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Random Feedback Loop Musings (PBR Feedback Loop)

By Kerry Krantz

The NAIC has asked the Life Actuarial Task Force to develop a white paper describing a principle-based reserve (PBR) feedback loop. The PBR Process and Coordination subgroup chair requested assistance from the American Academy of Actuaries. The Academy formed a Feedback Loop Task Force, and I am its chairperson. In an attempt to start a conversation on LinkedIn, a professional networking site, I posted the following message:

“1/18/11 PBR Feedback Loop

This is a request from the Life Actuarial Task Force for assistance from the American Academy of Actuaries to develop the concept of a PBR Feedback Loop. The assistance should include a discussion of the following areas:

1. The goals of a feedback loop;
2. The type and frequency of data collection;
3. How a feedback loop can provide regulators and industry with the information to determine if the PBA methodology is working as intended, or is in need of modification; and
4. The practical and effective implementation of a feedback loop.”

So far, we have enjoyed a productive response and discussion on LinkedIn.

Decades ago when I was a recently hired valuation actuary (before appointed actuaries), one of my assistants asked two questions on each valuation date, “What did we do last time?” and “Should we still be doing that?” I then asked, “If not that, what should we do?” and “What should we start doing that we have not been doing?” My boss’s boss, the CEO and an FSA, asked, “Why did that happen?” and “What, if anything, should we do about it?”

My idea of a feedback loop is to provide answers to those questions.

Most of the work on principle-based reserves has been to develop valuation requirements and financial reporting disclosures. My contribution to the PBR process and coordination subgroup of LATF has been to dis-

cuss peer review, which was not adopted, and changes needed to statement blanks and examiner and analyst handbooks to implement PBR. One major loose end is the analysis of increase in reserve. The adoption of a separate exhibit breaking out interest sensitive products several years ago was a good first step to understanding reserve changes. It is important for a company to understand the components that cause a reserve to increase or decrease, and the feedback loop should help.

The feedback loop should start with the initial assumption setting and conclude with an understanding of the factors that caused the reserve to change. One of the first steps should be to list the elements that cause the reserve to change as part of an actual to expected analysis. Reserves for existing business should be rolled forward, at appropriate levels of granularity, and actual to expected components (shown below) should be analyzed:

- persistency, including the change in insured demographic;
- actual mortality as a cost of insurance compared to average implied COI (with a reasonableness comparison to rates charged);
- average implied interest credited rates compared to crediting rates; and
- the impact of actual to expected new business in terms of insured demographic.

Those are basic comparisons that could be tested during an examination. In planning a risk-focused examination, the quality of the analysis would be used to determine residual risk. The actuarial examiner would then identify the management of risks as strong, moderate or weak.

The insurance department analyst who reviews a financial statement will maintain the domestic insurer profile summary. The field examiners will prepare examination planning memoranda, conduct C-level interviews, determine residual risk, and perform substantive testing. A feedback analysis could determine part of the content of their review. For the sake of brevity, I have left out a discussion of stress testing (including analysis of the development of margins added to best estimate assumptions), PBR valuation manual disclosures, infor-



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mation to be provided to an independent experience agent, risk-based capital, and long-term forecasting analysis. Part of a future discussion will also include identifying proprietary (confidential) information and non-proprietary (public) information that will be useful to examiners and analysts.

The PBR feedback loop has been part of industry discussions in the past few months. Below are a few letters on the topic.

The following letter is from the International Accounting Standards (EX) Working Group agenda at the NAIC meeting in Austin. Larry Bruning defined a PBR Feedback Loop in a letter dated Dec. 15, 2010.

- “The feedback loop should provide information on how well the process of valuing insurance risk is being performed and how the valuation should be improved. The Life Actuarial Task Force (LATF) should consider the types of data that should be collected, the companies that should submit data, the best way to collect and analyze the data, and who should do the work.
- “LATF intends to develop a white paper to address various aspects of the PBR feedback loop. The white paper will include a section on stress testing consistent with the desires of the Working Group. It will also include a discussion of information that is required for reporting purposes, who will review it and when. To this end, LATF has appointed the

Valuation Manual (VM) PBR Feedback Subgroup chaired by South Carolina to develop this white paper.

- “If the PBR and feedback loop changes are adopted, new information will need to be collected and related examiner and analyst procedures will need to be defined and added to the Financial Condition Examiners Handbook and the Financial Analysis Handbook(s). Annual Statement Instructions will need to describe both public and confidential exhibits that will be filed by each company.”

The following excerpt is from Commissioner Adam Hamm (ND), in a letter distributed to Technical Group Chairs on March 7, 2011.

“The Working Group is fully aware of the immense efforts by the Life Actuarial Task Force in completing its work for the initial version of the Valuation Manual, and recognizes there could be further changes adopted by the Task Force after the NAIC’s impact study is completed by Towers Watson. Having said that, I fully anticipate the NAIC membership adopting a Valuation Manual during the later part of 2011, thus laying the groundwork for states to consider adoption of the revised Standard Valuation Law in 2012.”

The following is a letter pertaining to the Statistical Agent Process Chair Approach, dated March 26, 2011. “LATF is currently working on a white paper in which they intend to outline how they believe a FAWG like feedback loop process could work and intend to discuss how stress testing could be performed without a centralized database.”

I hope this article provides an introduction to the PBR feedback loop being discussed. I welcome any comments and feedback you may have. ■