Scope & Objectives

The Casualty Actuarial Society (CAS) engaged PricewaterhouseCoopers LLP (PwC) to identify and consider the potential impact on a typical U.S. property/casualty insurance company’s financial statements of changing from current U.S. generally accepted accounting principles (GAAP) to “fair value” accounting for valuing loss reserves. A central theme of International Accounting Standards Board (IASB) proposed accounting standards to date is that assets and liabilities should be valued at a “fair value.” Fair value is defined as valuing assets and liabilities at a market value (e.g. stocks and bonds valued at their current market value), or at an estimated market value if a sufficiently active market does not exist.

The CAS requested that this study focus on the following two objectives:

- Compare typical property/casualty insurer financial statements, representing a cross-section of the industry, under current U.S. GAAP rules and a fair value accounting standard for valuing loss reserves.
- Discuss the major actuarial issues that might arise with respect to presenting property/casualty insurance financial statements using a fair value accounting basis for loss reserves.

Loss reserves are currently not traded in an open market like selected assets (e.g. stocks, bonds), and as a result a sufficiently active trading market currently does not exist. Therefore, the market value of loss reserves should be evaluated on the basis of the application of fair value principles using actuarial methods and models.

Our general approach to estimating loss reserves on a fair value basis was to:

- Begin with undiscounted reserve levels,
- Discount the reserves to account for the estimated time value of money, and
- Add an estimated margin for risk and uncertainty.

In this paper, we use the term “market value margin” (MVM) to refer to the estimated margin for risk and uncertainty in excess of the discounted loss reserves that would be required by a willing buyer in an arms-length transaction to assume the liabilities the loss reserves are held to meet.

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<tr>
<th>U.S. GAAP Reserves</th>
<th>Fair Value Reserves</th>
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<tr>
<td>Undiscounted reserves</td>
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<td></td>
<td>- Discount Amount</td>
<td>x (1 - Discount %)</td>
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<td></td>
<td>+ MVM Amount</td>
<td>x (1 + MVM %)</td>
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References to “fair value loss reserves” in this paper should be taken to mean loss reserves after the adjustments for discounting and MVM have been applied.
There are several generally accepted approaches to selecting the interest rate(s) to discount the loss reserves for anticipated investment income. The CAS requested that we utilize at least one of the following two approaches:

- Apply a risk-free interest rate that is associated with the duration of the projected future cash flow of the liabilities (i.e., duration approach);
- Apply a schedule of risk-free interest rates matching the projected future cash flows (i.e., yield curve approach).

The CAS requested that we estimate the MVM percentages under at least two different approaches:

- Percentile of an aggregate probability distribution of reserve values;
- The mean reserve value plus a margin proportional to the standard deviation of the estimated reserve distribution.

The CAS set forth the following data guidelines:

- The analysis should focus on three lines of business:
  a. Personal auto liability
  b. Workers’ compensation
  c. Medical malpractice claims-made
- The data should be publicly available
- The data should be at annual periods of exposure and valuation
- The data should be on an accident year basis
- The data should include loss and loss adjustment expense

We should note several additional key limitations to the scope of this project. These included:

- The impact of any entity-specific credit risk on a company’s required MVM, such as might be measured by a company’s credit rating, should not be considered.
- The adequacy of the booked loss and loss adjustment expense reserves forming the base data should be assumed to be reasonable (i.e., the recorded reserves should be considered an actuarial best estimate).
- Any adjustments to the MVM that might be made to account for the correlation across lines of business for multi-line insurers should not be considered.
- The study should focus strictly on the potential impact fair value accounting could have on loss reserve levels. As a result we have not considered the impact fair value accounting may have on unexpired risk reserves, other liability accruals, or any asset values.