>
</tr>
<tr>
<td>Most companies update their RM more often than annually (68%), with large companies, and those using L1 only, more likely to have annual updates.</td>
</tr>
<tr>
<td>Standard Formula firms are more likely to do annual updates only, and also to rely on L2 and L3 rather than L1.</td>
</tr>
<tr>
<td>L3 were more likely to be applied more frequently than annually, with L1 less likely, as is expected.</td>
</tr>
</tbody>
</table>
Discussion Points

• Are there any odd results as presented?
• Will your current method be able to cope with reduced timeframes? What is the extent of roll-forward/fast close processes?
• What do you think the most natural conversion process is? GAAP + UPR + BBNI, UY split etc? Does this depend on the current main reserving basis?
• What diagnostics do you find helpful in reviewing the TP output?
• Do the frequency of updates seem reasonable?
• What do you think would be the best amendments to the TPs i.r.o Brexit?
• Would you like to see this exercise repeated/modified?
WP members

- Alastair Lauder
- Amy Williams
- Cameron Heath
- Fergal Dolan
- Keith Taylor
- Laura Hobern
- Neil Bruce (Chair)
- Katherine Norris
- Wan Heah

- We are looking for a new Chair!
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