DISCUSSION BY MATTHEW RODERMUND

Miss Salzmann has written another good paper. This time she has tackled the elusive subject of the evaluation of current loss and loss expense reserves, and she has proposed not only a yardstick for the measurement of current loss reserves, but also a method of establishing minimum statutory reserves relative to policyholders surplus. Her approach.is well thought out, and it seems reasonable that her proposals be tried.

Yet this reviewer has a problem, a problem that relates not to the substance of Miss Salzmann's paper but rather to the mechanics. The problem arises out of the first half of the paper only, which presents the yardstick for current loss reserves.

Miss Salzmann's yardstick is represented by the expression:

$$\frac{\text{Adjusted Liabilities}_{12/31/n}}{\text{Adjusted Liabilities}_{12/31/n-1} + \text{Premiums Earned}_n - \text{Losses Paid}_n}$$

A study of the denominator of the above fraction reveals that this expression cannot be verbalized, has no meaning, does not exist in the real world. It is a mathematical expression, pure and simple.

This realization was mildly disconcerting to the reviewer. He then noted that the mathematical expression is equal to:

$$\frac{\text{Incurred Losses}_n + \text{Liabilities}_{12/31/n-1} - \text{Losses Paid}_n}{\text{Premiums Earned}_n + \text{Liabilities}_{12/31/n-1} - \text{Losses Paid}_n}$$

which is our old friend loss ratio, with a damper provided by adding (or subtracting) identical quantities to the numerator and denominator of the loss ratio fraction.

Unfortunately, this expression cannot be verbalized either, and it would be difficult to explain why dampening a company's loss ratio in this way, which appears to have no inner logic, produces a yardstick by which loss reserves will be evaluated.

The problem is that the yardstick Miss Salzmann has proposed can be described only in mathematical terms. Actuaries need credibility. They stand to lose their credibility if they are not able to talk about their business so that lay people will understand. The worry here is that because this important yardstick cannot be described in words, but must be demonstrated mathematically, it may never be sold and will never be used. The evaluation of loss reserves is not an abstruse subject, like credibility, for instance, or variance. Rather it is an area of our business where almost every informed practitioner has ideas and likes to talk about them. A system that can be explained only mathematically may be rejected by the industry even if it has theoretical merit.

The reviewer hopes that readers of Miss Salzmann's paper and of this review will think seriously about the public presentation of actuarial ideas. Even the concept of credibility can be illustrated for lay people if the analogy of thrown dice, or tossed coins, is used. But the president of an insurance company, if he is not an actuary, is going to question Miss Salzmann's yardstick where his own reserves are concerned, because there is no concept that he can grasp.

It is hoped that Miss Salzmann's rebuttal to this review will also be read and seriously considered, because it is a good one. The subject she has tackled is important to actuaries, but, in the opinion of this reviewer, the communication problem is also important and deserves attention.

AUTHOR'S REVIEW OF DISCUSSION

Mr. Rodermund's review criticizes the yardstick proposed in my paper because of its phantom qualities in that it is a mathematical expression devoid of verbal explanation. This criticism is well deserved and may, as the reviewer points out, seriously detract from both the acceptance and use of the new yardstick.

This lack of verbal identity was a matter of concern to the author when the paper was written, and there are some subtle, and not so subtle, references to this dilemma in the paper. The most obvious reference, of course, is that the author had no better name for the new yardstick than "formula base". Then there was the rather lame argument made in the paper that the results themselves would sell the product.