



SOCIETY OF ACTUARIES

Article from:

# The Financial Reporter

June 2008 – Issue No. 73

# Principle-Based Reserves Update

by Karen Rudolph



*(Editor's note: Karen Rudolph has agreed to supply the Financial Reporter with regular updates on PBA activities. Thanks to Karen and watch for future updates in the PBA Corner.)*

The NAIC calendar for 2008 is well underway. An overview of recent activity within certain aspects of the groups associated with the evolution of the Valuation Manual is presented here. The NAIC's Principle-Based Reserving (EX) Working Group anticipates that work on the Standard Valuation Law (SVL) will be complete during the Spring 2008 National Meeting and ready for plenary during the Summer 2008 National Meeting. The deadline for this article falls concurrent with the spring meeting.

## Valuation Manual (VM)

Work continues under the control of the LHATF rather than Academy working groups. The Academy's Life Reserve Working Group (LRWG), in particular, has been submitting proposed changes to the VM wording as it emerged from the winter meeting. Certain parts of those proposed changes are summarized below.

1. Stochastic Exclusion Test: Originally named the Material Tail Risk Test, the Stochastic Exclusion Test is a 12 scenario test, one of which is considered baseline. The other 11 scenarios

are generated by specified patterns of random shocks to economic conditions on the projection start date. The objective of the test is to provide a straightforward method of demonstrating whether a group of policies produces scenario amounts that are sensitive to economic conditions. If not, the principle-based reserve calculations need not include stochastic testing. Assumptions for this demonstration are prudent estimate assumptions. This test is performed annually, within 12 months of the valuation date. The test involves calculating a ratio using the baseline scenario asset amount (a), the largest scenario asset amount (b) and an amount representing the present value of benefits and expenses, (c). The ratio is  $(b-a)/c$  and must be less than a threshold (to be determined by the NAIC) in order to be considered as "passing" the test for dependence on economic conditions.

2. Reinvestment Assumption: VM-20 emerged from the winter meeting with a prescribed net spread on Treasury rates as applied to reinvestment assets. The LRWG has submitted an amendment that will effect two changes. First, the spread will be a gross spread rather than a net spread. It is felt that using a net spread together with a prudent estimate default charge assumption would result in excessive margin. Second, current gross spreads as of the valuation date, on reinvestment assets, are graded over three years to an ultimate gross spread. The ultimate gross spread for four specific asset types will be given in the VM. For a company whose reinvestment strategy includes assets other than those specified by the VM, the gross spreads used should reflect differences in these assets from the assets specified (i.e., quality rating, years to maturity and asset type).
3. General Considerations for Reinsurance: Text requiring certain reinsurance provisions (stop loss or maximum limits on benefits receivable) to be considered in the reserve calculations by stochastic analysis has been modified to allow the company flexibility in the method used to include these provisions in the principle-based cash flows. Revised wording states that all reinsurance agreements in force shall be included in calculating the reserve if doing so would



Karen Rudolph, FSA, MAAA, is a consulting actuary with Milliman, Inc. She can be contacted at [karen.rudolph@milliman.com](mailto:karen.rudolph@milliman.com).

increase the reserve. Such a reinsurance agreement must also comply with *the Accounting Practices and Procedures Manual* before being considered in force.

4. **Projection Period:** Projection period is expressed as a period long enough such that projecting further would not produce a materially greater reserve. The actuary can estimate the present value of obligations beyond the end of the projection period, but because the working reserve is zero, does not know the statutory reserve at that point in time. The proposed change is to add wording to the effect that the present value of remaining obligations (beyond the end of the projection period) be immaterial in determining the length of the projection period.

5. **Discount Rate:** In the discounting of projected cash flows, the VM currently specifies a path of discount rates equal to the path of net asset earned rates. As long as the model segment is projecting an asset amount greater than zero, this path provides a satisfactory estimate of an appropriate discount rate. However, for certain model segments and scenario combinations, the asset amount may be entirely depleted. In this circumstance, the wording change proposed would use a path of risk-free rates specified by the NAIC.

6. **Simplification Wording:** During the December 2007 Meeting, the wording allowing for simplifications and approximations was removed. The Life Reserves Working Group is recommending this wording be included based on concerns raised by small companies and companies with smaller blocks of business or business with no sensitivity to economic conditions. Simplifications and approximations are allowed if the company can demonstrate that their use does not materially change the resulting reserve.

7. **CTE Level:** During the December 2007 Meeting, the language describing the stochastic reserve specified a different CTE level depending on product type (30 CTE for whole life; 20 CTE for variable life; 35 CTE for all others in scope). The LRWG feels strongly that the CTE metric is designed to capture variation in the shape of the tail of the distribution. Therefore it is unnecessary to require different CTE levels by product type. Furthermore, varying CTE levels would complicate any aggregation across

product types. In addition to this change, the PBR Life Subgroup of the NAIC is proposing wording for a drafting note indicating that varying levels of CTE for different product types should be explored.

8. **Definition Change:** The term “Reported Reserve” has been used throughout VM-20 to imply the minimum reserve standard. The LRWG is advocating a permanent change from Reported Reserve to Minimum Reserve, since a company could choose to hold, or report, a reserve total higher than minimum.

In the discounting of projected cash flows, the VM currently specifies a path of discount rates equal to the path of net asset earned rates.

#### NAIC Principle-Based Reserve (EX) Working Group of the NAIC

This working group has drafted a paper describing the position of the NAIC on assurance of company reserves. In light of the removal of the reviewing actuary, this committee has discussed the following alternatives:

- Develop a Centralized Actuarial Reviewing office to perform annual reviews to confirm that companies valuing business under a principle-based approach are in compliance with the VM;
- Require the annual review by an independent actuary, where the reviewing actuary is hired directly by the state insurance department;
- Incorporate the requirement of an independent reviewing actuary into the state’s examination and analysis process;
- Combine the concept of a Centralized Actuarial Reviewing office and incorporate the requirements of this annual review into the state’s examination process.

The topic of assurance of company reserves is on the NAIC spring meeting agenda. The EX working group supports placing the assurance needed on reserves calculated using principle-based reserves into the examination and analysis function. The responsibility for the review would rest with the state of domicile. The state would have discretion in determining whether the review would be

continued on page 16 >>

performed by an independent actuary (hired by the insurance department) or an actuary on staff with the insurance department. Companies considered for review, the frequency and depth of the review would also rest with the state as part of its risk-focused examination process. The committee has agreed that consistency should be a goal for these reviews, as well as establishment of a centralized function that would prepare and compare reviews and the review processes of states in order to promote uniformity and minimize duplicative effort. The review process will no doubt evolve over time.

#### Timeline

The PBR (EX) Working Group has also updated its timeline. LHATF is expected to complete its work on the SVL at the spring meeting. PBR (EX), A

Committee and then Plenary should be reviewing the SVL revisions during the summer meeting. Work on the Valuation Manual is expected to be complete by the Fall 2008 Meeting, with presentation to the PBR (EX) and A Committee subsequently, and review by Plenary at the Winter 2008 Meeting. Other technical issues impacting the Annual Statement Blanks and SSAP should also be addressed during the summer/fall meeting sessions. §

## Attend the 1<sup>st</sup> Valuation Actuary Forum

The Valuation Actuary Symposium is a perennial favorite among financial reporting actuaries. Similarly, the Chief Actuaries Forum and the Smaller Insurance Company Chief Actuaries Forum are perennial favorites among their constituencies. Seeing an opportunity to build on these successes, the Financial Reporting Section is creating a forum for valuation actuaries that is patterned after these successful forums.

The first Valuation Actuary Forum will be attached to the Valuation Actuary Symposium in Washington, D.C., and will be held during the late morning and afternoon of Sept. 26, 2008. With the content of the Valuation Actuary Symposium fresh in their minds, participants will discuss valuation actuary issues in casual large group and small group settings. The forum will be an excellent opportunity for participants to internalize what they have heard at the symposium, to share and learn approaches of addressing valuation actuary issues and to bridge the gap between the ideal and real-world practice.

Participation will be limited. Details are still being worked out. If you are an appointed actuary or have another high level valuation actuary role, mark this time on your calendar and watch for additional information.

