PROPOSED NEW STATUTORY VALUATION OPINION

MR.RICHARD S. MILLER: A Special Advisory Committee on the Valuation Law (SAC/VL) has been formed by the National Association of Insurance Commissioners (NAIC) to significantly expand for regulators the scope and usefulness of the actuarial opinion, which states that the assets backing the reserves make appropriate provisions for the obligations of the company. I am a member of that committee.

The committee has extensively discussed the general considerations that would determine whether or not the valuation actuary must test reserves before rendering an opinion on asset adequacy. The committee reached agreement that its near-term objective should be to develop the means for determining what kind of testing (if any) applies to various products based on the types of risk involved. The proposed amendment to the Standard Valuation Law (SVL) and, more particularly, the model regulation should give the Actuarial Standards Board (ASB) the central role in formulating standards to guide the valuation actuary.

The following are the main ideas that have emerged:

- The form and intensity of testing should be a function of risk. In general, greater risk suggests more comprehensive testing.

- A two-dimensional grid might be used to determine the kind of testing, if any, that is needed. One dimension might consist of the degree of individual risks applicable to the company or product (i.e., C-1, C-2 and C-3 and various combinations thereof). Another dimension might be the duration over which the risk extends, since it is commonly accepted that uncertainty (i.e., risk) increases as obligations extend over the longer term.

- Although the valuation actuary needs to understand and quantify risk, by its very nature risk is not easy to understand and quantify (a recent study by the Society's Combination of Risk Task Force was cited in the SAC/VL's report). Liability risk is often better understood than asset risk, at least by actuaries. It can be particularly difficult to understand asset risk since assets may be subject to call under stress in certain economic scenarios. It is particularly difficult to understand and quantify risk at its extremes, which are associated with catastrophe. For this reason, the focus of valuation reserves should be on noncatastrophic levels of risk. Also, new products and forms of investment can be expected to introduce new and/or unusual risks for the valuation actuary to handle.

- The need for testing depends on the nature of the risk; in the case of certain risks, even though large, the risk is well-understood, and the appropriate strength

of the reserve can be demonstrated without cash-flow testing. Multiscenario testing becomes particularly important in cases where it is not clear what types of deviations from expected experience are adverse. The interest-rate risk frequently falls into this category.

- Materiality is an important factor in considering whether testing for a particular risk is needed and how comprehensive the testing should be.

After further discussion, a consensus of the SAC/VL appeared to support an approach to testing reserves that would generally presuppose analysis of the underlying asset and product cash flows. However, the valuation actuary should make a judgment, based on the risks involved in a particular product or line of business, as to what basis for determining asset adequacy is appropriate. The actuary should document in a memorandum why the chosen method is appropriate to the situation, especially as compared to multiscenario cash-flow testing.

It was further agreed that the standards should provide guidance as to the circumstances in which normal actuarial practice would require multiscenario cash-flow testing and those in which it would not. As a working hypothesis, we offer the following.

Multiscenario cash-flow testing is normally needed for business with book-value withdrawal rights prior to maturity and for fast growing blocks of business.

Multiscenario cash-flow testing might ordinarily be required for the following:

- Business with significant reinvestment risk (such as long deferred annuities or structured settlements supported by intermediate duration assets).

- Business backed by an asset strategy that is not coordinated with liabilities.

- Business where the risk is not well-understood.

- Business where the reserve equals the policyholder fund, and the fund is available at book value.

Cash-flow testing might be deemed necessary for:

- Closed blocks of business (a) without policyholder withdrawal options, where there is a history of reasonable earnings or (b) with withdrawal options but strong SVL reserves.

- C-1 risk, to the extent such risk is provided for through the mandatory security valuation reserve (MSVR).

- Some C-2 risk (if the actuary can readily make a judgment as to whether and to what degree reserves have to be strengthened).

- C-4 risk. This risk is generally beyond the capacity of the profession to quantify or analyze.

- Reinvestment risk, where it can be determined readily that the reserves held exceed a reserve calculated on the basis of a conservative declining discount rate.

- Blocks of business, which have not changed materially since the reserves were tested in a previous year, with due regard for the degree of comfort provided by the previous testing.

The composition of assets supporting the liabilities (e.g., heavy common-stock investments) may indicate a need for cash-flow testing.

In some instances, the actuary may be able to make an assumption/methodology review to determine whether the assumptions underlying the current reserves were so conservative that there would be no benefit to cash-flow testing.

The actuary should be able to account for materiality.

Upon receipt of a valuation actuary's opinion, the regulator would either accept the opinion or ask to review the actuary's report. After reviewing the report, the regulator would have three main options: accept the opinion, require additional analysis, or commission a review of the valuation actuary's work.

While multiscenario cash-flow testing might be the ultimate against which alternatives are compared, it was agreed that the choice of an alternative would normally be based on general reasoning or the efficiency of such alternative tests in particular situations.

One major assumption developing within the SAC/VL is that the C-1 risk will be dealt with elsewhere, presumably by a new approach to the MSVR. For the time being, the consensus is that we assume that we can rely on the MSVR unless there is some reason to suspect that a deficiency exists.

An issue is that we are only considering a level of risk that would be appropriate to be covered by statutory reserves. In other words, the more catastrophic scenarios could be assumed to be covered by surplus.

The committee is tending toward a materiality standard, which leads to the same reserve adequacy conclusion regardless of the company within which the risk resides. The committee's tentative materiality statement is as follows:

> A risk is material if its presence or absence results in significantly different probabilities of aggregate reserve adequacy. Similarly, an approximation has a material effect if its use may result in a significantly different probability of aggregate adequacy.
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> The opining actuary should resist any inclinations to judge materiality with reference to the amount of surplus or the proportion of surplus to total assets. At extremes of surplus position he may not be able to resist the inclination.

There is a broad category of business where the insurer has assumed risk but where a demonstration can be made that experience will almost certainly be less severe than provided for in the statement reserve. For example, the typical accidental death benefit (ADB) plan will fall in this category. A demonstration would consist of a comparison of actual and tabular mortality and a confirmation that interest earned on the assets very likely will exceed tabular interest. It is even possible that products with C-3 risk could fall into this category. An example is traditional participating industrial insurance. Here

the analysis might show that the probability of a significant increase in lapses due to a rise in interest rates is very low and that the dividend interest margin is sufficient to accommodate any reasonable drop in interest rates.

For short-term products, there are techniques that quantify deviations from expected values without using scenario testing. Such risks usually involve a small number of large individual claims over a short term. These techniques are described in various texts on risk theory.

C-2 risks in products such as disability income may appropriately be analyzed using statistical techniques to quantify the risk. However, C-3 risk is normally also present.

The C-3 risk may be present in varying degrees. If assets and liabilities are kept closely matched and the company has not granted options to policyholders (such as a cash-surrender option on life insurance) or borrowers (such as a bond-call option or a mortgage-prepayment option), then a satisfactory demonstration of reserve adequacy may be developed without multiscenario testing by showing the similarity of asset and liability duration together with a schedule showing rough comparability between asset and liability cash flows. Some structured settlements and guaranteed interest contracts (GICs) fall into this category. Products incorporating options also may fall into this category to the extent that protective hedges have been secured.

Where unhedged options have been granted to policyholders or borrowers and the likelihood of antiselection in the exercise of these options is significant, or where assets and liabilities are not closely matched, conventional actuarial wisdom indicates that multiscenario cash-flow testing is needed. Standards for such testing can be found in the ASB document "Recommendations Concerning Cash Flow Testing for Life Insurance Companies." This category contains business having a combination of C-2 and C-3 risk as well as products with only C-3 risk.

There are important categories of business where quantification of the risks is difficult and involves a great deal of subjective judgment. New lines of business provide an important example. Additional examples include major medical and plans where profit margins are highly sensitive to competitive pressures. Here a demonstration of reserve adequacy will rely heavily on a sensitivity analysis.