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International Marketplace - Reserve Ranges

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Agenda

- Reserve Ranges: International Guidance
- Reserve Ranges: U.S. Guidance
- Interpretation of Reserve Ranges
- Questions

Disclaimers

Views and information communicated today are based on research and do not necessarily reflect the views or procedures of the organizations discussed. None of the information included herein should be utilized without independent verification.

Reserve Ranges – International Guidance

- United Kingdom
- Switzerland
- Australia
- Canada
- IFRS

Reserve Ranges – International Guidance

United Kingdom

- **Point Estimate:** When providing quantitative advice, the member should normally include a specific point estimate in the context of the purpose of the advice.
- **Reserve Range:** Provision of a range of outcomes is often desirable but the provision of a range of outcomes without a specific point estimate could be open to misinterpretation.
- **Uncertainty:** The report should normally indicate the nature, degree and sources of uncertainty surrounding the results and sensitivities to key assumptions. Uncertainty should normally be quantified where practicable, but otherwise should normally be reported using an appropriate descriptive summary.

Source: Institute of Actuaries, UK, Guidance Note 12 – *General Insurance Business: Actuarial Report (2006)* and Guidance Note 50 – *General Insurance Principles and Practice (2006)*

Reserve Ranges – International Guidance

Switzerland

- **Required Loss Reserves:** An estimate of the non-discounted future claims payments after the balance sheet date. Considered to be the best estimate, i.e. neither on the cautious nor the incautious side, and do not contain any intentional increases.
- **Discount:** Not required but in certain cases permissible.
- **Run-off Risk:** The estimate of the required loss reserves has to be completed by indicating the run-off risk. This indication can consist of a distribution, a confidence interval, a standard deviation, or some other parameter.

Source: Swiss Association of Actuaries, *Guidelines for loss reserves in non-life insurance (2006)*

Reserve Ranges – International Guidance

Australia

- **Valuation of insurance liabilities:** Consists of a central estimate value and a risk margin that relates to the inherent uncertainty in the central estimate value.
- **Central Estimate:** intended to reflect the mean value in the range of possible values for the outcome (that is, the mean of the distribution of probabilistic outcomes). Measured as the present value of expected future payments.
- **Risk Margin:** must be determined for each class of business and in total. Expected to be a similar percentage of the central estimate for each class of business from year to year.
- **Uncertainty:** The actuary must describe, qualitatively, the key drivers of uncertainty for each class of business or portfolio being value. The actuary must describe the practical consequences of the uncertainty of the estimates. In many cases, the range of reasonable values of the liabilities will be very large.
- **Minimum value of insurance liabilities**

  Greater of:
  - 75th percentile
  - Central estimate plus one half of a standard deviation above the mean

Source: Australia Prudential Regulation Authority, Guidance on Prudential Standards 310 – *Audit and Actuarial Reporting and Valuation (2006)*

Reserve Ranges – International Guidance

Canada

- **Claim Liabilities:** The amount of the claim liabilities should be equal to the present value, at the balance sheet date, of cash flow on account of claims incurred prior to that date.
- **Valuation Methods:** The selection of valuation methods depends on the circumstances of the case. The actuary would usually consider several methods.
- **Risk Margins** – Not required if the work requires an unbiased calculation. If a risk margin is included, it should vary by line of business and year.

Source: Canadian Institute of Actuaries, *Standards of Practice (2008)*

Reserve Ranges – International Guidance

IFRS: IASB Discussion Paper

Measuring Insurance Liabilities – 3 building blocks

- Explicit, unbiased, market-consistent, probability-weighted and current estimates of the contractual cash flows
- Current market discount rates that adjust the estimated future cash flows for the time value of money
- An explicit and unbiased estimate of the margin that market participants require for bearing risk (a risk margin) and for providing other services if any (a service margin)

Source: International Accounting Standards Board, *Discussion Paper - Preliminary Views on Insurance Contracts (2007)*

Reserve Ranges – U.S. Guidance

- ASOP 36
- ASOP 43

Reserve Ranges – U.S. Guidance

Statements of Actuarial Opinion Regarding Property/Casualty Loss and Loss Adjustment Expense Reserves (2000)

- **Uncertainty:** The actuary should consider the implications of uncertainty in loss and loss adjustment expense reserve estimates in determining a range of reasonable reserve estimates.
- **Expected Value Estimates:** In evaluating the reasonableness of reserves, the actuary should consider one or more expected value estimates of the reserves…In arriving at such expected value estimates, it is not necessary to estimate or determine the range of all possible values, nor the probabilities associated with any particular values.
- **Range of Reasonable Reserve Estimates:** a range of estimates that could be produced by appropriate actuarial methods or alternative sets of assumptions that the actuary judges to be reasonable. The actuary may include risk margins but is not required to so. The range usually does not represent the range of all possible outcomes.

Source: Actuarial Standards Board, *Actuarial Standard of Practice No. 36*

Reserve Ranges – U.S. Guidance

Property/Casualty Unpaid Claims Estimates (2007)

- **Intended Measure of the Unpaid Claim Estimate:** could include high estimate, low estimate, median, mean, mode, actuarial central estimate, mean plus risk margin, actuarial central estimate plus risk margin.
- **Actuarial Central Estimate:** An estimate that represents an expected value over the range of reasonably possible outcomes. An actuarial central estimate may or may not be the result of the use of a probability distribution or a statistical analysis.
- **Methods and Models:** The actuary should consider the use of multiple methods and models…unless, in the actuary's professional judgment, reliance upon a single method or model is reasonable given the circumstances.

Source: Actuarial Standards Board, *Actuarial Standard of Practice No. 43*

Interpretation of Reserve Ranges

- Survey (2006)
  - We asked US and International actuaries from various consultancies and insurance companies a series of questions, including their interpretation of reserve ranges.
  - The answers were mixed
    - Some responded in ASOP 36-like terms
    - Some felt strongly that reserve ranges should be based on statistical methods
    - Some felt just as strongly that reserve ranges should not be based on statistical methods
    - Others felt both approaches could be used depending on the situation

Questions?

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