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This issue includes:

Principles Based Valuation—Should Small Companies Be Steamed by This Steamroller?

By Norman E. Hill

Recently, the Principles Based Valuation approach (PBV) has enjoyed considerable support and momentum within the life and health insurance industry. Instead of prescribed methods, assumptions, and tables for statutory reserves, they would be computed based on actuarial judgment in accordance with standards of practice. A key requirement would be peer review of such reserves by another professional actuary, before reserves were officially released.

Many actuaries have already spent considerable hours of professional time in developing the framework for a viable valuation structure. Our primary trade association, the American Council of Life Insurers, endorsed the approach in late 2005. However, one regulator referred to the Principles Based Valuation support as a "steamroller." This should be the time for small insurers and others to voice their reservations about the entire Principles Based Valuation proposal. Strict opposition may not be appropriate, but key questions should be asked.

Reservations

These reservations include:

1. Is there a burning need for Principles Based Valuation? Supposedly, it would reduce redundancies inherent in current statutory reserve requirements. The three or four industry groups who seem most concerned with alleged redundant statutory reserve levels are: High amount competitive term writers (through requirements for deficiency reserves); universal life writers whose minimum guarantees result in policies that are defacto term (and who may not hold reserves at all, or possibly not even half the cost of insurance after account values have run out); term insurers who have designed policies creatively to lessen reserve requirements of Regulation XXX; and variable life and annuity writers who apparently believe the New York Insurance Department's standard scenario to cover minimum general account guarantees is too high a reserve basis. There may be insurers of other products also. Mostly, there are large companies, but small insurers may also be part of this constituency. However, do these industry groups represent a majority of insurance companies?
2. Would adoption of Principles Based Valuation lead to still lower statutory reserves, even without the above portions, and bring their prevailing levels closer to reserves under generally accepted accounting principles? Would this be desirable from a solvency viewpoint?
3. Some small companies are concerned about a "level playing field." Large companies, willing and able to pay for an actuarial peer review, could hold smaller statutory

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reserves under Principles Based Valuation. Would this provide them an unfair competitive advantage?

4. Statutory reserves under Principles Based Valuation need continued qualification for federal income tax purposes. Proposals so far have called for a cash value floor as a minimum reserve, in hope that this would protect tax qualified status. However, this floor would not apply to term life or health insurance reserves. Also, the Treasury has sometimes implied that they will not allow reserves that do not correspond to a table specifically mentioned in National Association of Insurance Commissioners regulations.

5. The New York Insurance Department recently proposed a model law and regulation to implement Principles Based Valuation. Some aspects of it may have merit. For example, it seems to require sufficient margins in reserves that would keep Principles Based Valuation liabilities more conservative than under generally accepted accounting principles (if not very close to current statutory levels). Also, the model law describes Principles Based Valuation as an option, while expressing no preference for formulaic versus stochastic calculations.

6. On the other hand, at least one objection could be raised to New York's proposal. For testing reserves with minimum reserve scenarios (gross premium reserves), they seem to propose that minimum test reserves use a Treasury rate of interest, regardless of the company's investing rate of return. New York had previously demanded that these minimum or best estimate reserves be increased by 7.5 percent as official tests. This latter seems sufficiently conservative. An additional requirement for a treasury rate of interest when a company is earning more than this (even in the current low interest environment) seems unrealistic.

7. Some regulators have expressed concern that, under Principles Based Valuation, small companies, left to their own devices, would hold unacceptably low reserves. If peer reviewing actuaries, for these purposes, are deemed agents of regulators, and their responsibilities are sufficiently defined, this could answer their concern.

8. Some proponents of Principles Based Valuation have referred to the recent bankruptcy of Equitable Life in the United Kingdom. They seem to claim that this demonstrates the need for Principles Based Valuation in the United States, so that actuaries can use all their professional judgment in setting sound reserves.
This argument seems weak. For many years, in Britain and other countries, actuaries have been setting reserves under an equivalent of Principles Based Valuation. Peer reviews or adequate peer review standards may have been lacking. However, Britain seems to be backing away from Principles Based Valuation, so as to hold actuaries to very strict oversight from a government board. In effect, the entire actuarial profession in that country received a black eye (deserved or not) from existence of defacto Principles Based Valuation.

9. One implied argument for Principles Based Valuation, not so far explicitly stated, is that its adoption will raise the status of actuaries. This would come at a time when the profession is very concerned about its image, its status in the general field of risk management, and concern over inroads to actuarial prerogatives from other professions.

   First, reserve calculations have always been tied to unique actuarial expertise. Also, actuaries design current formulaic reserves and reserve standards. Society of Actuaries members, both from industry and Insurance Departments, have prepared new reserve tables as experience has evolved. Actuaries have designed guidelines and reserve standards for even more complex products.

   In other words, even before actuarial judgment and peer review have been emphasized in the new proposal, actuaries have always been intimately involved with statutory reserve developments of all sorts.

10. One primary concern over Principles Based Valuation is the belief of some actuaries that stochastic processing techniques should be used in all reserve calculations. They claim that stochastic is inherently superior to formulaic approaches, such that actuaries should be forced to justify why they don't choose the stochastic approach.

   The dictionary defines stochastic as "a process involving a randomly determined sequence of observations, each of which is considered as a sample of one element from a probability distribution." The key words here are "probability distribution." The distribution is chosen in advance and is itself an assumption. It may be based on statistical experience and professionally compiled, but it is still an assumption.

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Proponents have stated that stochastic calculations can capture the outlying risks inherent in many coverage's *i.e.*, very low probabilities, but extremely damaging if actualized. Again, these low probabilities themselves are assumptions within an overall distribution.

All or almost all formulaic reserve scenarios call for alternative calculations. The greater the tail risk, the more likely that large numbers of alternative reserves are needed to capture the range of outcomes. This could well result in higher reserves. The more numerous the benefit options, and the more extensive the variety of policyholder behaviors that could affect results, the greater the number of alternative scenarios that should be tested. This involves sound actuarial judgment. In short, this does not seem to demonstrate the superiority of the stochastic approach.

11. A key element of the current stochastic approach is the Conditional Tail Expectation (CTE). It involves use of reserves based on the arithmetic average of the desired number of worst-case scenarios. In other words, "65CTE" uses the average of the 35 percent worst-case scenarios. An "80CTE" uses the average of the 20 percent worst-case scenarios. This means that "80CTE" would have worse results and higher reserves than "65CTE."

    However, these worst-case scenarios are themselves assumptions within the probability distribution. Many adverse scenarios, unless weighted by a probability, would mean insolvency of the company. It would only make sense to use them if so weighted. Actually, true worst-case scenarios involve:

    1. All policyholders dying.
    2. All policyholders under health insurance entering nursing homes for 20+ year stays.
    3. For variable coverage, the stock market tumbling to zero and all policyholders transferring to the general account and then dying.

    No one uses these scenarios, because they mean the breakdown of our society.

12. Some proponents of Principles Based Valuation have stated that small companies could request exemptions from stochastic processing requirements. However, as stated above, sufficient justification for the inherent superiority of this approach has not been provided. Only then could stochastic be touted as a required replacement for the traditional formulaic option.

13. It is a legitimate concern that these proponents could insert requirements for use of stochastic processing into Actuarial Standards of Practice.

14. In regard to the stochastic processing approach, some actuaries have stated, "If we don't do it, somebody else will." In other words, if actuaries don't uniformly adopt the stochastic approach, other statisticians or non-actuaries will replace the profession as those qualified to calculate reserves. One answer to this argument is that there are activities that no one should be doing. In other words, even today, stochastic processing will undoubtedly be used extensively in calculating or testing reserves for certain products. For it to become a uniform standard, though, it must be subjected to much more rigorous tests and critiques than employed so far.

Summary of Issues

Small companies should be aware of possible pluses, but also, significant pitfalls, from the Principles Based Valuation proposals. Pluses include:

1. Possibly lower statutory reserves, especially for a company writing certain types of products that generate large deficiency reserves or other types of reserves mentioned above.
2. Potential to enter into certain product lines where previous reserve requirements would have kept them out.

Minuses include:

1. Onerous expenses from peer review.
2. Onerous expenses from software and computer machine time involved in stochastic processing.

Possible Approaches for Small Companies

1. Oppose Principles Based Valuation across the board.
2. Lobby for Principles Based Valuation laws and regulations to be general and not require or in any way favor either the formulaic or stochastic approach.
3. Insist that either formulaic or stochastic approaches remain optional.
4. Actuaries for small insurers should remain watchful and oppose any attempt to mandate use of stochastic approaches in Actuarial Standards of Practice.
5. Lobby for Principles Based Valuation requirements for peer review and for margins that are "appropriate to the risk profile of the particular insurer." In other words, small companies with relatively simple portfolios of products and investments should be able to employ Principles Based Valuation with the least amount of additional expenses. ●

On the cover

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