### LIFE INSURANCE COMPANY FINANCIAL REPORTING SECTION

"A KNOWLEDGE COMMUNITY FOR THE SOCIETY OF ACTUARIES"

# The Financial Reporter Issue No. 72

The Newsletter of the Life Insurance Company Financial Reporting Section

### American Academy of Actuaries' IFRS Task Force Response to IASB Discussion Paper on Accounting for Insurance Contracts

by Noel Harewood, Leonard Reback & Darin Zimmerman

This article does not address any of the authors' personal views on the Discussion Paper or the Academy's response, nor those of any of the authors' employers.

hese are certainly interesting times for U.S. life insurance valuation actuaries. On the regulatory front, the National Association of Insurance Commissioners (NAIC) is working with state insurance departments to replace the existing rules-based valuation laws with principle-based valuation laws. On the GAAP front, both the International Accounting Standards Board (IASB), which sets GAAP accounting guidance for many countries outside the United States, and the Financial Accounting Standards Board (FASB), which promulgates GAAP guidance in the United States, are moving toward a "current estimate" standard of valuation, which often results in a fair value or similar measurement basis.

This article reviews the IASB's discussion paper on insurance valuation and the American Academy of Actuaries' (Academy) response to it. But before U.S.-only actuaries skip to the next article, be warned: the SEC is currently considering a rule allowing domestic companies to choose to file under IASB accounting standards if they wish. And many knowledgeable people (including Robert H. Herz, Chairman of FASB<sup>1</sup>) believe it is only a matter of time before the SEC mandates that U.S. companies file under international standards as well. Even if these develop-



ments do not materialize, many people expect FASB to join the IASB in this project as part of the overall convergence effort. So, the IASB paper may form the basis of new FASB insurance accounting guidance as well.

Last Spring, the IASB issued its discussion paper, "Preliminary Views on Insurance Contracts."<sup>2</sup> In November, the Academy's International Financial Reporting Standards Task Force (IFRS Task Force or Task Force) submitted its comments to the IASB responding to the paper's request

continued on page 3 >>

 $^1\ http://www.fasb.org/testimony/10-24-07\_prepared\_statement.pdf$ 

<sup>2</sup> For a full discussion of the provisions of the discussion paper see, "An International Financial Reporting Standards (IFRS) Phase II Discussion Paper Primer," by Mark J. Freedman and Tara J. P. Hansen in the December issue of Financial Reporter.



### The Financial Reporter

#### March 2008 Issue No. 72

Published by the Life Insurance Company Financial Reporting Section of the Society of Actuaries

475 N. Martingale Road, Suite 600 Schaumburg, Illinois 60173 p: 847.706.3500 f: 847.706.3599 w: *www.soa.org* 

This newsletter is free to section members. Current-year issues are available from the communications department. Back issues of section newsletters have been placed in the SOA library and on the SOA Web site *(www.soa. org)*. Photocopies of back issues may be requested for a nominal fee.

2007-2008 Section Leadership Jerry F. Enoch, Chairperson Rod L. Bubke, Vice-Chairperson Craig Reynolds, Secretary Mike Y. Leung, Treasurer Edward L. Robbins, Board Partner Susan T. Deakins, Council Member (Spring Program Committee Rep.) Steve Malerich, Council Member Dwayne McGraw, Council Member Jason A. Morton, Council Member Vincent Y.Y. Tsang, Council Member Basha Zharnest, Council Member (Annual Program Committee Rep.) Kerry A. Krantz, Web Coordinator

Rick Browne, Newsletter Editor KPMG LLP 303 East Wacker Drive • Chicago, IL • 60601 p: 312.665.8511 f: 312.275.8509 e: *rhbrowne@kpmg.com* 

Carol Marler, Associate Editor e: carol.marler@ge.com

Sam Phillips, Staff Editor e: *sphillips@soa.org* 

Julissa Sweeney, Graphic Designer e: *jsweeney@soa.org* 

Mike Boot, Staff Partner e: *mboot@soa.org* 

Christy Cook, Project Support Specialist e: *ccook@soa.org* 

Facts and opinions contained herein are the sole responsibility of the persons expressing them and shall not be attributed to the Society of Actuaries, its committees, the Life Insurance Company Financial Reporting Section or the employers of the authors. We will promptly correct errors brought to our attention.

Copyright ©2008 Society of Actuaries. All rights reserved. Printed in the United States of America.

### What's Inside

1 American Academy of Actuaries' IFRS Task Force Response to IASB Discussion Paper on Accounting for Insurance Contracts—

A review of the Academy's response to the IASB Discussion Paper.

Noel Harewood, Leonard Reback and Darin Zimmerman

#### 6 My View for 2008—

Thoughts from the Section Chair.

Jerry Enoch

#### 8 Section Council Sponsors IFRS Research—

This article describes the study completed by the Society of Actuaries on the impact of IFRS on popular U.S. products. This study was sponsored by the Financial Reporting Section.

Tom Herget

#### 9 PBA Corner—

An update on activities surrounding the principle-based approach to statutory reserves and minimum regulatory capital.

Karen Rudolph

11 A Liquid/Illiquid Financial Instrument Reporting Paradigm and its Application to the IASB Preliminary Views of Insurance Contracts—

Considerations related to the IASB proposal for market-consistent, exit-value valuations.

Winston Wisehart

15 Market-Consistent Valuations of Life Insurance Business: The U.K. Experience A Report for the Society of Actuaries—

A reprint of the Exectutive Summary to this article published by the Society of Actuaries. *Chris O'Brien* 

- 19 Foreign Correspondent

An IFRS update.

Henry Siegel

### 22 The Chartered Enterprise Risk Analyst Credential

Experienced Practitioner's Pathway Article.

Chaundra McGill

2

for comments to 20 specific questions. The Task Force's response included views from members of the various sub-committees that are responsible for health, P&C, and life insurance accounting issues. The Academy's Life Financial Reporting Committee (LFRC), part of the Life Practice Council, drafted responses for most of the life-themed questions. The full response is available on the Academy Web site and on the IASB Web site,<sup>3</sup> but we would like to highlight some of the most important issues here. Since the Financial Reporter's focus is on life insurance issues (i.e., not P&C) we will focus on those issues.

#### **Current Exit Value**

The IASB has not yet released its analogue to FASB Statement No. 157, which provides an overall definition of fair value for GAAP reporting purposes. So therefore, the IASB discussion paper does not technically propose the measurement basis for insurance contracts to be considered "fair value." However, as expected, the IASB discussion paper's starting point for insurance valuation is very similar to fair value, a measurement basis the IASB calls "current exit value." Paragraph 104 of the discussion paper notes that the IASB has not identified significant differences between fair value and current exit value. The IASB's proposed definition of current exit value comes from paragraph IN21:

This paper defines current exit value as the amount the insurer would expect to pay at the reporting date to transfer its remaining contractual rights and obligations immediately to another entity.

This definition is similar to FASB's new standard contained in paragraph five of FAS 157:

Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.

In its response, the Task Force pointed out that often, there is no liquid market for the liabilities held by insurance companies, so the term "current exit value" will likely be impossible to actually measure and could create the impression that such a market exists. A recurring point was that just because an item can be measured in theory does not mean there is any practical way to measure the item in reality. Of the questions asked in the discussion paper, Question 2 is probably the most fundamental. That question asks whether insurance liabilities should be measured using the three building blocks of current exit value identified in the paper:

- 1. explicit, unbiased, market-consistent, probability weighted and current estimates of the contractual cash flows,
- 2. current market discount rates that adjust the estimated future cash flows for the time value of money, and
- 3. an explicit and unbiased estimate of the margin that market participants require for bearing risk (a risk margin) and for providing other services, if any (a service margin).

In its response, the Task Force agreed that the measurement of life insurance liabilities should reflect a current estimate of all future cash flows, appropriately discounted and with a risk margin to reflect the market view of the risk inherent in the liability. However, it noted that much of the language in the discussion paper on this subject is actually actuarial guidance that should be promulgated by the actuarial profession. It recommended that the accounting standard should simply state the measurement and recognition principles and objectives and allow the actuarial profession to write the detailed measurement guidance.

The Task Force also noted that it may not be possible to separate inputs that are level 1 and level 2 under FAS 157 into the building blocks in a nonarbitrary manner. It also noted that the definition specifies using "market consistent" inputs, whereas in reality most inputs that a knowledgeable buyer would use to value insurance liabilities would be "entity-specific" inputs that account for characteristics of both the target and the acquirer.

With respect to the specific building blocks, the Task Force objected to the requirement that cash flow estimates always be "market consistent" and

continued on page 4 >>

 $^3\ http://www.iasb.org/NR/rdonlyres/DAE50622-0FAF-4CE0-9F55-2494DBC7A890/5173/20071116171127\_AcademycommentsonIASBDP.pdf$ 

Many knowledgeable people believe it is only a matter of time before the SEC mandates that U.S. companies file under international standards as well. Noel Harewood, FSA, MAAA, is a consultant with Towers Perrin. He may be contacted at noel.harewood@ towersperrin.com



Leonard Reback FSA, MAAA, is vice president and actuary, with Metropolitan Life Insurance Co. in Bridgewater, N.J. He may be contacted at Ireback@metlife.com



Darin G. Zimmerman, FSA, MAAA, is vice president and chief actuary for Transamerica Re in Charlotte, N.C. He may be reached at darin.zimmerman@ transamerica.com

"probability weighted." The discussion paper would require the probability weighted cash flows to reflect "all possible scenarios." But in reality it is impossible to know all the "possible" scenarios to be used (for example, prior to 9/11 no insurer would likely have included such a scenario in its probability weighted scenarios). And even if reflecting "all possible scenarios" were possible, it is extremely impractical to use "all currently available information" each reporting period. Finally, for many assumptions the effect of probability-weighted scenarios can be adequately approximated without the use of stochastic modeling. The Task Force also concluded that the estimate of cash flows should be permitted to reflect entity specific experience.

On the issue of discounting the cash flows, the Task Force expressed general agreement with the requirement, but noted that the first two building blocks need to be properly integrated. For example, each separate cash flow scenario needs to be discounted using interest rates associated with that specific scenario. Also, the discount rates need to be consistent with any investment returns used in projecting the cash flows for each scenario.

The Task Force stated that any separation of margins, such as risk versus service, is likely to be arbitrary and meaningless. The Task Force expressed the view that determining the proper margin is likely to be subjective unless the margin can be calibrated in some manner. It also noted that where markets exist for non-insurance financial instruments the risk margin is incorporated by using biased probability weights on cash flows, rather than by separately generating an unbiased estimate of probability weighted cash flows and an unbiased estimate of a separate risk margin.

Question 4 of the discussion paper asks what role the actual premium charged should play in calibrating margins. This involves the issue of whether it should be permissible to recognize a gain at issue, or whether income should be recognized only as the insurer is released from risk. If the margins are calibrated to the actual premium charged (net of relevant acquisition costs) gains at issue would be eliminated. A minority view within the IASB conforms to this position that gains at issue should be eliminated by calibrating the margin to actual premiums charged and releasing that margin as the insurer is released from risk. However, the IASB majority view is that margins should not be calibrated to actual premiums charged. This view holds that gains at issue should be permitted if the current exit value calculated in accordance with the three building blocks is less than the premium charged net of relevant acquisition costs. In its response, the Task Force disagreed with the majority view, but did not quite conform to the IASB minority view either. Rather, the Task Force took a middle ground: there should be a rebuttable presumption that the margin implied by the actual premium is the market consistent margin, and that the evidence needed to rebut the presumption, especially if it results in a gain at issue, should be overwhelming.

#### **Beneficial Policyholder Behavior**

Questions 6 and 7 address beneficial policyholder behavior. Question 6 asks generally about whether beneficial policyholder behavior (i.e., policyholder behavior that reduces the liability if recognized, such as lapses on a lapse supported policy) should be recognized, and if so, whether it should be reflected through a reduction in the liability or as a separate asset. The Task Force took the position that the expected beneficial behavior should be reflected, preferably as part of the liability.

Question 7 refers to the issue that probably has the greatest potential to produce non-intuitive results: whether future premiums should be recognized in the valuation. The IASB position is that such premiums should be recognized if any of three conditions are met:

- 1. The premiums are contractually required to be paid;
- 2. Recognizing the premiums and any associated benefits and expenses would increase the liability; or
- 3. The premiums are required for the policyholder to retain guaranteed insurability.

The first two criteria are non-controversial. But the third criteria was actually a concession within the discussion paper. Under the IASB's principles, future premiums that do not meet either of the first two criteria are not part of a liability, but an intangible asset representing the possibility that the insurer will collect these premiums. But under the IASB's accounting framework, internally generated intangible assets cannot be recognized. Since recognition trumps measurement within the accounting framework, premiums that do not meet either of the first two criteria could not normally be included in the valuation. However, the IASB recognized that for insurance products excluding future premiums would produce meaningless results. Therefore, the discussion paper makes a concession for premiums necessary to retain the insured's guaranteed insurability, on the theory that such premiums are so closely related to the underlying liability that it is appropriate to include them.

While this concession potentially resolves the premium issue for traditional insurance contracts, it would still exclude most future premiums on universal life type contracts. This would produce very different results for universal life and whole life valuations—likely overstating the appropriate liability for universal life contracts—even though the products are similar. Furthermore, in an acquisition, i.e., a transaction that would indicate an exit value, the acquirer would almost certainly include expected future universal life premiums in the valuation. Therefore, in its response, the Task Force favored including all expected future premiums in the insurance liabilities measurement.

#### Other Important Issues

Question 8 of the discussion paper asks whether a deferred acquisition cost (DAC) asset should be accrued or whether acquisition costs should be expensed as incurred. The Task Force agreed with the discussion paper conclusion that a DAC asset should not be necessary, since the margins in future premiums to recover acquisition costs would already be reflected in the valuation. However, the Task Force noted that if recognition of expected future premiums in the valuation was restricted (as proposed in the discussion paper) then some sort of DAC asset would be necessary.

Question 13 relates to unbundling. The IASB discussion paper proposes bifurcating a contract between an insurance element and a deposit or service element under certain circumstances. The Task Force objected to this proposal, in a response similar to the one we sent to the FASB when it proposed bifurcation of insurance liabilities in 2006. We think it's a bad idea.

Question 14 asks whether the measurement of the insurance liability should reflect the insurer's credit standing. Similar to FAS 157, the IASB discussion paper suggests that an insurance liability reflect the insurer's own credit standing. This would reduce the liability if an insurer's credit standing declined, and increase the liability if an insurer's credit standing increased. The Task Force objected to this proposal because it did not agree with the contention that reducing a liability if credit standing declined would provide useful information to users of finan-

cial statements. It also noted that due to regulatory constraints in many jurisdictions, any attempt by an insurer to actually realize the "benefit" of its reduced credit standing would likely not be possible for the insurer as a going concern.

Question 16 asks how to recognize policyholder dividends on participating contracts. The discussion paper suggests recognizing future policyholder dividends only if the insurer has either a legal or constructive obligation to pay those dividends as of the reporting date. The discussion paper also suggests similar treatment for interest credits on universal life contracts in excess of guarantees.

This is essentially the converse situation of that in Questions 6 and 7. In the situations covered by Questions 6 and 7 the discussion paper suggests ignoring future premiums from the valuation if the policyholder has no compulsion to pay. Here, the discussion paper suggests ignoring future dividends if the insurer has no compulsion to pay. Similar to the responses to Questions 6 and 7, the Task Force favored incorporating all expected future cash flows in the liability valuation. This would include policyholder dividends on participating contracts and nonguaranteed elements on universal life contracts.

The Task Force also responded to other questions, including those on: recognition and de-recognition of insurance liabilities, whether premiums are revenue or deposits, and the treatment of reinsurance.

Finally, in its other comments, the Task Force reminded the IASB that the proposed guidance is a radical departure from existing guidance. Therefore, the cost of any implementation will be significant. Furthermore, as much time as possible should be allowed for implementation after the guidance is finalized.

Finally, in its other comments, the Task Force reminded the IASB that the proposed guidance is a radical departure from existing guidance.

# My View for 2008

by Jerry Enoch



hree years ago I wrote my final column as editor of The Financial Reporter. It never occurred to me that one day I might be submitting the Chairperson's column to another editor. Surprise!

Shortly before I became Chairperson, Henry Siegel, last year's Chairperson, told me something that I will remember for a long time. He said, "You can accomplish anything you want, as long as you find the people to do it." That's a powerful statement. We rarely accomplish beyond our dreams, and we don't accomplish what we can't implement. I decided to dream big, to be willing to try many things and fail at some, rather than trying only what I'm confident we can accomplish. I told the council to not think in terms of, "What can we do?" but to think in terms of, "What do we want to do?"

The Council had had a "blue sky" discussion, and I thought about the most important opportunities facing the Financial Reporting Section. This gave birth to "the Big Three." In no particular order they are: meeting the increased demand for continuing education caused by increased requirements, becoming an effective, active force in research, and finding and fulfilling our appropriate role in the Principle-Based Approach (PBA). Each of these is worthy of additional description.

#### Continuing Education

The American Academy of Actuaries has greatly broadened and deepened its requirements for continuing education. If you are a member of the Academy or Society and are not familiar with these requirements, I strongly encourage you to read them on the Academy's Web site as soon as you complete this issue of The Financial Reporter. The Academy's requirements become effective in 2008, and the Society's, which will be very similar, are to be effective in 2009. While providing great flexibility, the requirements will result in more actuaries needing more "organized" continuing education. Given the recent popularity of webcasts, I expect the demand for webcasts, as a convenient and inexpensive way to receive organized continuing education, to increase significantly. I want the Financial Reporting Section to effectively help meet the increased need through webcasts or any other medium.

I have another dream for continuing education that is not directly related to continuing education requirements, but becomes more important because of the new requirements. Our annual GAAP and Advanced GAAP seminars have been immensely successful year after year. These have been running for more than 10 years, and I won't venture a guess about their future lifetime. I, personally, am grateful for the actuaries who have led these seminars over the years. Aren't there other topics about which we could develop annual seminars that would benefit actuaries year after year? Can the section start one every other year for the next several years? That is my dream.

#### Research

The next item in the Big Three is research. The SOA is an organization devoted to education and research. The Section has contributed very effectively to education, but our experience in research is limited. Last year's Chairperson, Henry Siegel, took us to the next level with a huge research project about International Financial Reporting Standards. I hope you will read Tom Herget's article in this newsletter describing this project. Our challenge is to remain at that level.

PBA may help us accomplish that. Mike Boot, Staff Fellow with the SOA, has been working with several Academy groups, and has informed us of some very important research needs that the Academy has identified related to PBA. We are evaluating these to determine how we can best contribute. We also find that working with the SOA's Committee on Life Insurance Research provides many good opportunities to contribute toward research, and to learn from a broader base of experience. Additionally, research opportunities continue to emerge from the international arena.



Jerry Enoch, FSA, MAAA, is vice president corporate actuary with Lafayette Life Insurance Co. He can be contacted at jerry.enoch@ Iafayettelife.com

#### PBA

PBA rounds out the Big Three. This is one of those "unstructured problems" that actuaries are encouraged to learn to master. PBA is important and it is advancing. What role should the Financial Reporting Section take in PBA? We certainly don't want to get in the way of the good work that is being done. At the same time, we want to recognize when it's time to get involved. That involvement could involve education; it could involve research; it could involve something else. Maybe the time to get involved is this year; maybe it will be later. Whatever the case, it is a high priority for us to recognize our time to be involved.

#### Strategy for Accomplishing the Big Three

Believing that committees are rarely good leaders, we have a council member who is leading our efforts in each of these areas. Dwayne McGraw, who is in his first year on the council, is our Continuing Education Leader. I admire Dwayne's boldness. Mike Leung, in his third year on the council, has agreed to provide support. Of course, the whole council is available anywhere for support when needed.

Sue Deakins is our Research Leader. Sue fulfilled this role last year. There is a considerable learning curve in finding and managing research projects, so we are very fortunate that we have Sue's experience working for us. She has hit the ground running. Jason Morton has undertaken our unstructured problem by taking on the responsibility of PBA Leader. He will be coordinating with Mike Boot and Dwayne and Sue, as appropriate. Jason and Sue are both in their second year on the Council.

The tasks they have undertaken are too big for Dwayne, Sue and Jason alone. I expect that they will need to establish task forces to implement various projects, or even to identify projects. They will be looking for assistance from the Council and from the membership at large. When they ask for help, I hope that the response will be overwhelming. If you have an interest in one of these areas, please call or write them now. Tell them what your interest is, and there's a good chance you can be involved.

I think that this is an exciting time for the Financial Reporting Section Council, and, if we do a good job this year, that excitement should continue for several years. I hope that the readers of this article will consider running for section council next year and will be interested in helping us with our work this year. Feel free to contact me or another council member. We have a lot going on besides the Big Three, but that will have to wait for a future article.

### Financial Reporting Section Plans Quebec City Offerings

Looking for a relevant structured learning opportunity? Pack your passport and head to the 2008 Life Spring Meeting in Quebec City June 16–18. Unlike prior years, this year's meeting will include three full days of sessions—the last day is a joint day with CAS, CIA, IAA and SOA sessions.

The Financial Reporting Section Council has created a slate of sessions providing broad coverage of reporting developments. Highlighting the list of section offerings are sessions on the impact of principle-based approach (PBA). Some of these sessions include the Canadian experience with PBA, technical topics in PBA including credibility theory and setting the mortality assumptions, technology aspects of a PBA and capital in a PBA world including RBC C-3 phrase 3 for life insurance.

Other sessions include modeling UL secondary guarantees, GAAP updates and economic capital. In addition, there will be a four-part, embedded seminar providing an introduction to modeling efficiency and scenario reduction techniques.

The section council is excited about the programming for Quebec City. We look forward to seeing you there!

Mike Boot, FSA, is staff fellow, ILA Solutions, at the Society of Actuaries. He may be reached at *mboot@soa.org*.



### Section Council Sponsors IFRS Research

by Tom Herget

he SOA has completed its study of IFRS accounting impacts on popular U.S. products. Members and other interested readers can find the study on *www.soa.org/research/research-life.aspx*.

The International Accounting Standards Board (IASB) has been studying insurance accounting for 10 years. They are closing in on concluding initial research and are now sharpening their pencils for writing new standards for insurance accounting.

The IASB issued its Discussion Paper last May. It contained preliminary views and rationale for an initial draft of accounting principles. Naturally, it contained elements that both pleased many constituents and alarmed others.

In order to help the United States actuarial profession establish its position on these new accounting principles, the American Academy of Actuaries (AAA) asked the Society of Actuaries (SOA) to conduct a research project. The Financial Reporting Section Council accepted this challenge. It organized a Project Oversight Group (POG) which in turn retained a consulting firm, PricewaterhouseCoopers (PwC) to lead the study.

The POG then recruited 20 Actuarial Task Forces (ATFs). The ATFs were small calculating teams who applied IFRS principles to real blocks of business and real products. We thank the companies and firms (AFLAC, Beneficial, Cincinnati Life, Deloitte & Touche, Ernst & Young, Kaiser Foundation Health Plan, Manulife, MetLife, Milliman, New York Life, Ohio National, Symetra and XLRe) who provided real products, real inforce blocks and real people to perform the calculations.

The ATFs provided projections of GAAP income statements and balance sheets along with the various cash flow components needed for IFRS computations. The assumptions surrounding the projections were provided for comparison to other submissions. They also provided various sensitivities around their specific product along with observations or comments.

The results were provided to PwC who reviewed and vetted. The POG also weighed-in on approaches and results. Once all 20 ATFs reported numbers, PwC then wrote a report on the results. The report included graphs of the resulting net income under both existing GAAP and the proposed IFRS. Sensitivities and alternative views were also explored with respect to the risk margin and discounting proposed by the IFRS DP and the resulting impact on net income was shown. Comparison of the GAAP net liabilities to the proposed IFRS liabilities were also prepared and displayed. Many items were identified that were either not addressed in the IFRS DP or may warrant future research.

These results have been forwarded to the Academy who in turn has submitted them to the IASB and the FASB. The FASB has requested comments from its constituents as to whether users feel IFRS could be a suitable replacement for U.S. GAAP.

There are two results we are hoping for. One is that the accounting rule-makers can see the impacts, the pros and the cons, of the principles they espouse. The second outcome is to educate the United States practioners as to what they can expect in the way of results and calculation process.

The IASB will now evaluate all responses (over 150) to its Discussion Paper and use information learned to prepare an Exposure Draft with, presumably, revised proposals. In doing this, it will collaborate with the FASB which will most likely join in the project in the third quarter of 2008. The Exposure Draft will be issued more than a year from now. We will probably have a second chance to do research on these updated principles.

The Section Council appreciates the hard work performed by the ATF's, the researchers, and the POG. S



Tom Herget, FSA, MAAA may be reached at Herg411@aol.com

# PBA Corner

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.)

ctivity surrounding the principle-based approach (PBA) to statutory reserves and minimum regulatory capital is gaining momentum. The regulatory community, actuarial profession and insurance industry in general have contributed significant effort to fuel the progress to date. As the deadline for this issue of The Financial Reporter nears, the NAIC's Life and Health Actuarial Task Force (LHATF) scheduled an unprecedented number of days combing through the documents included in the proposed Valuation Manual (VM), as well as endeavoring to adopt the revisions to the Standard Valuation Law (SVL-II) that recognizes the VM as the repository for statutory accounting reserve requirements. This article will allow those readers who are not as close to this initiative to quickly become familiar with the landscape of the movement and where it stands today.

The work products have been many and varied. At this stage, all reserving requirements, both principlebased and formulaic methods, will be found in the VM. Following is an overview of the six sections of the VM and some important elements of each. The first five sections refer to one or more minimum standards found in the final, sixth section. Much of the content in these sections is in draft form and subject to change.

*I. Introduction.* The reserve requirements found in the VM satisfy the minimum statutory valuation requirements of the SVL. These requirements are applicable to life, annuity, deposit-type contracts and health insurance business. The operative date of the VM is January 1 following the date that: (1) the VM (or a change thereto) is adopted by at least 75 percent of the NAIC executive and plenary members; and (2) at least 39 states have adopted the revised SVL. This section also includes the process for updating the VM.

*II. Reserve Requirements.* This section lays out the scope of the VM and maps any particular business type to the appropriate requirements. For example, for life insurance contracts in force on the operative date of the VM, this section specifies applicable state

requirements as the minimum standard. For life insurance contracts issued on or after the operative date, the minimum requirements found in VM-20 are applicable. VM-20 is the Requirements for Principle-Based Reserves for Life Products and is found in a later section of the VM. Whether a contract qualifies as a life contract is specified in VM-2.

*III. Reporting Requirements.* Companies are subject to each of two types of reporting requirements: the Actuarial Opinion and Memorandum (VM-30) and the Principle-Based Reporting Requirements (VM-31).

*IV. Annual Principles-Based Review Requirements.* The scope and responsibilities of the reviewer and the company are found in VM-40. At the winter NAIC national meeting however, this section was removed from the manual. The disposition of peer review requirements for principle-based valuations is to be determined. Review requirements found in VM-40 will likely be retained in some way, whether by inclusion in the Financial Examiner's Handbook or some other state-specific requirement. The frequency of the review is also unknown and may be at the discretion of the state.

V. Experience Reporting Requirements. The scope and content of experience reporting is still under development. VM-50 and VM-51 outline these requirements and the associated formats for submissions.

*VI. Valuation Manual Minimum Standards.* This is where the detailed content resides. Sections I through V point the reader to a document in Section VI for detail on specific requirements. These include: VM-0 Introduction, General Information and

- M-0 Introduction, General Information and Table of Contents
- VM-1 Definitions for Terms in Requirements
- VM-2 Definitions for Types of Contracts
- VM-3 PBR Applicability to Contracts
- VM-5 NAIC Model Standard Valuation Law
- VM-20 Requirements for Principle-Based Reserves for Life Contracts.
- VM-21 PBR Variable Annuity (VACARVM)
- VM-22 Requirement for Principle-Based Reserves for Non-Variable Annuity Contracts
- VM-25 Health Insurance Reserves Minimum Reserve Requirements



Karen Rudolph, FSA, MAAA, is a consulting actuary with Milliman, Inc.She can be contacted at karen.rudolph@ milliman.com

- VM-26 Credit Life and Disability Reserve Requirements
- VM-30 Actuarial Opinion and Memorandum Requirements
- VM-31 Reporting and Documentation Requirements for Business Subject to PBR
- VM-40 Review Opinion Requirements for a Principle-Based Valuation
- VM-50 Experience Reporting Requirements
- VM-51 Experience Reporting Formats

#### **Recent Developments**

With respect to PBR for life insurance, developments between the September and December NAIC meetings include definition of a test for sensitivity to economic scenarios (formerly the Material Tail Risk Test) and reconstruction of the guidance for determining the valuation mortality assumptions.

The purpose of the test for sensitivity to the economic conditions is to provide the practitioner a safe

The mortality section of VM-20 (Subsection 6) has been updated to include a clarified methodology for arriving at valuation mortality rates. harbor test to demonstrate a group of policies as qualifying for the stochastic modeling exclusion. This test is under review by LHATF, but all indications are that it will approve the general methodology. The test is performed on a limited number (12) of proposed economic scenarios, one of which is considered baseline, and focuses on a ratio of (A-B)/C where:

- A = highest scenario reserve amount among the 11;
- B = baseline scenario amount; and

C = PV of benefits and expenses, determined on baseline scenario.

A, B and C use prudent estimate assumptions and follow the definition of scenario reserve found in VM-20. Regulators would need to determine a threshold level for policies to qualify for the stochastic modeling exclusion. A group of policies for which there is a clearly defined hedging strategy is viewed by the regulators as a group of policies ineligible for the stochastic modeling exclusion regardless of the type of hedging being used.

The mortality section of VM-20 (Subsection 6) has been updated to include a clarified methodology for arriving at valuation mortality rates. The objective of the rewrite was to provide companies with little or no credible experience a simplistic way to find the appropriate valuation mortality table. A credibility criterion has been introduced. This criterion has yet to be determined, but can be thought of as a threshold credibility level. If the company's credibility falls below the credibility criterion threshold, the company uses its underwriting and risk-classification procedures (through a scoring procedure) to map into a VBT and its corresponding CSO mortality table.

If the company's experience mortality credibility falls above the criterion, the company would use a more complex path to determine the appropriate valuation mortality assumption. This path includes the underwriting scoring procedure, determination of the appropriate VBT industry table and a method for blending the industry table with company experience rates. A margin is added to the blended rates. Finally, the company would select the CSO mortality table that provides a seriatim reserve closest to, but not less than, a seriatim reserve based on the blended rates with margin.

# A Liquid/Illiquid Financial Instrument Reporting Paradigm and its Application to the IASB Preliminary Views on Insurance Contracts

by Winston Wisehart

he IASB invited comments from the public in 2007 on its Preliminary Views on Insurance Contracts (the Views). The FASB is contemplating a joint project with the IASB on a new comprehensive accounting standard for insurance based on the Views. The Views propose a version of a market-consistent valuation of insurance contracts to fulfil the following objective:

... the Board will pay particular attention to the need for users of an insurer's financial statements to receive relevant and reliable information, at a reasonable cost, as a basis for economic decisions. (paragraph 9)

To meet this objective, the IASB Views propose a market-consistent, exit value valuation, incorporating a three building block method:

- 1. unbiased, current, best estimate of future cash flows
- 2. effect of time value of money
- 3. risk margin

The Views suggest that risk margins under this method should incorporate assumptions consistent with market values. However, because insurance liabilities do not currently trade in deep and liquid markets, the Views suggest that industry parameters should be estimated for the risk margin. The Views further suggest that the assumptions underlying the estimates should be set at an individual product portfolio level rather than at the company level (the company level would reflect diversification between product portfolios).

This article suggests that the best way to achieve the IASB objective is to use an explicit liquid/illiquid economic valuation and reporting paradigm. Under this paradigm, a company would be required to report the value of liquid financial instruments using an external model (market value) and illiquid financial instruments using its own internal economic model (consistent with market information to the extent possible, and using company-wide risk diversification).

In order to meet the objective of providing reliable information at a reasonable cost, it is imperative to meet the following criteria:

- 1. clarity in the classification of reported values into "facts" and "estimates," i.e., external and internal model results,
- 2. to resist the temptation to manufacture and report as "market values" those values that are derived from internal models.

Accounting systems that do not meet these criteria are likely to be an expensive burden, as the information generated by them is not transparent or fully credible. The manufacture of opaque information is not only expensive, but damaging to the actuarial profession as a whole, as the users of financial data migrate to other financial professionals in pursuit of actionable information.

The adoption of mark-to-market methods in financial instrument valuation reflects a dominant economic valuation theme of our times—that the use of an external model based on market values is superior to the use of an internal model. This paradigm has been adopted due to the frequently demonstrated positive bias in mark-to-model valuation, among other reasons. Stated another way, mark-to-market risk is materially less than mark-to-model risk (and quite a bit less than mark-to-nothing risk, a term attributed to Maurice Greenberg in the press).

For the purposes of this article, a liquid financial instrument is loosely defined as a financial product with a reported market price in a reputable financial publication. In addition, a significant simplifying assumption is that there is a clear delineation between liquid and illiquid financial instruments. A more rigorous treatment of classification of financial instruments into liquid/illiquid categories is omitted

continued on page 12 >>



Winston Wisehart, FSA, MAAA, is vice president and economic valuation specialist with Swiss Reinsurance in Zurich, Switzerland. He can be contacted at winston\_wisehart@ swissre.com

11

due to extensive discussion that such a classification requires. Furthermore, guidance on this question would presumably be provided by the IASB or other regulatory institution.

### Rationale for the Liquid/Illiquid Valuation Paradigm

Financial analysis of a company's condition generally follows an analysis of the balance sheet, split between assets and liabilities. Further, insurance company liabilities are generally assumed to consist of illiquid financial instruments. This is the paradigm incorporated in the Views, which are restricted to a discussion of the treatment of insurance contracts.

From an economic modelling perspective, the asset/ liability balance sheet paradigm is less useful than a liquid/illiquid financial instrument paradigm because the liquidity attribute defines the class of valuation tool to be used. Under current economic valuation principles, liquid instruments are valued using an external model (marked-to-market) and illiquid instruments are valued using internal models (marked-to-model, using market-consistent valuation principles). These tools have profound differences in their model risk attributes and thus their results should be reported separately to reflect this risk.

The liquid/illiquid classification could be disclosed through a simple enhancement to the existing asset/ liability reporting structure. A typical insurance company balance sheet could be constructed as follows:



An economic income statement could be produced that separately reports changes in liquid and illiquid positions in the balance sheet over the reporting period and connects those changes to the actual cash flow realized by the company. This goes a long way towards meeting the IASB objective given at the beginning of this article: "... relevant and reliable information, at a reasonable cost, as a basis for economic decisions."

The advantage of this system lies in its clarity:

- 1. Clarity of valuation framework.
- 2. Explicit disclosure of verifiable facts versus model estimates.

Clarity in economic methodology, modelling and reporting naturally leads to the rational resolution of the questions that inevitably arise when valuing complex financial instruments. Discussions of issues tend to focus on the choice and application of the best tool(s) available to obtain a market consistent result. It is the author's experience that discussions regarding the best valuation tool are frequently intense, but in almost every case may be resolved through a fact-based evaluation of the alternatives. Resolution of issues is much more difficult when the principles themselves are unclear.

A far more sophisticated discussion of the nature of useful accounting information than is given in this article is contained in a paper by Ross L. Watts, of the Sloan School at MIT ("What Has The Invisible Hand Achieved," dated Jan. 27, 2006). Although Watts is quite pessimistic for a number of reasons regarding the current direction of the IASB (and the FASB under Fair Value), presumably he would approve of the clear differentiation of verifiable information from estimates under the framework suggested in this article.

### Suggestions for Modifications of the IASB Views

The Views likely are intended to generate a more faithful estimate of market value for illiquid insurance liabilities than is possible with the use of own company risk assessments. However, in the absence of true market values it would be an error to manufacture the suggested estimated market values for the following reasons:

• management makes decisions based on internal assessment of value—and in the absence of true market values, this is far more useful information than an estimate;

- the proposed estimate of market value suffers from "double" mark-to-model risk—the model used by the company to produce internal value plus the enhancement used to estimate market parameters;
- a range of values exist in illiquid markets, and those transactions that are executed between companies are based on each company's diversified internal risk and expense assessments not fixed at an individual product level; and
- the use of different estimates of market value parameters produced by each company may lead to a loss of credibility in the accounting system.

The following modifications to the Views are suggested:

- Addition of an explicit statement that insurance contracts traded in a liquid markets should be valued at market value. This would clarify the market-consistent framework underlying the valuation methodology.
- 2. For insurance contracts that are illiquid financial instruments, specify the use of owncompany economic valuation and expense models (including fully diversified risk assessment) rather than the suggested market value estimation method.
- 3. Require the reporting of these two types of financial instruments separately, as suggested in the first part of this article.

Further discussion of market-consistent valuation of insurance assets and liabilities may be found in "The Economics of Insurance: How Insurers Create Value For Shareholders," published by Swiss Re in 2001, and downloadable from SwissRe.com.

### New Business Assessment—Entry Value and Exit Value

The above discussion may be illustrated with an analysis of economic value approaches to the calculation of the value of new business at the time of issue of a contract.

Approach #1: Some financial professionals have suggested an entry value approach, which yields a zero value under a no-arbitrage principle. The problem with this approach is simple; it omits critical information. Companies do not generally transact business for zero value, or price on a zero gain basis. Approach #2: The suggested position in the Views is an exit value approach, using estimated industry

parameters. Presumably, if the insurance contract were tradable in a liquid market, this approach would produce the observed exit market value of the contract. It would be useful if this were explicitly stated in the Views. For illiquid contracts, for the reasons mentioned in the section above, the IASB approach

is fundamentally flawed in that it involves a kind of double mark-to-model risk—an internal model used to estimate a non-specific external market value. Furthermore, the suggested method does not fully reflect the company's ability to price its business activities, as nominal assumptions would obscure this assessment.

Approach #3: The use of a company's internal economic model to assess the value of new business provides the most useful information available in the absence of a liquid market. This information is the company's best estimate of the value of the business activity, reflecting pricing assumptions of risk and expense at the time of sale. Granted, this method incorporates mark-to-model risk. However, the result conveys the full economic rationale for the transaction, as evaluated by the company, using the values it uses for internal decision-making. This is truly useful information. It can be easily explained to the users of financial information—it is the estimated risk-adjusted economic value to the company of the new business activity.

Further, the evolution of the company's estimates over time, as required in an economic accounting system, allows for an assessment of the strength of the company's internal models. This is an extremely valuable result that may be evaluated by investors, rating agencies, regulators and management. It also presumably will enhance the value of those professionals producing the models and model results including the readers of the Financial Reporter.

### New Business Value—Present Value of Future Profits

A frequent objection to booking a positive value for an insurance contract at issue is that the value has

continued on page 14 >>

The suggested position in the Views is an exit value approach, using estimated industry parameters. not yet been earned, and that this is inconsistent with accounting treatment in other industries.

For example, it has been reported that Hewlett Packard may be selling its consumer printers at a loss in order to realize the profit gained from supporting the printers after sale. Presumably, under GAAP accounting, HP reports a loss at sale, and then profits from supplies and service only as they are realized.

Consider how useful it would be for investors to receive the estimated value of the printer and subsequent product support, reported at time of sale. It would be surprising if the HP management does not itself produce this information and manage its business accordingly.

After the sale of the printer, disclosure of the anticipated economic impact of any developments that threaten projected future profits would be similarly useful to investors.

The answer to the objection raised at the beginning of this section therefore may be that investors should require all industries to adopt accounting frameworks disclosing the present value of future estimated profits associated with current sales—but only within a framework that clearly discloses changes in liquid assets/liabilities, illiquid contractual estimates, and illiquid non-contractual future estimates.

#### Conclusion

Under economic accounting, large fluctuations in reported insurance liability values over time are probably inevitable. Even if assets are selected to hedge interest rate and other market risk in a book of insurance contracts, small changes in assumptions such as future mortality or morbidity may generate a large change in the value of the book. This is frightening for reporting professionals in view of the punishment the market often inflicts on stocks of companies reporting earnings volatility.

However, it is reasonable to assume that the market relationship with volatility may evolve under economic reporting methods. In the future, the market may inflict punishment on the valuation of companies that exhibit persistent bias in mark-tomodel valuations, and reward companies that exhibit relatively neutral and/or controlled behavior. This behavior would be a reflection of effective modelling and management of the risks embedded in the insurance business. The liquid/illiquid valuation and reporting paradigm suggested in this paper would provide the information necessary for this market evolution in a clear and transparent manner.

The statements and opinions expressed in this article are those of the author, and do not reflect the official position of Swiss Re.

### GAAP Textbook Spreadsheets Ready for Download

The SOA Financial Reporting Section hired PolySystems to create spreadsheets for the numerical examples in the US GAAP Textbook (Second Edition). The spreadsheets contain formulas which reproduce the examples in the textbook. They are ready for download from the SOA Web site. Kudos to Diane Yandach of PolySystems for managing this year-long endeavor.

To download, go to the SOA Home Page (*www.soa.org*). At the lower left corner Find a Section box, select Financial Reporting from the list and click the GO button. You will be taken to the Financial Reporting Section Home Page. Find the Related Links area at the right of the page. Click Links of Interest. The US GAAP Textbook Spreadsheets are at the bottom of the Links of Interest page. You can click them to download.

An alternative method to find the Links of Interest page is to search the string "US GAAP Textbook Spreadsheets" on the SOA Web site and you will be provided a link.

14

## Market-Consistent Valuations Of Life Insurance Business: The U.K. Experience A Report for the Society of Actuaries

### by Chris O'Brien

he following Executive Summary is an excerpt from a report by Chris O'Brien entitled, "Market-Consistent Valuations of Life Insurance Business: The U.K. Experience." For the full report, visit the SOA Web site at http://www.soa. org/research/life/research-market-consistent-uk.aspx.

U.K. life insurers writing participating business have, since the end of 2004, been required by their regulator, the Financial Services Authority (FSA), to value their assets and liabilities on a market-consistent basis. This was intended to provide a more relevant and reliable basis for measuring and regulating the solvency of life insurers than the traditional approach using a net premium valuation.

The purpose of this paper is to:

- Explain the new valuation approach based on market-consistent values, and its rationale;
- Set out the issues faced by life insurers in implementing the new regime; and
- Explain how insurers addressed these issues in particular, the importance of the modelling techniques they used—and how insurers' practices varied.

Implementing the new regime was a major challenge but has had positive achievements. It has been particularly useful in highlighting the importance of the guarantees and options of insurers. However, we find that the value placed on guarantees and options depends partly, but significantly, on what economic model the insurer has used. We suggest further research to understand why models that look to provide market-consistent values do, in practice, provide markedly different values.

### The New Rules: Which Products Do They Apply To?

The new rules apply to major life insurers writing participating business. Participating policies, written by both stock and mutual insurers, have traditionally been an important part of the U.K. market, and are essentially a form of savings contract, with some life insurance cover, together with guarantees, options



and "smoothing." The guaranteed payout increases over time as annual bonuses (dividends in U.S. terminology) are declared and added to the policy. The assets backing policies are usually a mixture of bonds, equities, property and cash. A policyholder's premiums accumulate over the course of the policy, with the investment return earned; when we make a deduction for claims, expenses, tax and profits transferred to shareholders, the outcome of this calculation is the "asset share," i.e., the share of the insurer's assets that can be attributed to the policy.

At maturity, the policyholder typically receives a payment about equal to the asset share, but it may differ; for example:

• The guaranteed benefit must be paid if it exceeds the asset share;

continued on page 16 >>

- Some policies contain options (particularly important are guaranteed annuity options): when exercised, they can add to the liabilities of insurers;
- While the asset share changes daily as asset values vary, insurers aim to provide policyholders with a more stable payout using "smoothing" and therefore change bonus rates only infrequently (say twice a year): this may mean payouts are either above or below asset shares.

ted ed assets .... The traditional valuation of liabilities used a net premium valuation, with the benefits valued excluding any future bonuses (at least explicitly). This was not "realistic" and lacked transparency. When

the FSA took over responsibility for insurance regulation in the United Kingdom in 2001, it wished to understand the solvency of life insurers on a more realistic basis, and it set about designing a new regulatory regime to achieve this.

### A New Approach: "Market-Consistent" Valuations

FSA decided that the "realistic" valuations should use market-consistent values of assets and liabilities. In other words, insurers should value their assets and liabilities in the same way that the market uses to price other financial instruments. This could have been called fair value; however, given that the meaning of fair value was being debated in the discussions on insurance accounting, it was a term best avoided.

For assets, market consistency is typically market value, since most assets of life insurers are traded. Traditionally, the United Kingdom has largely used assets at market value already, but insurers now had to include (the market value of) assets that were previously inadmissible.

The valuation of liabilities was more problematic. At maturity, the insurer expects to pay the asset share to the policyholder, so the asset share as accrued to the balance sheet date, with the assets at market value, is an appropriate market-consistent starting point. However, the insurer has to account for the additional amounts payable from guarantees, options and smoothing. Can this be assessed on a marketconsistent basis? The approach to valuing guarantees was to regard participating policies as comprising the asset share and a put option, i.e., an option to sell the accumulated assets for the guaranteed amount, which option would be exercised if the asset share was lower than the guarantee. So, can we look up the prices of put options and then place a value on the guarantees? Unfortunately, no, because put options in the market do not extend as far as the 35 years or more that life policies last, and because it may not be easy to find put options on all the assets that make up the asset share, in particular property.

Therefore, insurers typically use an economic scenario generator (ESG), being a stochastic model that projects scenarios of future interest rates, shares and other asset prices, which is calibrated to the prices of put options as quoted on the market at the balance sheet date, and then used to work out the prices of other put options on a basis that is intended to be market-consistent.

The ESG will be run to produce some thousands of scenarios, but it is too complex to run it in conjunction with all individual policy data, so a model of the insurer's business is used. The outcome enables the insurer to assess the probability of the guarantee exceeding the asset share and hence the value of the extra payments it expects to make. The model can also be used to place a value on the options under policies, and on payments being above or below asset share as a result of smoothing.

The FSA rules also refer to "management actions," such as an insurer changing its investment strategy to reduce the likelihood that the guaranteed benefit exceeds the asset share. If the valuation is to realistically represent the future, the model needs to incorporate "management actions." However, this is complex to model, and FSA allows firms discretion regarding whether or not they incorporate the effect of management actions.

### Issues In Implementing the New Requirements

The new rules were implemented on Dec. 31, 2004, following a hectic three-year period for the regulator, the life insurance industry and the actuarial profession. Insurers faced several issues in implementing the rules. We focus here on how they valued their liabilities, which is where the main challenges have been.

### ... Traditionally, the United Kingdom has largely used assets at market value already ...

The main issues were as follows, and we then set out how firms have addressed these; we give particular emphasis to where insurers have adopted different approaches:

- How do insurers use an economic scenario generator model?
- How do insurers build a model of their business?
- Do insurers incorporate the effect of management actions?
- How many projections do insurers make?
- Do insurers have controls to ensure the results are accurate?

The research is based on the valuations carried out by the 37 insurers reporting on the new regime at the end of 2005.

### How Do Insurers Use An Economic Scenario Generator Model?

Sixteen of the 37 insurers used a model provided by Barrie Hibbert (BH); nine used The Smith Model (TSM); and the remainder used either an internal model or a model from another provider. ESG providers allow insurers to vary the approach and/or assumptions in their models, to some extent.

Insurers can use risk-free rates and asset volatilities, deduced from market prices, to help calibrate the model they are using. However, we can see that there are differences between firms in their modelling, because each insurer has to report what its model produces for specimen put option prices. If an insurer reports a relatively high put option price, this implies it would put a relatively high figure on its liability for guarantees. The large differences throw doubt on whether the models, as operated, are really market-consistent. We have data for five-, 15-, 20-, 25- and 35-year options, on risk-free bonds, corporate bonds, equities and property (and some combinations of these), at, in and out of the money. We find:

- There are significant differences between insurers in the put option prices they are using: e.g., if we look at 15-year at-the-money put option prices on equities, one firm (the highest) has a price that is 72 percent more than the lowest;
- There is a greater variability for long-dated than short-dated put options (the highest is 83 percent greater than the lowest for a 35-year put option on equities);

- Out-of-the-money put options have greater variation in prices between insurers, compared with at-the-money and in-the-money put options;
- The variation in prices of put options on riskfree bonds is especially high, as one group of three insurers' modelling produces put option prices for 15-year at-the-money put options that are 65 percent higher than the next highest price;
- Put option prices on property have relatively low variability, which reflects insurers making similar assumptions about property price volatility (property options are not, in practice, available).

We also find significant differences between firms using different models. In many cases, firms using the BH model had the highest put option prices, then insurers using TSM, with those using the "other" models having the lowest. For 15-year at-the-money put options on equities, insurers using the BH model had a put option price 8 percent higher than the average; insurers using TSM 4 percent lower than average; "others" being 10 percent less than average. There is also significant variability among insurers using the

same model (this tends to be greater for insurers using the BH model than TSM: e.g., for 15-year at-the-money put options on equities, the coefficient of variation of insurers using the BH model was 8.2 percent, while it was 3.1 percent for those using TSM).

The option prices used by financially weak life insurers were often lower than those

used by stronger firms. However, these differences are generally not statistically significant: the main driver for differences is the model (and the assumptions in the model) that the firm is using.

### How Do Insurers Build a Model Of Their Business?

Insurers have to develop a model of the business so that running the projections is feasible. Between 2004 and 2005 they increased the number of "model points" they used: the average "compression

continued on page 18 >>

The option prices used by financially weak life insurers were often lower than those used by stronger firms. However, these differences are generally not statistically significant ... factor" increased from 1.95 percent to 3.21 percent (i.e., the number of model points was 3.21 percent of the individual policies).

It is important to choose model points that accurately represent the business, especially as regards to whether guarantees are in-the-money or not, and some insurers reported checks they carried out to confirm this.

### Do Insurers Incorporate the Effect of Management Actions?

Some insurers built management actions into their models, others did not. This introduces an unfortunate inconsistency when comparing insurers' financial strength.

The author's view is that it is a priority to incorporate management actions; and that, in the meantime, insurers should disclose any actions they have not modelled.

#### How Many Projections Do Insurers Make?

Life insurers run projections of their stochastic model, the number varying from 500–10,000. Larger insurers tend to use more projections, but not proportionately more. Some insurers reported how the results converged when using a larger number of simulations.

### Do Insurers Have Controls To Ensure the Results Are Accurate?

One concern is that, when the new rules were introduced, insurers' systems may not have been robust. Insurers did build in a number of checks on their models. However, several made adjustments to their 2005 valuations, suggesting that the initial results at 2004 were not correct. One insurer that had £1805m capital in 2004 gained £214m in 2005 as a result of a model change and a further £35m from changing the grouping of policies into model points. "Improvements to the stochastic model code" in another firm led to a £156m reduction in its £697m capital. Clearly, it is to be hoped that regime settles down and there are fewer such changes in the future.

#### Conclusions

The U.K. participating life insurance sector has experienced a radical change in its financial reporting. It has taken a tremendous effort by the regulator, the industry and the actuarial profession to achieve this. The realism of the methodology is regarded as very helpful: in the past, the assets and liabilities were intended to be on a prudent basis, but no one knew how prudent they were, if there wasn't a realistic benchmark. The market-consistent approach is now put forward as a realistic approach. Its transparency has led to a better understanding of life insurers' finances, especially regarding guarantees and options.

The modelling that life insurers are now doing involves:

- Using stochastic models to generate economic scenarios; calibrated to the market prices of options where possible, and then used to estimate a market-consistent value of the guarantees and options that they have granted;
- Applying this to a model of the business based on model points, which have to be chosen to represent the business appropriately; and
- Where possible, including management actions in the modelling.

However, there are further challenges ahead:

- What economic scenario generator an insurer uses can make a big difference to the reported value of its guarantees and options: more work is needed to understand (and, perhaps, reduce) these differences;
- Incorporating "management actions" more fully is important; and
- Further controls are needed so that we do not see a continuation of the errors that arose when the new regime was introduced.



Chris O'Brien is employed at the Centre for Risk and Insurance Studies, Nottingham University Business School, Jubilee Campus, Wollaton Road, Nottingham, England NG8 1BB. He can be reached at christopher.obrien@ nottingham.ac.uk.

18

# Foreign Correspondent

by Henry Siegel



here was a time when all that actuaries interested in financial reporting in the United States needed to monitor were developments at the FASB for GAAP and the NAIC for Statutory accounting. Once in a while the AICPA or the SEC would issue something of importance, but even then these were all U.S. entities that could be monitored without too much effort. This is no longer the case; the SEC has turned the applecart upside down.

With its decision in November to allow foreign filers to use International Financial Reporting Standards (IFRS) as their basis for financial reporting without any reconciliation to US GAAP and the impending decision that may permit U.S. filers to use IFRS as an alternative to US GAAP, a different environment will now be in place. It will now be essential for U.S. insurers to monitor closely what happens at the International Accounting Standards Board (IASB) in London.

At the same time, developments are emerging on the solvency front that suggest the U.S. Statutory system may have a limited shelf-life as well. Solvency II in Europe and developments at the International Association of Insurance Supervisors (IAIS) are moving to adopt IFRS liability standards for statutory purposes as well. Furthermore, formulaic risk-based capital (RBC) structures will likely be replaced in Solvency II and in guidance provided by the IAIS by internal company models. Whether the U.S. statutory reporting structure can hold out when almost the entire world is moving in a different direction remains to be seen.

One result of these changes is that U.S. actuaries need to begin to pay much more attention to developments at the IASB and the IAIS than we have in the past. The purpose of this column over the next year will be to present developments on the international front particularly aimed at U.S. actuaries who have not previously been involved in international discussions.

#### Developments at the IASB

Clearly the most important development in financial reporting in the past year, other than the SEC's ruling, was the issuance of the Discussion Paper Preliminary Views on Insurance Contracts (the DP) by the IASB. This paper sets the stage for the IASB's development of an accounting standard specifically for liabilities for insurance contracts. Weighing in at more than 250 pages including appendices, the DP discusses most of the major issues concerning financial reporting for insurance contracts including arguments for each of the various positions included. Painful as it might be, this is required reading for anyone who wants to understand where GAAP accounting is headed. Fortunately, there was an article in the December Financial Reporter by Mark Freedman and Tara Hansen that outlined the major issues included in the paper.

Comments were due Nov. 16, 2007. As of this writing, there are 143 comment letters posted on the IASB's Web site. Clearly, this paper has received considerable attention worldwide. Deadlines being what they are, it's impossible for me to completely report on the contents of all these comment letters. By the time you read this, such expansive information may well be available since the IASB staff plans to report to the Board on the comment letters in February. Nevertheless, I have assembled a sampling



Henry W. Siegel, FSA, MAAA, is vice president, Office of the Chief Actuary with New York Life Insurance Company in New York, N.Y. He may be reached at Henry\_Siegel@ newyorklife.com. of comments on certain of the questions raised in the discussion paper that are of particular interest to actuaries. The attached table shows the responses in comparison to the IASB's tentative conclusion for those questions where an answer in a tabular form could be representative of the responses.

Responses to Question 2 are not shown on the table because they were generally too complicated to display in a tabular form. Question 2 deals with the basic building blocks used to measure the liability. Most comments regarding life insurance products accepted the basic three building blocks (estimates of the contractual cash flows, discounting and a risk margin), but there was disagreement on the details. The DP, for instance, called for "explicit, unbiased, market-consistent, probability-weighted average and current estimates of the contractual cash flows." There are a number of comment letters that disagree with the inclusion of "market-consistent" since markets don't exist for insurance contracts. Furthermore, some commentors felt that "probability-weighted" may not always be possible or even preferable for some liabilities such as for IBNR liabilities.

There was also disagreement concerning discounting (which rate to use) and with how risk margins should be addressed. I'm not going to discuss these issues in detail here. They are complicated and, in some cases, nearly philosophical, but the comments made are important reading for anyone who wants to understand the discussion. The point to remember, however, is that there is not widespread agreement with the details of the IASB's preliminary views.

Related Question 5 asked whether Current Exit Value, the overall accounting objective proposed, is the proper measurement attribute for insurance liabilities. Somewhat to my surprise, most of the respondents given in the table said that they disagreed with this approach, indicating that a transfer value is not a relevant objective since there is no market to observe or to calibrate values to. Several preferred to use the present value of the benefits as they are expected to be paid by the current insurer. It's important to note, however, that current exit value is consistent with the values being used in Solvency II and with FAS 157.

Question 3 asked if guidance for calculating the three building blocks contained in the DP was appropriate. The actuarial commentators, as well as several others, thought that the guidance provided was too detailed. These comments indicated that the IASB should stick to stating principles and the industry, particularly actuaries, should be relied upon to provide specific measurement guidance.

This is a particularly important issue for actuaries, as it deals with who decides how we will perform our jobs. We have become more sensitive to assure that the guidance reflects actuarial and business reality, to given the experience gained in the recent efforts to implement SOP 05-1.

Of the items in the table, of particular importance is the response to Question 7, the treatment of favorable policyholder behavior and Question 16 concerning participating policy dividends. In both cases, the IASB had tentatively limited the extent that expected future cash flows could be considered in the measurement of the liability. Nearly every responder disagreed with this approach. There is nearly unanimous agreement that all future cash flows should be included in the measurement.

The major difference in responses to Question 7 is whether the principle applied should simply be to reflect all future cash flows related to the contract or to restrict those considered to those with commercial substance. In fact, these approaches are essentially the same, as the commercial substance requirement simply attempts to eliminate cash flows that one would not include in any event, such as renewals for short-term policies such as group life business. The likely result under both approaches would be the same.

Similarly, there was near unanimous opposition to the unbundling proposal that was the subject of Question 14. In some cases, responders were willing to accept unbundling when there was clearly no relationship between the elements of a contract, but the Board's proposal had little support in its entirety.

The key immediate question for now is how the IASB will respond to the comment letters. Will they hold their positions in the face of serious opposition or will they modify those positions to provide a set of principles more consistent with the views expressed. This remains to be seen.

#### The International Actuarial Association

In late October, the International Actuarial Association (IAA) held its semi-annual meeting in Dublin. Approximately 250 individuals attended including about 50 from the United States. At the meeting, most of the time was spent in committee meetings discussing important issues such as their comment letter to the IASB, development of international actuarial standards and how the organization will be run in the future.

The IAA is very different from the organizations we are familiar with in the United States and Canada. The members of the IAA are not individuals but actuarial associations, 57 Full Members, 23 Associate Members and three Institutional Members. The United States has five association members: the SOA, the CAS, the AAA, the CCA and ASSPA. Each committee potentially has a member from each association, generating relatively large committees. Nevertheless, most committee meetings are open and observers are welcome to express their views.

In the past, the IAA has been relatively overlooked by U.S. practitioners. As we move to international regulation of accounting and to a lesser extent solvency, however, this will no longer be acceptable. The IASB will be looking to the IAA to prepare standards for actuaries who prepare IFRS statements and the International Association of Insurance Supervisors, a member of which is the NAIC, will be looking to it for assistance in setting solvency standards. The American Academy of Actuaries has been given the task of coordinating the IAA efforts in the United States. Nevertheless, since most meetings of the IAA are held across one or the other ocean, participating in person is often expensive and participation by phone can be at inconvenient hours. What the role of the IAA will be in the future and how it will operate most effectively are important issues that deserve particular attention. All actuaries should start to pay close attention to material posted on the IAA's Web site www.actuaries.org.

#### Upcoming Events

The FASB will decide formally whether to join the IASB's insurance project in the third quarter of 2008. Prior to this there may be educational sessions for FASB and the IASB may take up topics, time permitting.

The next IAA meeting is in June in Quebec City. Discussion there will probably include a revised paper on its paper that is in the process of being re-exposed, entitled, *Measurement of Liabilities for Insurance Contracts: Current Estimates and Risk Margins,* as well as drafts of standards on several accounting topics.

#### **Responses to Questions in IASB Discussion Paper**

Responses to Questions in IASD Discussion I aper							
<u>Responder</u>	<u>Q4</u>	<u>Q5</u>	<u>Q7</u>	<u>Q13</u>	<u>Q14</u>	<u>Q16</u>	<u>Q18</u>
IASB Tentative Conclusion	с	Yes	а	Yes-as drafted	Yes	Only if Obligation	None Taken
AAA	b -> a	No	b	No	No	All	Revenue
IAA	c -> b	Mixed	с	No	xx	All	Revenue
DAV	b	No	b	No	No	All	Revenue
IAJ	xx	No		No		All	
UK	d	No	b	No	N/O	As Drafted	Revenue
S&P	с	xx	b	No	Yes	xx	xx
Fitch	с	Yes - Fair Value	а	No	No	xx	xx
PWC	с	No	с	No	Yes	All	Deposit
E&Y	Depends	No	с	No	No	All	Mostly Revenue
KPMG	b	No	Not a close to c	No	No	All	Revenue
D&T	с	No	xx	Not Always	Yes	All	xx
Tripartite Umbrella3	а	No	b	No	No	All	Revenue
UK ASB	b	No	b	No	Maybe	All	Revenue Usually
AICPA/AcSEC	b	Yes	xx	хх	Probably No	хх	xx
xx = No opinion expressed							

#### Brief Description of the Questions Summarized

Q4 - Should Premiums be used to calibrate margins?

- a) Yes
  - b) Rebuttable Presumption
  - c) No more than anything else

- insurer umbundle them?
- Q14 Should the measurement of an insurance liability reflect changes in the liabilities' credit standing?
- Q16 Should policyholder dividends only be used if they are required by law or constitute an obligation?Q18 Should Premiums be treated as revenue or deposits?
- Q5 Is Current Exit Value the Proper Measurement Objective for liabilities? Q7 Should renewal premiums only be counted if they are required to keep the
  - policy in force?
    - a) Yes
      - b) All cash flows should be recognized
  - c) Only cash flows with commercial substance
- Q13 If an insurance contract contains deposit or service compoents, should the

### The Chartered Enterprise Risk Analyst Credential: The Experienced Practitioner's Pathway

by Chaundra McGill

he old adage "experience is the best teacher" aptly describes the CERA Experienced Practitioner's Pathway. This pathway is an avenue for a select group of Society of Actuaries members who have demonstrated expertise and substantial experience in the field of enterprise risk management to obtain this new credential without completing the examination requirements.

Short for Chartered Enterprise Risk Analyst, this new international credential encompasses the most comprehensive and rigorous validation available of enterprise risk management. While the CERA curriculum was carefully developed for professionals to use their quantitative and qualitative strengths to bring technical sophistication to a rapidly emerging specialty, this pathway is an opportunity for accomplished professionals to optimize their practical experience to add the CERA credential to their name.

In July 2007, Mike McLaughlin, FIA, FSA, MAAA, became one of the first individuals to earn the new CERA credential, the first new credential from the SOA since it was formed in 1949. While the development of the credential was the work of many members over the past few years, McLaughlin championed its actualization.

Several years ago, McLaughlin realized that today's business world was facing an expanding breadth of risk. While managing and mitigating risk has long been the domain of actuaries, the changing nature of risk now encompassed financial and operational risks. Better known as enterprise risk management (ERM), organizations of all types were taking a 360-degree view of their risk profile, signaling an opportunity for actuaries to become leaders in this emerging practice.

"Soon after I was elected to the Board of Governors of the SOA in 2002, I read that the number of people registering for membership as chartered financial analysts just that one year exceeded the total number of members of the SOA," McLaughlin said. "Clearly the business world was relying on professionals who can convert risk into opportunity. Because actuarial training offers both qualitative and quantitative insights to risk management, I knew our profession was uniquely positioned to play a leadership role in ERM."

With the support of the SOA Board of Governors, the Knowledge Management Strategic Action Team (KMSAT) was engaged to develop a curriculum for a new professional credential. Designed to encompass the most comprehensive and rigorous demonstration of enterprise risk management available, the CERA credential stems from the same rigorous process through which actuaries earn their credentials. Already more than 95 individuals have earned the designation.

"Actuarial principles have traditionally helped the world understand risk, and the CERA credential signifies an evolution of the profession," said SOA Past-President Ed Robbins.

As enterprise risk management has grown to address the increasingly complex needs of in all types of organizations, including insurance, benefits, broader financial services and the energy, manufacturing, transportation and healthcare industries, many actuaries have already assumed leadership roles. This CERA Experienced Practitioner's Pathway is for actuaries who have a minimum of three years of substantial experience in the field of enterprise risk management.

Qualified professionals interested in pursuing the CERA Experienced Practitioner's Pathway should have relevant experience demonstrated in following ways:

• An individual who has performed work in the field of ERM at a senior level.

- An individual who has advanced the actuarial profession within the ERM field.
- An individual with significant visibility in the ERM field.
- An individual who has made substantial contributions to practice in the ERM field.
- Experience as a risk officer for an entity or line of business.
- An individual who has served as a key contributor to an organization's risk committee.
- Experience managing interactions between multiple risks.
- An individual who has developed or implemented methodology for monitoring, measuring and management of risk in an ERM environment.
- An individual whose academic research has resulted in practical industry ERM applications.

The CERA Experienced Practitioner's Pathway will be open to applicants through July 1, 2008. For more information on the application process, visit *www.ceranalyst.org.*  McLaughlin notes that while the CERA credential responds to market needs, it also better positions the profession for a competitive future. According to research conducted by the SOA in the past few years, the recognition of actuarial credentials is very high among employers in insurance, reinsurance and consulting markets. Given the increasingly complex and rapidly changing business environment, organizations are now seeking risk management professionals to help manage their companies.

Building upon the profession's inherent rigorous training, the CERA credential provides opportunity beyond "traditional" choices, offers an avenue for differentiation from the competition, and increases actuaries' expertise in risk, enhancing the profession's image in ERM. "The definition of risk is evolving from mere mitigation to expansion of opportunity CERAs don't merely speak to what we can lose, they focus on what we can gain," said Robbins. §





### SOCIETY OF ACTUARIES

475 N. Martingale Road, Suite 600 Schaumburg, Illinois 60173 Web: *www.soa.org*