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You Say You Want a Revolution?

by Bradley N. Buechler

The 2001 Bowles Symposium kicked off May 16 at Georgia State University. The Coming Revolution in Insurance Accounting symposium focused on the development and practical considerations of a new international accounting standard, generally referred to as *fair value accounting.* The new standard will require both assets and liabilities to be 'marked-to-market' in a consistent manner. As long as the fair value of assets and liabilities move in tandem, over time the difference between the two, the fair value of surplus, will be immunized against changes in economic conditions and earnings will be smooth. In the absence of appropriate asset/liability matching, however, earnings can exhibit extreme volatility, since changes in the fair value of surplus are immediately booked as earnings. The symposium drew a diverse panel of experts from the United States, Canada, the United Kingdom, Australia, and the Netherlands who delivered presentations that will help the actuarial profession prepare for the profound changes that the new accounting standard will bring.

The first day began with opening remarks from Don Behan, Ph.D., FSA, director of the Actuarial Science Program at Georgia State University, and a welcome from Carl Patton, Ph.D., president of Georgia State University. They were followed by Bowles Distinguished Lecturer Sam Gutterman, FSA, FCAS (PricewaterhouseCoopers), who provided an overview and description of the issues raised by the proposed international accounting standard. Peter Clark, chartered accountant (International Accounting Standards Board), focused on the IASB's organizational structure, objectives and agenda for developing the new standard, indicating a tentative implementation date of 2005. Mike Grillaert, CPA (KPMG), then performed a detailed examination of the practical considerations of implementation of fair value accounting.

Craig Merrill, Ph.D. (Brigham Young University), and Luke Girard, FSA, FCIA, CFA (Delaware Lincoln Investment Advisors), dedicated the late morning session to addressing methodology issues relating to estimating the fair value of liabilities. Merrill outlined three techniques in common use for accounting for risk in financial valuation and demonstrated that, if applied correctly, they all arrive at the same answer to a given valuation problem. Merrill also addressed the controversial concept of the company's (put) option to default on debt and its relevance to fair value accounting discussions. Girard focused initially on an illustration of the equality of the direct and indirect methods of evaluating the fair value of liabilities and then described the advantages of using a leverage-adjusted cost of capital versus a constant cost of capital or capital spread.

After lunch, Allan Brender, Ph.D., FCIA, FSA (OSFI Canada), provided an overview of the regulatory issues surrounding the use of internal models by Canadian financial institutions in determining company-specific capital requirements and performing insurance valuations. Canada's regulatory structure already provides much of the latitude to the Appointed Actuary that would be necessary under fair value accounting. Terri Vaughan, ASA, ACAS, president-elect of the NAIC and current commissioner of the Iowa Division of Insurance, then commented on what she views as the inherent difficulties in the proposed use of internal models. Harry Panjer, Ph.D., FSA, FCIA (University of Waterloo) rounded out the early afternoon session by describing his involvement with the International Actuarial Association's Working Group on Solvency and its connection with fair value accounting.

Kim Balls, Ph.D. (Allianz Life), began the late afternoon session with a demonstration of the use of replicating portfolios for estimating the fair value of liabilities including useful insights into the development of market value margins. Marsha Wallace, CFA (Transamerica/Aegon), then presented a fair value accounting case study relating to a structured settlement liability. She showed that, to the extent insurers' assets and liabilities are closely matched (duration, key rate duration and convexity), fair value accounting provides a steady stream of earnings relatively immune to changes in economic conditions. However, to the extent insurers' assets and liabilities are not closely matched, fair value accounting means that interest rate/equity volatility translates directly into earnings volatility. Depending upon the degree of the mismatch and the magnitude of the change in economic conditions, this earnings volatility can be severe. Sam Gutterman closed out the first day with a presentation on the role of the actuary in the coming revolution.

The early morning session on the second day dealt mostly with case studies. The presenters were Robert Daly, FIA, FIAA (Tillinghast-Towers Perrin); Doug Doll, FSA (Tillinghast-Towers Perrin); David Sandberg, FSA (Allianz Life); and David Hare, Ph.D., Fellow of the Faculty of Actuaries (Standard Life Assurance Company of Scotland). In the late morning session, Henk van Broekhoven, member of the Dutch Actuarial Society (ING Group) constructed a fair value of liabilities and presented a simple model to calculate a market value margin with an emphasis on mortality risk. Godfrey Perrott, FSA (Milliman USA), illustrated the earnings volatility characteristic of fair value accounting with an SPDA case study, corroborating the work presented by Marsha Wallace the day before. Mark Freedman, FSA (Ernst & Young, LLP), provided commentary on Perrott's presentation using the contrived example of a CFO forced to explain the huge earnings volatility his company suffered under fair value accounting as a result of its asset/liability mismatch. Finally, Mark Tenney (Mathematical Finance Company), observed that as actuaries add more stochastic variables, it will take more scenarios for the results to converge. This led into an illustration of the usefulness of *Low Discrepancy Sequences,* also known as the quasi-random Monte Carlo method, which converge to the correct answer after only one-tenth the number of scenarios required by traditional Monte Carlo simulation for many types of real-world problems.

Special thanks to Sam Gutterman, 2001 Bowles Distinguished Lecturer, for organizing this outstanding symposium and to Anne Shaw, marketing and conference services manager, for making sure everything ran smoothly. Congratulations to Sam Cox who was recognized as the Bowles Chairholder. Papers from the symposium have been submitted for publication in the *North American Actuarial Journal.*

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