

DISCUSSION BY ROBERT A. ANKER

Mr. Skurnick has performed a great service to the students of the Casualty Actuarial Society in the preparation and publication of his paper. Likewise, he has provided the practicing actuary with a consistent and valuable set of definitions for use in the loss reserving field and a comprehensive research and reference source. He has done an excellent job of organizing, distilling, and interrelating a broad spectrum of analytic approaches to loss reserving.

The primary thrust of Mr. Skurnick's paper is educational, and this review will consider it in that light. Thus, a portion of the review will be devoted to comments on specific items in the paper and Mr. Skurnick's interpretation of those items. Because I hope the paper will also serve as a catalyst for further papers in the area of reserving, the remainder of the review is devoted to the description of a broad approach to the selection and application of loss reserving methods.

COMMENTS ON SPECIFIC ITEMS

Fast Track Reserves

In discussing fast track reserves, Mr. Skurnick states this form of reserving is "appropriate for lines of insurance whose claims are similar in size such as auto collision." This statement may be amplified to observe that fast track reserving is suitable for use for particular subsets of claims which exhibit similar size within a given line of insurance. For example, the technique works quite well for workmen's compensation claims whose expected final payment value at the time of indexing is less than a selected limiting value intended to control the size variance of the claims.

Incurred But Not Reported (IBNR)

In discussing runoff tests for IBNR, Mr. Skurnick observes that the time needed for reasonable development varies from company to company and from line to line. It is significant that the variance within a line from company to company is primarily due to different claims administration systems and should be relatively small, normally less than one or two months. However, the variance in development time required between lines is a function of the line or coverage itself and can be substantial. It should also be noted that the time required for reasonable development can vary

among states or jurisdictions because of variances in elements of the legal and/or regulatory climates.

Differences in required development time by line and by company exist for all runoff tests, not just IBNR runoff tests.

Total Loss Reserve Runoff

In his discussion of the runoff method for total loss reserves, Mr. Skurnick observes that Schedule O of the annual statement is a runoff method of total reserves, with some minor exceptions. He does not specify the rather significant exception that the IBNR reserves for surety and fidelity are not used in the runoff analysis in Schedule O.

Incurred Loss Development

Mr. Skurnick states that the Bornhuetter-Ferguson method produces an estimate of subsequent development which will lie between the estimates derived from the incurred loss development method and the loss ratio method. This is not true in the circumstances where the redundancy in the known reserve exceeds the expected IBNR as defined by Skurnick, i.e., where the ultimate factor is less than unity. In that case, the incurred loss development method produces the median estimate.

A BROAD APPROACH

Perhaps the greatest service provided by Mr. Skurnick's paper is the demonstration of the multitude of methods available for reserving. The very fact that so many methods exist and are in use is a sufficient demonstration that there is no single "correct" method. Thus, on lines that possess a great potential for variance in reporting rates and severity characteristics, it is imprudent to rely on any single method. Loss reserving here must be a function of a decision process designed to produce an optimum estimate. As many methods as possible within the available time and data limitations should be used, with method selection based on the principle of including methods likely to produce both high and low estimates.

By this means, it is possible to establish ranges for reserve estimation. For each method used, ranges around the calculated value of the method

should be established, either statistically or subjectively. If we describe these range limits as probable upper and lower bounds for the method, we can establish the following:

<u>Estimate</u> <u>Range Description</u>	<u>Upper Limit</u>	<u>Lower Limit</u>
Absolute Range	Probable Upper Bound of High Method	Probable Lower Bound of Low Method
Likely Range	Calculated Value of High Method	Calculated Value of Low Method
Best Estimate Range	Probable Upper Bound of Low Method <u>or</u> Lowest Probable Upper Bound of Any Method	Probable Lower Bound of High Method <u>or</u> Highest Probable Lower Bound of Any Method

Under normal circumstances, one would expect the ranges to be successively narrower and the likely range to contain the best estimate range. The likely range will always be contained in the absolute range. When the best estimate range is wider than the likely range, the method selection and application should be reexamined for possible refinement. If it is felt that the method selection and application are proper, then the range of the final reserve estimation should always be the narrowest range determined.

If the high and low method ranges used in establishing the best estimate range do not intersect, in which case the best estimate range does not exist, there is a logic error in the selection or application of methods.

This approach may be expanded to be directly applied to the analysis and evaluation of subsets of data which may have distorting effects on the estimation methods. It allows one to intelligently input information on the probable effects of such things as changes in claim administration, unusual and/or unprecedented claim or risk situations, and current economic and societal conditions.

There is an intrinsic sensibility to the approach which tends to assist in illustrating the need for using multi-source and multi-discipline information in the reserving process. Functional information, both actuarial and other, individual product information, economic information, and

managerial and administrative information are all needed. To the extent that the approach can be simply defined and demonstrated, it can assist greatly in gaining the cooperation of individuals outside the actuarial area whose input can be valuable to the reserve valuation process.

I have left the description of this approach intentionally broad so as to not overly limit its use. My comments are not intended as a "how to" guide, any more so than is Mr. Skurnick's paper, but are meant as a further addition to the dialogue on loss reserve methodology that has developed in recent years.

Now that Mr. Skurnick has so admirably organized the existing literature, we must seek the brave soul who can develop a categorization specifying the appropriateness, utility, and limitations of the various methods in application to specific lines and under specific circumstances.