



SOCIETY OF ACTUARIES

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What's New In Financial Reporting Research

by Ronora Stryker



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New regulations and methodologies for valuing insurance liabilities seem to be occurring at a fast pace. Recognizing these new developments and the need for information to assist financial reporting actuaries in their daily practice, the Financial Reporting Section Council has placed an emphasis on sponsoring research. In 2008 alone, the Council initiated three projects related to a principle-based approach for statutory minimum reserves and RBC that is currently under development by the NAIC.

The first project examines the proposed principle-based reserving and capital approach on U.S. life insurance products. Through a competitive bidding process, a Milliman research team was selected to work with 16 companies to model the proposed approach on their blocks of businesses and compare the results to the current formulaic approach. Following are some of the issues that will be considered in the research:

1. Size of reserve: PBA vs. current approach, stochastic PBA vs. deterministic PBA;
2. Grouping and aggregation effects in the stochastic PBA reserve;
3. Difficulties and questions encountered by the modeling companies in complying with the new reserving framework;
5. Stochastic exclusion test results; and
6. Reinsurance

The project is progressing nicely with a summary of the research findings expected to be available on the SOA's Web site in the second quarter of 2009.

The second project identifies, compares and examines the appropriateness of approaches for calculating risk margins in actuarial assumptions under a principle-based framework. In addition to summarizing the different methods, the PricewaterhouseCoopers research team discusses the relevancy of the methods as they are applied in establishing the margin for various actuarial assumptions such as mortality, lapse and policyholder behavior, expense and expense inflation, default costs, and reinsurance. This project is nearing completion with the final report expected in early 2009.

Under the proposed PBA framework, individual company experience will be used to determine the proper

level of reserves and capital. The application of credibility theory will likely be required in order for actuaries to determine and evaluate the appropriateness of assumptions such as mortality and lapse levels for a company's block of business. The last PBA project underway involves conducting a company survey of U.S. life insurers on how they are currently using credibility theory as well as a statistical analysis of some of these approaches. Since this project is in the early stages, no timetable for completion has been set.

In addition to the above projects, the Financial Reporting Section, IAA, and other organizations are cosponsoring the development of an educational monograph on the applications of stochastic processes and modeling to insurance company financial reporting and capital assessment. This research will be useful to members as the U.S. insurance industry moves to the use of stochastic modeling processes in its reserving and capital requirements.

PBA is not the only research topic area of interest for the Section. Recently completed is a study examining stochastic pricing of embedded options found in life insurance and annuity products. Cosponsored with the Product Development Section and authored by Tim Hill, Dale Visser and Ricky Trachtman of Milliman, the report investigates the challenges associated with determining a fair value assessment for embedded options in two product types (universal life and variable annuity) and incorporates the process into product pricing. To peruse the report, see <http://www.soa.org/research/life/research-stochastic-pricing.aspx>.

Another large initiative undertaken by the Section was to analyze financial reporting for insurance contracts under possible future international accounting standards. Similar to the PBA study, companies modeled proposed international financial reporting standards (IFRS) and compared the results to GAAP values. The PricewaterhouseCoopers research team summarized some of the principal findings from the study such as:

- Income expected to be reported under the IFRS proposal can differ significantly from that resulting from the application of US GAAP, particularly at the time of contract issuance, although the overall pattern of

resulting liabilities after the first year are broadly similar.

- The direction and extent of the initial profit or loss under the IFRS proposal can differ significantly from US GAAP results, depending on type of contract, product design and underlying profitability of the product. Products that derive a significant portion of their income from investment returns tend to show lower income in year one under IFRS than under US GAAP, while those with alternative sources of income tend to portray more of a year one gain than under GAAP.

These and other findings are expressed in the Executive Summary of the report available at: <http://www.soa.org/research/life/research-financial-standards.aspx>.

This article just begins to touch the surface on all the studies the Section has sponsored over the last few

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years. For more information, visit the Section's research webpage for a complete project listing at <http://www.soa.org/professional-interests/life-insurance-company-financial-reporting/fr-research.aspx>.

If you are interested in getting involved in Section sponsored research or have an idea for a research project that would benefit Financial Reporting Section members, please contact Ronora Stryker, SOA Research Actuary, at rstryker@soa.org or Sue Deakins, Research Leader for the Section, at Deakins.Susan@pennmutual.com. ■

AG VACARVM/AG 43 Seminar



May 19-20, 2009
Denver Marriott City Center
Denver, CO

Co-sponsored by the Society of Actuaries and the American Academy of Actuaries, this day-and-a-half-long seminar on VACARVM and AG 43 will provide an in-depth discussion of several "hot topics" and specific implementation challenges related to the proposed Principle-Based Approach (PBA) for variable annuity products.

The seminar will also focus on technical aspects of implementation and a review of the updated Variable Annuity Practice Note, set to be released in spring 2009.

Learn more at www.soa.org

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