Towards Optimal Reserving Process

## Q1 Your firm operates in (tick all that apply):



| Answer Choices | Responses |
| :---: | :---: |
| UK | $\mathbf{8 1 . 4 5 \%}$ |
| Europe | $\mathbf{4 9 . 1 9 \%}$ |
| USA | 61 |
| Total Respondents: $\mathbf{1 2 4}$ | $\mathbf{2 4 . 1 9 \%}$ |

## Q2 The firm you work for is involved in (tick all that apply):



| Answer Choices | Responses |  |
| :---: | :---: | :---: |
| Life | 13.71\% | 17 |
| General (Lloyd's) | 39.52\% | 49 |
| General (London Market ex Lloyd's) | 33.06\% | 41 |
| General (Other) | 66.94\% | 83 |
| Health | 10.48\% | 13 |
| Non-insurance | 4.84\% | 6 |
| Total Respondents: 124 |  |  |

# Q3 Your firm is using the following approach to modelling capital management (tick all that apply): 



| Answer Choices | Responses |
| :---: | :---: |
| Standard Formula to calculate SCR, with no other internal model available | 22.58\% 28 |
| Standard Formula to calculate SCR, but have an internal model | 35.48\% 44 |
| Approved internal model to calculate SCR | 54.03\% 67 |
| None of the above | 4.03\% 5 |
| Total Respondents: 124 |  |

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## Q4 Size of SII TPs:

Answered: 124 Skipped: 0


| Answer Choices | Responses |
| :---: | :---: | :---: |
| $0-£ 250 \mathrm{~m}$ | $23.39 \%$ |
| $£ 250 \mathrm{~m}-£ 1 \mathrm{bn}$ | $38.71 \%$ |
| $£ 1 \mathrm{bn}+$ | 48 |
| Total | $37.90 \%$ |

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## Q5 How frequently are assumptions used in the TP calculation process updated:



|  | Every quarter | Annually | Other | Total | Weighted Average |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Cashflow patterns | 27.91\% | 66.28\% | 5.81\% |  |  |
|  | 24 | 57 | 5 | 86 | 1.78 |
| Best estimate ultimates (gross) | 77.91\% | 13.95\% | 8.14\% |  |  |
|  | 67 | 12 | 7 | 86 | 1.30 |
| Best estimate ultimates (reinsurance) | 76.74\% | 16.28\% | 6.98\% |  |  |
|  | 66 | 14 | 6 | 86 | 1.30 |
| Bad debt load | 37.21\% | 54.65\% | 8.14\% |  |  |
|  |  |  |  | 86 | 1.71 |
| Expense provision | 34.88\% | 59.30\% | 5.81\% |  |  |
|  | 30 | 51 | 5 | 86 | 1.71 |
| ENID load | 17.44\% | 74.42\% | 8.14\% |  |  |
|  | 15 | 64 | 7 | 86 | 1.91 |

## Q6 How important are each of the

 following sources of information in calculating the best estimate technical provisions. 1 is the most important and 5 is the least important. N/A means it is not used. If another source is used that isn't listed, please rank this here and detail it in the next question (Q7)Answered: 86 Skipped: 38


|  | 1 | 2 | 3 | 4 | 5 | 6 | N/A | Total | Score |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Ground up calculations independent of other reserving exercises | $\begin{array}{r} 20.93 \% \\ 18 \end{array}$ | 19.77\% $17$ | 12.79\% $11$ | 10.47\% $9$ | $\begin{array}{r} 5.81 \% \\ 5 \end{array}$ | $\begin{array}{r} 0.00 \% \\ 0 \end{array}$ | $\begin{array}{r} 30.23 \% \\ 26 \end{array}$ | 86 | 4.57 |
| Derived from the results of a previous non-TP reserving exercise without any allowance for actual experience since that exercise | $\begin{array}{r} 6.98 \% \\ 6 \end{array}$ | $\begin{array}{r} 4.65 \% \\ 4 \end{array}$ | $\begin{array}{r} 11.63 \% \\ 10 \end{array}$ | $\begin{array}{r} 16.28 \% \\ 14 \end{array}$ | $\begin{array}{r} 12.79 \% \\ 11 \end{array}$ | $\begin{array}{r} 0.00 \% \\ 0 \end{array}$ | $\begin{array}{r} 47.67 \% \\ 41 \end{array}$ | 86 | 3.56 |
| Derived from a non-TP reserving process performed as at the same period end | $\begin{array}{r} 41.86 \% \\ 36 \end{array}$ | $\begin{array}{r} 24.42 \% \\ 21 \end{array}$ | $\begin{array}{r} 13.95 \% \\ 12 \end{array}$ | $\begin{array}{r} 4.65 \% \\ 4 \end{array}$ | $\begin{array}{r} 3.49 \% \\ 3 \end{array}$ | $\begin{array}{r} 0.00 \% \\ 0 \end{array}$ | $\begin{array}{r} 11.63 \% \\ 10 \end{array}$ | 86 | 5.09 |
| Derived from a roll-forward process from a previous non-TP reserving exercise allowing for actual experience since that exercise | 24.42\% $21$ | $\begin{array}{r} \mathbf{2 5 . 5 8 \%} \\ 22 \end{array}$ | 12.79\% $11$ | $\begin{array}{r} 9.30 \% \\ 8 \end{array}$ | $\begin{array}{r} 2.33 \% \\ 2 \end{array}$ | $\begin{array}{r} 0.00 \% \\ 0 \end{array}$ | $\begin{array}{r} \mathbf{2 5 . 5 8 \%} \\ 22 \end{array}$ | 86 | 4.81 |
| High level subjective adjustments from a previous technical provisions calculation | $\begin{array}{r} 1.16 \% \\ 1 \end{array}$ | 10.47\% | 13.95\% $12$ | 15.12\% $13$ | 17.44\% $15$ | $\begin{array}{r} 0.00 \% \\ 0 \end{array}$ | $41.86 \%$ $36$ | 86 | 3.36 |
| Other - please specify in the next question (Q7) | $\begin{array}{r} 1.16 \% \\ 1 \end{array}$ | $\begin{array}{r} 1.16 \% \\ 1 \end{array}$ | $\begin{array}{r} 2.33 \% \\ 2 \end{array}$ | $\begin{array}{r} 2.33 \% \\ 2 \end{array}$ | $\begin{array}{r} 3.49 \% \\ 3 \end{array}$ | 12.79\% $11$ | $\begin{array}{r} 76.74 \% \\ 66 \end{array}$ | 86 | 2.10 |

# Q7 If you answered 'other' in Question 6, what is the 'other' source of information used in to calculate the best estimate technical provisions? 

Answered: 8 Skipped: 116

## What is the order of review of the TP output within your organisation?

Answered: 81 Skipped: 43


|  | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | N/A | Total | Score |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Actuarial reserving team | 83.95\% | 2.47\% | 1.23\% | 0.00\% | 1.23\% | 0.00\% | 0.00\% | 0.00\% | 11.11\% | 81 | 7.89 |
|  | 68 | 2 | 1 | 0 | 1 | 0 | 0 | 0 | 9 |  |  |
| Capital modelling/Risk management | 6.17\% | 6.17\% | 9.88\% | 13.58\% | 8.64\% | 6.17\% | 4.94\% | 0.00\% | 44.44\% | 81 | 5.09 |
|  | 5 | 5 | 8 | 11 | 7 | 5 | 4 | 0 | 36 |  |  |
| Finance team | 0.00\% | 9.88\% | 17.28\% | 18.52\% | 17.28\% | 9.88\% | 1.23\% | 0.00\% | 25.93\% | 81 | 4.95 |
|  | 0 | 8 | 14 | 15 | 14 | 8 | 1 | 0 | 21 |  |  |
| Head of Actuarial | 4.94\% | 22.22\% | 45.68\% | 11.11\% | 6.17\% | 1.23\% | 0.00\% | 0.00\% | 8.64\% | 81 | 6.05 |
|  | 4 | 18 | 37 | 9 | 5 | 1 | 0 | 0 | 7 |  |  |
| Head of reserving | 1.23\% | 54.32\% | 6.17\% | 4.94\% | 1.23\% | 2.47\% | 0.00\% | 0.00\% | 29.63\% | 81 | 6.60 |
|  | 1 | 44 | 5 | 4 | 1 | 2 | 0 | 0 | 24 |  |  |
| Finance committee/ Reserving committee | 0.00\% | 1.23\% | 11.11\% | 25.93\% | 24.69\% | 20.99\% | 1.23\% | 0.00\% | 14.81\% | 81 | 4.33 |
|  | 0 | 1 | 9 | 21 | 20 | 17 | 1 | 0 | 12 |  |  |
| Board | 0.00\% | 1.23\% | 3.70\% | 12.35\% | 18.52\% | 20.99\% | 33.33\% | 1.23\% | 8.64\% | 81 | 3.26 |
|  | 0 | 1 | 3 | 10 | 15 | 17 | 27 | 1 | 7 |  |  |
| Other - please specify in the next question (Q9) | 1.23\% | 0.00\% | 1.23\% | 2.47\% | 3.70\% | 2.47\% | 3.70\% | 8.64\% | 76.54\% | 81 | 2.89 |
|  | 1 | 0 | 1 | 2 | 3 | 2 | 3 | 7 | 62 |  |  |

## Q9 If you answered 'other' in Q8, what other team/who else undertakes the review?

Answered: 11 Skipped: 113

Q10 How are you calculating premium provisions (split between earned, unearned, BBNI) within your TP projection?Please answer to all that apply and indicate the frequency of the methods used. 1 is the MOST frequently used/important and 5 is the LEAST used. N/A means it is not used. If another method is used that isn't listed, please rank this here and detail it in the next question (Q11)

Answered: 75 Skipped: 49


|  | 1 | 2 | 3 | 4 | 5 | N/A | Total | Score |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Ground up calculations by policy | 22.67\% | 6.67\% | 12.00\% | 5.33\% | 0.00\% | 53.33\% |  |  |
|  | 17 | 5 | 9 | 4 | 0 | 40 | 75 | 4.00 |
| Applying constant patterns to underwriting year ultimates | 22.67\% | 17.33\% | 8.00\% | 1.33\% | 0.00\% | 50.67\% |  |  |
|  | 17 | 13 | 6 | 1 | 0 | 38 | 75 | 4.24 |
| Applying constant patterns to accident year ultimates | 26.67\% | 26.67\% | 6.67\% | 4.00\% | 0.00\% | 36.00\% |  |  |
|  | 20 | 20 | 5 | 3 | 0 | 27 | 75 | 4.19 |
| Applying seasonal/specific patterns based on the premium writing pattern and the quarter being reported | 22.67\% | 20.00\% | 12.00\% | 5.33\% | 0.00\% | 40.00\% |  |  |
|  | 17 | 15 | 9 | 4 | 0 | 30 | 75 | 4.00 |
| Any other / a mixture - please specify in the next question (Q11) | 1.33\% | 2.67\% | 2.67\% | 4.00\% | 6.67\% | 82.67\% |  |  |
|  | 1 | 2 | 2 | 3 | 5 | 62 | 75 | 2.31 |

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> Q11 If you answered 'other' in Q10, what other method(s) are used in calculating premium provisions within your TP projection?

Answered: 4 Skipped: 120

> Q12 How are you calculating gross claims ultimate provisions (split between earned, unearned, BBNI) within your TP projection? Please answer to all that apply and rank the methods used in calculating, with 1 is the MOST frequently used/important and 5 is the LEAST used.N /A means it is not used. If another method is used that isn't listed, please rank this here and detail it in the next question (Q13)

Answered: 68 Skipped: 56


|  | 1 | 2 | 3 | 4 | 5 | N/A | Total | Score |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Policy level calculation of ultimate claims, split earned/unearned | 11.76\% | 11.76\% | 2.94\% | 5.88\% | 1.47\% | 66.18\% |  |  |
|  | 8 | 8 | 2 | 4 | 1 | 45 | 68 | 3.78 |
| Apply pattern to ultimate selection (underwriting year or accident year) | 64.71\% | 14.71\% | 4.41\% | 1.47\% | 0.00\% | 14.71\% |  |  |
|  | 44 | 10 | 3 | 1 | 0 | 10 | 68 | 4.67 |
| Calculate reserves in respect to non-GAAP provisions and add to GAAP | 14.71\% | 25.00\% | 13.24\% | 0.00\% | 0.00\% | 47.06\% |  |  |
| using ultimate loss ratios applied to premium provisions | 10 | 17 | 9 | 0 | 0 | 32 | 68 | 4.03 |
| Calculate reserves in respect to non-GAAP provisions and add to GAAP | 4.41\% | 14.71\% | 11.76\% | 7.35\% | 0.00\% | 61.76\% |  |  |
| using other method | 3 | 10 | 8 | 5 | 0 | 42 | 68 | 3.42 |
| Other - please specify | 4.41\% | 1.47\% | 1.47\% | 7.35\% | 4.41\% | 80.88\% |  |  |
|  | 3 | 1 | 1 | 5 | 3 | 55 | 68 | 2.69 |

# Q13 If you answered 'other' in Q12, what are the other method(s) used in calculating gross claims ultimate provisions within your TP projection? 

Answered: 6 Skipped: 118

Q14 Is the same claims provision calculation methodology used for PPOs as for non-PPO claims?


| Answer Choices | Responses |  |
| :---: | :---: | :---: |
| Yes | 25.00\% | 17 |
| N/A | 42.65\% | 29 |
| No - Please specify the main calculation methodology used | 32.35\% | 22 |
| Total |  | 68 |

## Q15 How are you calculating reinsurance provisions and/or cash flows within your TP projection?Please answer to all that apply and rank the methods used in calculating, with 1 as the MOST frequently used/important and 5 is the LEAST used. N/A means it is not used. If another method is used that isn't listed, please rank this here and detail it in the next question (Q16)

Answered: 67 Skipped: 57


|  | 1 | 2 | 3 | 4 | 5 | N/A | Total | Score |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Policy level calculation of ultimate claims, split earned/unearned | 25.37\% | 7.46\% | 2.99\% | 4.48\% | 2.99\% | 56.72\% |  |  |
|  | 17 | 5 | 2 | 3 | 2 | 38 | 67 | 4.10 |
| Apply pattern to ultimate selection (underwriting year or accident year) | 50.75\% | 22.39\% | 1.49\% | 1.49\% | 0.00\% | 23.88\% |  |  |
|  | 34 | 15 | 1 | 1 | 0 | 16 | 67 | 4.61 |
| Calculate reserves in respect to non-GAAP provisions and add to GAAP using ultimate loss ratios applied to premium provisions | 4.48\% | 22.39\% | 8.96\% | 2.99\% | 0.00\% | 61.19\% |  |  |
|  | 3 | 15 | 6 | 2 | 0 | 41 | 67 | 3.73 |
| Calculate reserves in respect to non-GAAP provisions and add to GAAP using other method | 8.96\% | 8.96\% | 16.42\% | 5.97\% | 0.00\% | 59.70\% |  |  |
|  |  | 6 |  |  | 0 | 40 | 67 | 3.52 |
| Other - please specify | 10.45\% | 4.48\% | 2.99\% | 5.97\% | 5.97\% | 70.15\% |  |  |
|  | 7 | 3 | 2 | 4 | 4 | 47 | 67 | 3.25 |

> Q16 If you answered 'other' in Q16, what are the other method (s) used in calculating reinsurance provisions and/or cash flows within your TP projection?

Answered: 12 Skipped: 112

Q17 Are you explicitly allowing for the BBNI impact of reinsurance policies being different to gross (if applicable) due to contract boundary effects?


| Answer Choices | Responses |
| :---: | :---: |
| Yes | $\mathbf{5 8 . 2 1 \%}$ |
| No | 29 |
| N/A | $29.85 \%$ |
| Total | $\mathbf{1 1 . 9 4 \%}$ |

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## Q18 Is bad debt...



| Answer Choices | Responses |  |
| :---: | :---: | :---: |
| Calculated separately for the TP exercise | 43.28\% | 29 |
| Derived from bad debt provisions in other exercises | 35.82\% | 24 |
| Combination of the two (e.g. using GAAP bad debt for earned provisions and separately for unearned) | 17.91\% | 12 |
| calculated using other methodology(ies) not mentioned above (please specify) | 2.99\% | 2 |
| Total |  | 67 |

## Q19 Which of the below are included in the Expense provisions within TPs (tick all that apply):



| Answer Choices | Responses |  |
| :---: | :---: | :---: |
| Claims ALAE | 62.69\% | 42 |
| ULAE | 86.57\% | 58 |
| Admin expenses/ overheads | 88.06\% | 59 |
| Investment management | 70.15\% | 47 |
| Acquisition costs and commissions (inwards business) | 61.19\% | 41 |
| Acquisition costs and commissions (outwards/ceded business) | 44.78\% | 30 |
| Profit commission (inwards business) | 35.82\% | 24 |
| Profit commission (outwards/ceded business) | 38.81\% | 26 |
| Total Respondents: 67 |  |  |

# Q20 How are you calculating future gross cash flows within your TP projection for discounting purposes (tick all that apply): 



| Answer Choices | Responses |  |
| :---: | :---: | :---: |
| Applying underwriting year patterns | 40.30\% | 27 |
| Applying accident year patterns | 59.70\% | 40 |
| Applying seasonal/specific patterns based on the premium writing pattern | 20.90\% | 14 |
| Total Respondents: 67 |  |  |

Towards Optimal Reserving Process

## Q21 Is the same discounting methodology used for PPOs as for non-PPOs?



| Answer Choices | Responses |
| :---: | :---: |
| Yes | $\mathbf{3 2 . 8 4 \%}$ |
| No | 22 |
| N/A | $\mathbf{2 2 . 3 9 \%}$ |
| Total | $\mathbf{1 5}$ |
| $\mathbf{y y y}$ |  |

Towards Optimal Reserving Process

## Q22 In deriving the ENID load, is it (tick all that apply):



| Answer Choices | Responses |  |
| :---: | :---: | :---: |
| Calculated from external data | 17.91\% | 12 |
| Applied as a percentage load | 53.73\% | 36 |
| Derived using scenarios | 43.28\% | 29 |
| Derived using truncated distributions/statistical | 31.34\% | 21 |
| Calculated at total portfolio level | 31.34\% | 21 |
| Vary by class of business (as a percentage of reserves) | 38.81\% | 26 |
| Vary by premium vs claims provision | 34.33\% | 23 |
| Implicit within the best estimates | 13.43\% | 9 |
| Total Respondents: 67 |  |  |

## Towards Optimal Reserving Process

## Q23 How often are each of the below used to calculate the risk margin:



|  | More than once a year | Annually | Other | Total | Weighted Average |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Level 1 - Estimate the SCR at each future point in time using a stochastic approach (e.g. use of a capital model) | $\begin{array}{r} 7.81 \% \\ 5 \end{array}$ | 29.69\% $19$ | 62.50\% $40$ | 64 | 2.55 |
| Level 2 - Estimate the SCR at each future point in time in totality by using a fixed proportion of a measure e.g. the best estimate technical provisions | 28.13\% $18$ | 26.56\% $17$ | $\begin{array}{r} 45.31 \% \\ 29 \end{array}$ | 64 | 2.17 |
| Level 2 - Estimate the SCR at each future point in time in totality by using an increasing proportion of a measure e.g. the best estimate technical provisions | 20.31\% $13$ | $26.56 \%$ $17$ | 53.13\% $34$ | 64 | 2.33 |
| Level 2 - Estimate the SCR at each future point in time in totality by using another method please specify | $\begin{array}{r} 9.38 \% \\ 6 \end{array}$ | 21.88\% $14$ | 68.75\% 44 | 64 | 2.59 |
| Level 3 - Estimate the Risk Margin as a proportion of a measure e.g. the best estimate technical provisions (at any granularity) | 26.56\% $17$ | 26.56\% $17$ | $46.88 \%$ $30$ | 64 | 2.20 |

## Q24 Would you be willing to take part in a more detailed discussion-based questionnaire?



| Answer Choices | Responses |  |
| :---: | :---: | :---: |
| Yes - please email michelle.chou@actuaries.org.uk to register your interest | 22.58\% | 14 |
| No | 77.42\% | 48 |
| Total |  | 62 |

Towards Optimal Reserving Process

Q25 What's your job title?
Answered: 62 Skipped: 62


| Answer Choices | Responses |
| :--- | :--- | :--- |
| Prefer not to answer | $\mathbf{3 7 . 1 0 \%}$ |
| My job title is | $\mathbf{2 3}$ |
| Total | 39 |

