

The Financial Reporter

ISSUE 86 SEPTEMBER 2011

- 1 Communicating Under Revised Insurance Accounting Proposals**
By Brian Paton
- 10 Changes to DAC: Some Things You Want to Know about ASU 2010-26**
By Larry Gulleen, Marina Adelsky and Elizabeth Rogalin
- 13 Insurance Accounting as a Black Hole**
By Henry Siegel
- 20 PBA Corner**
By Karen Rudolph
- 23 IAA Discount Rate Project Update**
By Frank Grossman
- 24 Market-Consistent Term Insurance Premiums and Liabilities**
By James Milholland

Communicating Under Revised Insurance Accounting Proposals

By Brian Paton

U.S. insurance company financial reporting will undergo an unprecedented level of change within the next several years. The Financial Accounting Standards Board (FASB) and International Accounting Standards Board (IASB) are currently working on a number of joint projects with the goal of converging and improving both U.S. and international standards.

Perhaps most relevant to insurance companies is the insurance contract accounting standard, and, in this regard, convergence between U.S. GAAP and International Financial Reporting Standards (IFRS) presents a number of business challenges and opportunities. Although the target date for completion of the insurance contracts standard has been delayed, the timeline to implementation is still such that this should be high on the agenda for insurance companies.

While there will be significant implementation issues of both a practical and technical nature, one of the most fundamental issues to be dealt with is how the impact of the change will be communicated to investors, policyholders, rating agencies and other key stakeholders.

Communicating the value in life insurers represents a significant challenge, and there will be a short window of time in which to do this following conversion to a new accounting standard. Nevertheless, companies who get the message right are likely to reap the rewards.

CONTINUED ON PAGE 3

The Financial Reporter

ISSUE 86 SEPTEMBER 2011

Published by The Financial Reporting Section
of the Society of Actuaries

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).

2011 Section Leadership

Craig Buck, Chairperson
Rob Frasca, Vice Chairperson
Michael Sparrow, Secretary
Mark Davis, Treasurer
Darryl Wagner, Board Partner
Mark Alberts, Council Member
Matthew Clark, Council Member
Daniel Harris, Council Member
John Roeger, Council Member
Mark Yu, Council Member
Kerry Krantz, Web Site Coordinator

Content Managers

Lisa Markus, Newsletter Editor
e: lisa.markus@pacificliflife.com

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

Michael Fruchter, Associate Editor
e: mfruchter@kpmg.com

SOA Staff

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

James Miles, Staff Partner
e: jmiles@soa.org

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

Julissa Sweeney, Graphic Designer
e: jsweeney@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 Financial Reporting Section or the employers of the authors. We will promptly correct errors brought to our attention.

Copyright © 2011 Society of Actuaries.
All rights reserved.
Printed in the United States of America



SOCIETY OF ACTUARIES

Annual Meeting
& Exhibit

Oct. 16-19
Sheraton Chicago
Hotel & Towers
Chicago, IL

SOA 2011

Get ready to get it done in the city that works.

Join us at the SOA 2011 Annual Meeting & Exhibit in Chicago—the SOA's largest networking opportunity. Roll up your sleeves. This is the event where you dig in and get tons of takeaway. More than 100 hearty sessions, full of just what you need for professional growth—and offering loads of CPD credit. Speakers who'll move you to take action. And networking opportunities where you'll find other doers like yourself.

Be sure to sign up for these informative sessions:

<p>Session 35 Panel Discussion IFRS: The Future of Accounting for Insurance and its Implications In July 2010 the International Accounting Standards Board issued the Exposure Draft: Insurance Contracts. The Board expects to complete this project by issuing a final standard in June 2011. In March 2011 the SOA released the research project: Financial Reporting for Insurance Contracts under Possible Future International Accounting Standards—2011 Extension. This session covers the latest thinking of the consequences of a new accounting standard for insurance under IFRS.</p>	<p>Session 64 Panel Discussion Convergence of Financial Reporting and Capital Requirements for Insurance Financial reporting and regulatory capital standards for insurance are changing concurrently in North America and overseas. This session tracks the past and future paths that these changes are taking and addresses when and how these efforts may converge.</p>
---	--

Ready to get it done? Head to SOAAnnualMeeting.org.

This article discusses some of the challenges that are likely to arise and which will need to be communicated effectively. The article will then cover potential approaches to deal with some of these challenges and what can be learned from the experiences of other territories where market-consistent techniques are already being used.

IMPACT OF INSURANCE ACCOUNTING CHANGES

To put the potential communication challenges in context, a brief description of the building-block approach set out in the IASB Exposure Draft is set out in the following insert.

- An unbiased probability-weighted best estimate of future cash flows in fulfilling the contract.
- Discounting at a risk-free rate appropriate to the nature of the liabilities, including the illiquidity of the liabilities.
- A risk margin reflecting the uncertainty of the amount and timing of the cash flows.
- A residual margin which removes a day-one gain.

Under the approach set out by the FASB in its discussion paper, the main difference is that the risk margin and residual margin are combined into a composite margin. The amortization of the composite margin is also different, and interest does not accrue. The IASB approach requires that the risk margin be reassessed each period, on current assumptions, and allows for interest accrual on the residual margin. The risk margin approach remains a key topic of debate in achieving a combined model.

As a result of adopting these measurement models, a number of potential challenges arise in the communication of GAAP results:

Earnings profile—The earnings profile, and hence generation of GAAP cash flow, will be substantially different than under current U.S. GAAP. The pattern of recognition of profits will be unfamiliar compared with existing GAAP measures. Combine this with additional volatility along with the impact of transitional measures (see below), and there will be a strong need to communicate not just the impact on conversion but the ongoing differences in likely earnings.

Volatility—The requirements that measurement be current (i.e., that the estimates of future cash flows will reflect all available information at the measurement date) and the use of a market-consistent valuation are likely to result in greater volatility of earnings.

Under both the FASB and IASB approaches, the liability cash flows would be based on current assumptions for non-market variables. If these assumptions change, the capitalized value of that change on all future cash flows would impact the liability value and current period income statement.

The use of a market-consistent valuation also introduces potential volatility. Volatility arises due to valuation mismatches between the market value of assets and the mark-to-model approach using a market-consistent calibration on the liability side. Differences arise from many sources; however, the discount rate used (discussed below), extrapolating market observations to the longer durations (required for insurance liabilities) and the calibration of volatility assumptions are amongst some of the most significant.

In particular, in distressed market conditions, such as those observed in the financial crisis at the end of 2008, the depth and liquidity of the market for certain instruments and durations can raise questions on whether there is a sufficiently robust market to calibrate the liability valuation model to. In such situations the mismatch between assets and liabilities can be particularly significant.

Under the IASB approach the risk margin would also be recalculated each period adding a further source of potential volatility. This would arise as management's view of risk changes over the life of the contracts.

In our 2009 survey of analysts' perspectives of current and future reporting in the insurance industry, a majority (60 percent) of U.S. analysts wanted changes in assumptions to be reflected in the income statement immediately. Typically this view was held by those who wanted the impact of management changes to be as visible as possible.

Only 15 percent of our survey participants felt that companies should treat changes in economic and non-economic assumptions in different ways.

These sources of potential volatility can make it difficult to understand how the profits in any period relate to the likely future emergence of profits, and therefore, the ultimate value inherent in the business.

Discount rate—The discount rate used in the liability valuation is a key assumption and will require careful communication for a number of reasons:

- Spread-based business such as U.S. fixed annuities can look uneconomic if the discount rate does not reflect the expected return on assets used to back the liabilities. In particular where there are guaranteed or minimum crediting rates to policyholders, the impact of using a risk-free rate can be onerous. Communicating the economic viability of such products despite the valuation requirement can be challenging.
- The allowance for any illiquidity premium in the liability discount rate can be a significant assumption. However, the inability to directly observe transaction prices for liquid and illiquid insurance liabilities makes it difficult to assess the appropriate adjustment to the risk-free rate. Furthermore, different liabilities display different liquidity characteristics making the determination of the appropriate assumption for any particular insurance portfolio more difficult. A number of potential approaches are evolving (including the use of more “top-down” approaches based on portfolio yields less adjustments for credit risk) as a result of investigations supporting the EU Solvency II implementation requirements; however, this is likely to be an area of interest and focus to users of the financial statements.
- The rate at which the liability cash flows are discounted becomes the rate that insurers need to outperform each year (to achieve a positive investment variance). This rate therefore becomes important in determining a benchmark or hurdle rate for measuring asset performance. This may create a need for careful communication, as it is unlikely that assets will be invested in this way. In particular, it will be difficult to replicate or hedge to a risk-free rate with an allowance for an illiquidity premium making matching difficult.

Link with risk management—If the IASB approach of identifying a separate risk margin is ultimately adopted by the boards, this is likely to stimulate questions on how the risk margin relates to other forms of capital such as regulatory, economic or rating agency capital levels.

In our 2009 survey of analysts’ perspectives of current and future reporting in the insurance industry, a majority (58 percent) of U.S. analysts wanted insurers to report a risk margin. Some respondents expressed the view that it is the disclosure around the risk margin that is important. However, others felt that risk margins were too subjective and a further sign of over complexity in insurance reporting.

One of the key criticisms of requiring a separate risk margin is the lack of a consistent method and approach to parameterization across the industry. This makes the resulting risk margins difficult to compare and understand. It is therefore highly likely that users of the financial statements will want to understand how the risk margin relates to other forms of capital.

Other capital measures are typically calculated at an insurance entity level, whereas risk margins would apply to insurance contracts. This may result in the need to subdivide other capital measures by accounting contract classification, and to reconcile these to the risk margin.

There are many reasons why the risk margin would be different than regulatory, economic or rating agency level capital for the same contracts. However, it is likely that analysts and other users of the financial statements will want to understand the relationship and reasons for the differences. They will also be keen to understand how the risk margin will be released over time to profit.

Transitional measures—The IASB Exposure Draft includes the intended approach to transition in-force contracts as at the date of conversion to the new standard. Under this approach, the measurement of the liability would not include a residual margin either on transition or subsequently. Existing deferred acquisi-



tion costs and any intangible assets associated with the contracts would be derecognized.

Although it is likely that this approach will see revision, this could result in the release of profit, which would not be recognized in period earnings. Subsequent earnings would be reduced compared to the existing GAAP profile. The quantification of the risk margin for the in-force contracts will therefore be important in determining the future earnings profile and increases the need to understand how this relates to other capital measures.

The impact of the transitional measures on in-force business, both at initial measurement and subsequently, will therefore be an important component in explaining the likely earnings profile. Insurance companies will need to explain the reason for lower expected returns on capital compared to current more familiar measures.

In its discussion paper, the FASB did not set out any intended transitional arrangements. As of the date of publication, this topic had not been addressed by the board.

Disclosure requirements—In addition to the above communication points, the Exposure Draft and discussion papers propose certain required disclosures. They are more detailed than currently required and may involve significant development of analytical processes and systems. In particular the presentation of the income statement, using a margin analysis style presentation, will be a significant change in how companies think of, measure, manage and communicate their earnings performance. This will require more of a focus on the underlying drivers of the emergence of profit.

This income statement analysis, along with the required reconciliation of movements in the insurance and reinsurance balances, can be a difficult and time consuming exercise to perform, particularly on a market-consistent basis. The effort to develop robust, repeatable processes, which deliver these analyses within the reporting timelines, should not be underestimated.

The risk management disclosures are similar in nature and content to current IFRS requirements. However, as discussed above, a greater alignment of risk management information, risk-based capital assessments, and any risk margin under insurance accounting standards, will undoubtedly require careful consideration and communication.

Finally, considering the extent to which information is confidential or may provide advantage to competitors will be important. Presenting information in a way that allows the intended messages to be conveyed, but limits sensitive information, will clearly be worthwhile.

DEALING WITH THESE CHALLENGES

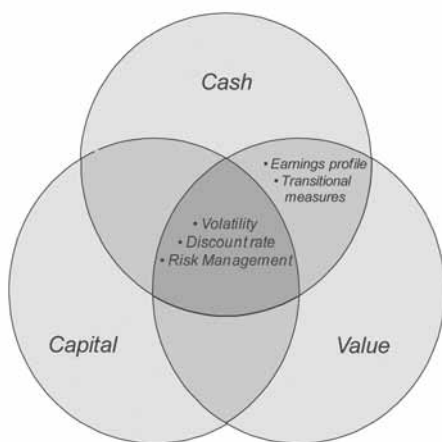
In order to construct an effective communication strategy to deal with the above areas, it is useful to consider three fundamental metrics that are important to the users of insurance company financial statements:

- *Cash*—The generation of GAAP and statutory earnings in any period. This is a combination of the release of profits from in-force business and the potential strain as a result of writing new business in the period.
- *Capital*—This is a combination of regulatory capital requirements along with companies' own internal view of how much capital they need to manage the business and meet corporate objectives. Regulatory capital requirements will dictate the minimum amount that needs to be maintained within the company. Capital required to meet internal objectives is likely to be a more economic, and risk-sensitive view of capital. In particular, it may include rating agency objectives, such as maintaining a particular ratings classification.

CONTINUED ON PAGE 6

- **Value**—This is the long-term value that is ultimately expected to become available to shareholders. It represents retained earnings, “locked in” capital and the potential for future profits to emerge from the business. This value could be based on the current in-force business (similar to embedded value reporting currently common in Europe) or an appraisal value metric allowing for the new business generating capacity of the company.

Using these fundamental metrics to explain the impact of the change in accounting basis can ensure that this not only conveys the impact at conversion, but also in the longer term through value and the interaction with risk management and capital.



This diagram shows that each of the areas identified above impacts multiple metrics, and considering only one of them will miss an important part of the message.

Reconciling the metrics—One of the key difficulties that users of insurance company financial statements often find is being able to understand the linkage and interactions between these fundamental metrics. Explaining the relationship between the metrics will increase transparency

and aid understanding of how the change in accounting basis fits within the overall position of the company. Starting with regulatory surplus capital, adjustments can be shown (for example for any policyholder surplus, intangibles and other valuation differences) to reach an IFRS equity position. This can then be continued to remove any long-term capital costs and then add in the expected future profits to result in the long-term value metric. European companies already on an IFRS basis who show this type of reconciliation commonly do so in tabular form or as a waterfall diagram.

Earnings profile and transitional measures—On adoption of the new insurance standard there will be substantial disclosures required consistent with any

restatement or change of basis. However, it is also worth considering the ongoing impact, and how to communicate the likely change in earnings profile in future years. In particular, in subsequent reporting periods, the potential lower returns as a result of transitional measures may need to be explained.

The linkage between cash and value is clearly important here. One message is that the long-term value is unchanged, and retained earnings have increased today, in exchange for lower future years’ earnings. Although not recognized in earnings on conversion, value has been released earlier than it would have under existing GAAP and is therefore more tangible; although return on equity may be lower as a result in future years. A graphical presentation of profit signatures before and after may be a useful approach to communicating this message.

Following conversion, it may also be worth considering whether to separate out the return on equity for the converted business and the new business written since conversion, to show that the return on the new business block is similar to pre-conversion measures.

The GAAP retained earnings, plus the risk and residual margin (or composite margin) may become a proxy for the long-term value of the business. However there may be reasons why this is not a good value metric (such as amounts that may be allocated to policyholders), and embedded value techniques may become a more important metric.

The margin analysis style of income statement presentation will also be helpful in explaining what the drivers of the earnings in any period are. However, to fully explain the sources of earnings, a subdivision between the business in-force at the start of the period and the new business written in the period will be useful. With the addition of a new business contribution, the income statement will provide a valuable tool in explaining how earnings may progress over time and dealing with volatility (see below).

Some companies already perform this type of analysis and present it as a waterfall diagram showing the movement in GAAP equity in the reporting period.

Volatility—Again, the revised income statement presentation, on a margin analysis basis, is a helpful starting point for explaining volatility. Some elements of the income statement will be more stable than others. These lines can be used as a reasonable basis for forming expectations of earnings, from similar sources, in future periods. For example, the residual margin should be reasonably predictable and will follow the chosen amortization and interest schedule. However, investment margins may be more volatile and less predictable.

Linking the GAAP margin analysis to the business planning cycle, and performing stress testing, can create an understanding of the range of likely outcomes for each line in the income statement. For example, the impact on earnings of stress testing to optimistic and pessimistic assumptions can be shown as a bar for each income statement line. This type of analysis will be useful in communicating performance.

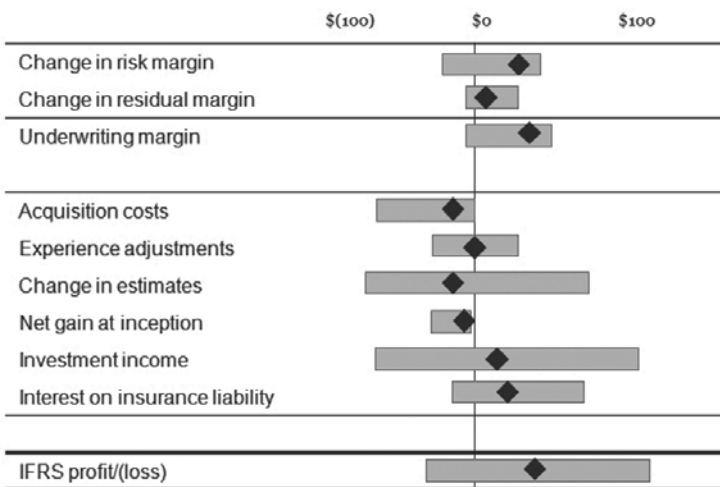
It is unlikely that companies would go as far as external disclosure of the above analysis. However, it is useful internal information, and helps facilitate a better understanding of how variable the earnings drivers are and, therefore, what the external messages need to be.

Producing the full margin analysis is likely to be an onerous and time consuming process, which will realistically only be performed a few times a year. Therefore, being able to separate out the reasons for volatility, and developing more readily available key predictive metrics (for example, a claim loss ratio may indicate the need for a change in estimate), will also help in the understanding of performance as it emerges over the year. This will enable early, internal and possibly external communication of under- or over-performance.

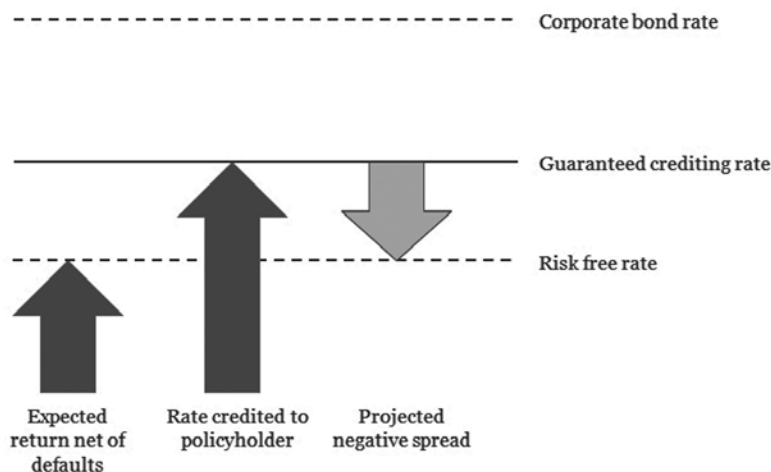
This type of analysis also facilitates communication of actions taken by management to reduce volatility. These actions may often incur cost, but show no direct earnings benefit in current conditions. Being able to show the possible volatility of earnings, before and after, will help demonstrate the value added by the management action.

It is already common to perform sensitivity testing of GAAP and capital results. Doing this across cash, capital and value metrics on a consistent set of stresses will also further help explain the interaction among the metrics and how they move relative to each other in particular situations.

Discount rate—One of the areas where a market-consistent valuation may not show the realistic economic value for a block of business is where earnings are driven by investment spreads. This is clearly a significant consideration in the United States. The difficulty arises as the crediting rate is set, based on expected asset performance, and this can be in excess of the risk-free rate. Additionally, minimum guaranteed crediting rates may also be in excess of the risk-free rate. The benefits can therefore be assumed to grow faster than the discount rate, resulting in projected investment losses and, therefore, a valuation strain.



CONTINUED ON PAGE 8



This is an issue that companies in Europe have recently faced when converting to market-consistent embedded value under the European CFO Forum MCEV Principles[®].

Due to the financial significance of this issue, a number of companies made additional disclosures (both in their supplementary financial statements and analyst presentations) to explain the reason for the apparent loss, and to explain why these products are still economically viable.

A number of companies used diagrams similar to that shown above, to explain the projected negative spread. They commented that, as management expects the return earned each year to be closer to a corporate bond rate, there would be an expectation of a positive investment variance each year in the future.

In the model, invested assets are equal to baseline statutory reserves and required capital, with distributable earnings released as earned.

Some companies showed this by illustrating historic returns on their asset portfolio in relation to the risk-free rate. They demonstrated that they had achieved a positive spread each year, rather than the negative spread projected in the valuation. Some companies also included illustrative profit profiles showing that the loss suffered would be returned through investment variances.

For companies with substantial portfolios of spread-based business, getting this message across will be critical.

The approach to determining the liquidity premium applied to the discount rate, and the products to which it is applied, are likely to be useful disclosures. MCEV reporters already disclose these as well as sensitivity to the liquidity premium applied.

Explaining asset performance relative to the discount rate in the period will also be an important element in adding commentary to the margin analysis presentation of income.

Risk management—The linkage between cash and capital is clearly important in explaining the risk margin in the context of “locked in” capital needed for regulatory, risk management or rating agency purposes.

In the past, the amount of capital required to meet rating agency objectives has often been based on multiples of regulatory capital. However, with the rating agencies becoming more focused on enterprise risk management, economic capital will also become more important. If a risk margin is part of a new insurance contract standard, then this is also likely to require an economic capital style calculation, and many companies will use their existing internal capital models to calculate this.

This will ultimately create a process where GAAP profits will be more sensitive to risk management actions, and therefore GAAP commentary will need to link to risk disclosures.

WHAT CAN BE DONE TO PREPARE?

The impact of moving accounting to an IFRS for insurance contracts will vary from company to company. One of the key preparations that can be started now is to investigate which of the above areas are important for your business. Understanding which areas will be important, and which will require careful communication to investors, will allow time to develop the required analyses and processes and to ensure information is available to facilitate the message.

Early quantitative analysis of the likely impact of the required changes on the balance sheet and future income statements, along with product level analysis of changing profit signatures, will enable identification of important areas and board education and allow early preparation for communication strategies.

There is likely to be increased pressure and greater demands from investors and analysts to communicate the performance of insurance companies going forward. The difficulties of producing these disclosures in a robust manner should not be underestimated. It is likely that implementing them will pose significant challenges around data and systems for most companies.

However, showing the accounting change in the context of other metrics, and being able to show that the underlying business strategy, plans and inherent value are not compromised, is likely to lead to greater understanding by investors and analysts with potential beneficial results. ■



Brian Paton is a director in PricewaterhouseCoopers' Actuarial and Insurance Management team. He is based in Chicago and can be contacted at brian.paton@us.pwc.com.

SOCIETY OF ACTUARIES

CPD Compliance

The SOA CPD Requirement has a two-year rolling cycle. 2011 is the second year of the 2010-2011 compliance cycle. Be sure to track & earn your 2011 credits so you are ready to attest compliance as of Dec. 31, 2011.

- STEP 1: Know your CPD compliance path.
- STEP 2: Track and earn CPD credits.
- STEP 3: Attest at year-end.

1-2-3

Visit SOA.org for more information on Continuing Professional Development.

Changes to DAC: Some Things You Want to Know About ASU 2010-26

By Larry Gulleen, Marina Adelsky and Elizabeth Rogalin



Larry Gulleen, FSA, MAAA, is senior actuary, Principal Financial Group, Des Moines, Iowa. He can be contacted at gulleen.larry@principal.com.



Marina Adelsky, FSA, MAAA, is director, PricewaterhouseCoopers LLP, New York, N.Y. She can be contacted at Marina.Adelsky@us.pwc.com.



Elizabeth C. Rogalin, FSA, MAAA, is VP & chief actuary, Retirement Solutions, Guardian Life Insurance Company, New York, N.Y. She can be contacted at elizabeth_rogalin@glic.com.

“Why now?” and “Why this amount?” These are the two questions most often asked by accountants when there is a change in GAAP balances. And these are two very important questions to answer about ASU 2010-26 Accounting for Costs Associated with Acquiring or Renewing Insurance Contracts. ASU 2010-26 is the new Financial Accounting Standards Board (FASB) guidance which changes the definition of costs related to the acquisition of new and renewal insurance contracts that can be capitalized. This new guidance will have significant impacts on GAAP financial statements for financial periods beginning after Dec. 15, 2011.

WHY NOW?

Some stakeholders had become concerned about the diversity of practice in the costs that were being capitalized and amortized as deferrable acquisition costs (DAC). Specifically, concerns about the treatment of advertising costs triggered the FASB review of industry practice. However, FASB’s review was expanded to include all aspects of deferrable expenses, and ultimately resulted in a change in the definition of deferrable acquisition costs in order to create a more consistent financial reporting standard for life insurance contracts. Some have argued for a delay in the timing of this change until a unified standard could be worked out under convergence with IFRS, but key stakeholders wanted to complete this work on a more rapid timetable.

WHY THIS AMOUNT?

Under current GAAP, deferrable acquisition costs are those that vary with and are primarily related to the acquisition of new and renewal insurance contracts. Generally these costs are determined for a block or portfolio of business, not strictly limited to costs incurred on individual contracts actually sold. The requirement that costs vary with the acquisition of contracts is also not currently limited to strictly incremental acquisition costs. ASU 2010-26 tightens the DAC definition to “costs that are related directly to the successful acquisition of new or renewal insurance contracts,” based on the following criteria:

- Incremental direct costs that are essential to contract acquisition.

- Certain costs related directly to the following acquisition activities performed by the insurer for the contract:
 - Underwriting,
 - Policy issuance and processing,
 - Medical and inspection, and
 - Sales force contract selling.

The revision in the definition of deferrable expenses is expected to result in a decrease in amounts deferred, and therefore a reduction in GAAP DAC balances, for many companies.

GOOD NEWS FOR ACTUARIES

Certainly the new definition of DAC results in a lot of work for companies. Expense research, time studies, allocation formulas, etc. must be reviewed. DAC amortization schedules are affected. If a company chooses to apply the definitions retrospectively to prior DAC schedules, it could result in quite an effort. But for financial reporting actuaries there is some good news. Most of the expense effort falls on the accounting community! Of course financial reporting actuaries will be involved, but they don’t carry the entire burden of the work. All kidding aside, the third and fourth important questions to answer are: “How does this affect my company?” and “What are a few specific issues to watch for?”

HOW DOES ASU 2010-26 AFFECT MY COMPANY?

First, as was stated, ASU 2010-26 changes the requirements for deferability of acquisition expenses. The company must at least review its current expense structure and apply the new guidance when determining new DAC amounts for financial reporting periods after Dec. 15, 2011. The company may also want to apply the standard to prior years. If retrospective application is elected, historical expense data must be obtained and analyzed, and initial DAC amounts restated for as many past years as possible. Trending of data backwards after a number of years may be acceptable if the results of the data collected support applying the assumption to prior periods.

If retrospective application is elected, DAC balances will need to be restated for each DAC amortization



cohort schedule. In many cases simple ratio techniques may be adequate to complete the task, but there are instances where the financial reporting actuary may wish to rerun the system with new DAC amounts from issue for each cohort.

Finally, depending on the amount of historical data a company publishes, the company will generally need to restate prior quarterly and annual results using the retrospective application of ASU 2010-26.

WHAT ARE SOME SPECIFIC ISSUES TO BE AWARE OF?

Term

For FAS 60 Term and Non-Participating Life products, in the event of retrospective adoption, the amounts previously capitalized (DAC) should be adjusted to reflect the new guidance. However, the assumptions used in the calculation of liabilities (including maintenance expenses) should not change. Unless there is a “loss recognition event,” the amounts capitalized are amortized in proportion to gross premiums, where the rate of amortization is calculated using assumptions locked-in at issue. For most cases, then, the rate of amortization of adjusted DAC should not change. Therefore, new DAC balances can normally be calculated by applying the ratio of new/previous deferred expenses to the previous DAC balance (i.e., pro rata).

For FAS 97 Limited Pay contracts (which are in many respects similar to FAS 60 products), the amount

of Deferred Profit Liability (DPL) depends on the capitalized amount; therefore the DPL will increase. However, as is the case for DAC, the rate of amortization should not change (unless there was a “loss recognition event”), so restated DPL balances could be calculated pro rata. In some cases, shadow loss recognition reserves may change also.

UL/Par Life

For Universal Life/Par Life contracts, insurers amortize acquisition costs in proportion to estimated gross profits (EGPs) or estimated gross margins (EGMs) over the life of a book of contracts. Typically, similar contracts issued within the same calendar year are grouped together as a single cohort for purposes of DAC amortization. It is important to note that ASU 2010-26 does not change the definition of EGPs or EGMs. Previously capitalized costs, which are no longer deferrable under ASU 2010-26, should not be included in EGPs/EGMs as costs incurred for contract administration. Actual gross profits/gross margins from past periods used to amortize acquisition costs do not change either, while the amortization ratio does (as the past and future capitalized amounts change). This means that, similar to Term policies (FAS 60), the rate of amortization of capitalized amounts will not change. Generally, the new DAC balances could be calculated in proportion to changes in capitalized amounts unless there was a “loss recognition event” or unless there are significant renewal year DAC amounts in a cohort. Shadow DAC balances should also be recalculated.

The new guidance should not have an impact on Terminal Dividend Liability, Unearned Revenue Reserve, Sales Inducement Asset and SOP 03-1 liability calculations.

Retrospective Application

In deciding whether to elect retrospective application, a company should consider several issues. Since ASU 2010-26 will generally result in lower new deferral amounts, this will generally cause a decrease in GAAP operating earnings and net income for an ongoing operation. If a company does not adopt retrospective application, new DAC cohort schedules will be on a different basis than old schedules and a full transition

CONTINUED ON PAGE 12

to the new standard will not actually occur until all old business has rolled off of the DAC models. Adoption of retrospective application of ASU 2010-26 allows a company to put all business (new and existing) on the new basis immediately. Retrospective application will generally lower existing DAC balances, resulting in lower impacts to GAAP operating earnings and net income in future years.

Some of the issues companies considered in the past should be reconsidered. By way of example, years in which the company encountered a cap on DAC and calculation of any shadow loss recognition reserves will take special attention. The guidance probably does not impact the current net reserves for blocks of business in loss recognition, but any restatement of financial results prior to the loss recognition event may be impacted.

Of course, retrospective application will require more work. In addition, because of the decrease to DAC balances, GAAP capital will be reduced. Measures such as debt-to-capital ratios and book value amounts will be impacted. For companies with contractual arrange-


ments tied to these ratios, this issue should be considered carefully.

CONCLUSION

The new DAC requirements in ASU 2010-26 will bring more work to both the accountants and the actuaries, particularly if the company elects to apply the standard retroactively. On the positive side, there should be greater consistency in expense practice in the industry. Also, since DAC balances will likely be lower, it could lower the volatility of a company's GAAP results. Finally, the additional insight to the company's deferrable expenses and conversion calculations will certainly help as we do this again in a few years when the new insurance contract accounting standard comes into effect!

The Life Financial Reporting Committee of the American Academy of Actuaries is working on a Public Policy Practice Note with further details on this issue. Be sure to look for that paper, which will soon be released. ■

Equity-Based Insurance Guarantees Conference



Nov. 13, 2011

Bridging the Gap: A Primer for the Equity-Based Insurance Guarantees Conference—Chicago, IL

Nov. 14-15, 2011

Equity-Based Insurance Guarantees Conference—Chicago, IL

This seminar is designed to give professionals with limited-to-moderate experience an understanding of how to better quantify, monitor and manage the risks underlying the VA and EIA products.

Learn more at www.soa.org.

Insurance Accounting as a Black Hole

By Henry Siegel

“Proposed insurance accounting changes akin to going from a ‘black box’ to a ‘black hole’”.

—One investor at a recent Morgan Stanley sponsored accounting roundtable.

This comment struck me as a very interesting analogy, but probably not in the way the person making it intended. It was probably meant to imply that the new insurance accounting was getting less understandable. To me, it meant exactly the opposite; that may be the result of having a physics grad student as a son.

It’s true that you can’t understand what’s inside a black box. You can’t see into it and, depending on how it’s constructed, can’t X-ray it or possibly even break it open. What’s inside is truly unknowable except to the person who put something inside it.

A black hole, on the other hand, is generally understandable at a high level by anyone who’s taken a college-level physics course (or seen one of the many sci-fi shows that distort their physics) and is rather well understood by experts in the field. There are mathematical equations that describe the behavior of black holes and their effects on the space and matter surrounding them. There are even photos of them. (Below, right)

It’s my hope that the final insurance accounting standard, whatever it turns out to be, will have the same characteristics as the black hole. It will be easy to understand at a fairly high level by anyone who spends a little thought on it and can be completely understood by those who choose to become experts in the subject. Many of the latter will be actuaries, both preparers and those who work for investment companies, and that’s good for our profession.

Of course, users will require extensive disclosures, a topic neither the International Accounting Standards Board (IASB) nor the Financial Accounting Standards Board (FASB) has tackled yet in detail. It will also require extensive retraining—a concern for preparers, users and auditors alike. In fact, I think recognition of this is a large part of the great unhappiness that the analysts at the Morgan Stanley roundtable evidenced. This retraining will take time and money, but my hope is that by the end of this decade we’ll be wondering what all the fuss was about.

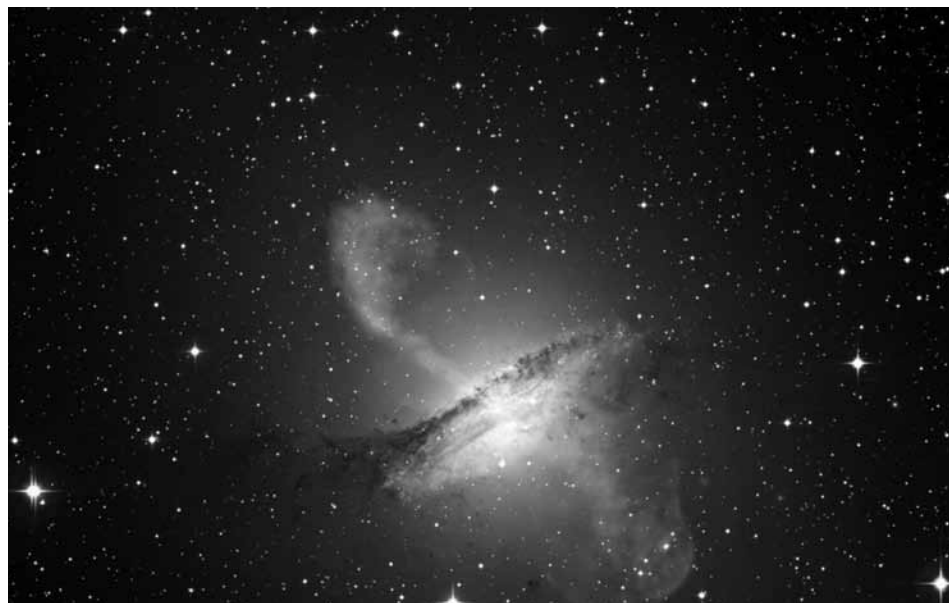
This quarter, both the FASB and the IASB worked quite diligently on the Insurance Contracts project although not always achieving agreement. There was an Insurance Working Group (IWG) meeting and several panels with analysts and preparers similar to the one cited above. Furthermore, the Securities and Exchange Commission (SEC) came out with a paper on one way that International Financial Reporting Standards (IFRS) could be incorporated into U.S. accounting requirements, thereby shedding light on their thinking on the subject and providing interested parties a chance to react.

As of this writing, it’s clear that the June 30 target date the IASB had set for a final standard will not be met; it’s not clear whether the next IASB due process document will be a final standard, a near-final standard, or another exposure draft. In any event, it’s highly unlikely that anything will be out before the end of 2011, and there is increasing pressure for the IASB and FASB to issue new standards together, after appropriate field testing, probably in late 2012. With new leadership for the IASB taking charge July 1, there is much now up in the air.

Here, with the help of the “IASB Updates,” are the key events of the quarter.



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 can be reached at Henry_Siegel@newyorklife.com.



CONTINUED ON **PAGE 14**

APRIL MEETINGS

There were three separate joint board meetings during April as the boards attempted to finish as much as possible prior to June 30.

Top-Down Approaches to Discount Rates

Having tentatively decided back in February that an insurer could use either a “top-down” or a “bottom-up” approach to determine discount rates, the boards discussed the subject further. The discussion was largely in response to reactions from preparers who, based on Solvency II QIS 5 (Quantitative Impact Study 5) results, are greatly concerned about the volatility introduced into the financial statement by the current proposals. The boards’ decisions didn’t help too much. The boards tentatively decided that in applying the “top-down” approach:

- a. Insurers must determine an appropriate yield curve on the basis of current market information using either the actual portfolio of assets the insurer holds or a reference portfolio (presumably a replicating portfolio) of assets.
- b. If there are no observable market prices for some points on that yield curve, extrapolate or interpolate as appropriate.
- c. The cash flows of the instruments must be adjusted so that they reflect the characteristics of the cash flows of the insurance contract liability. An insurer shall make both of the following adjustments:
 - i. Type I, which adjust for differences between the timing of the cash flows to ensure that the assets in the portfolio selected as a starting point are matched with the duration of the liability cash flows, and
 - ii. Type II, which adjust for risks inherent in the assets that are not inherent in the liability.
- d. An insurer using a “top-down” approach need not make adjustments for remaining differences between the liquidity inherent in the liability cash flows and the liquidity inherent in the asset cash flows.

A Modified Approach for Short-Term Policies

The boards discussed the modified approach for short-term policies, which is another highly controversial subject, particularly for P&C insurers. The approach

proposes that a different approach should be used for the accounting in the pre-claims period for contracts, typically of short duration, that meet specified criteria. In particular, the boards discussed what those criteria might be and whether that different approach was a proxy for the building-block approach or a separate model.

The boards tentatively decided that:

- a. They would later consider (thereby postponing discussion of the key issue) whether the pre-claims obligation should reflect the time value of money, based on their tentative decision in the Revenue Recognition project on reflecting the time value of money.
- b. The insurer should reduce the measurement of the pre-claims obligations over the coverage period as follows:
 - i. on the basis of time, but
 - ii. on the basis of the expected timing of incurred claims and benefits if that pattern differs significantly from the passage of time.
- c. An insurer should perform an onerous contract test if facts and circumstances indicate that the contract has become onerous in the pre-claims period.

In addition, the IASB tentatively decided that an insurer should deduct from the pre-claims obligation measurement the acquisition costs that would be included in the measurement of the insurance contract liability under the building-block approach. Nine of the 13 IASB members present supported this approach. The FASB did not vote on this issue.

MAY MEETINGS

Topping the record in April, there were four separate meetings on insurance in May, including one that spread over into June.

May 4

This discussion of unbundling, like many before and to follow, was confused by the question of whether it affected the measurement of the liability or only the presentation. By the end of the quarter, this was still unclear.

Unbundling

The boards discussed whether non-insurance goods and services should be unbundled from an insurance contract in accordance with the principles for identifying separate performance obligations in the Revenue Recognition project. The boards tentatively decided they should be subject to further discussion.

The boards tentatively decided that an insurer should unbundle explicit account balances (e.g., for unit-linked and variable contracts) that are credited with an explicit return that is based on the account balance, again using criteria based on those being developed in the Revenue Recognition project. An insurer would not unbundle implicit account balances. All IASB members and a majority of FASB members supported these decisions.

In addition, the IASB tentatively decided that an insurer would account for an unbundled explicit account balance in accordance with the relevant requirements for Financial Instruments in IFRS, subject to future decisions on allocation.

May 11–12

Measurement of Policyholder Participation

The boards considered how to apply the principle that an insurance contract is measured using the expected present value of the fulfillment cash flows when those cash flows result from contractual participation features.

The IASB made the following tentative decisions.

- a. The measurement of the fulfillment cash flows relating to the policyholder's participation should be based on the measurement in the IFRS financial statements of the underlying items in which the policyholder participates. Such items could be assets and liabilities, the performance of an underlying pool of insurance contracts or the performance of the entity.
- b. An insurer should reflect, using a current measurement basis, any asymmetric risk sharing between insurer and policyholder in the contractually linked items arising from a minimum guarantee.
- c. An insurer should present changes in the insurance contract liability in the statement of comprehensive income consistently with the presentation of changes

in the linked items (i.e., in profit or loss, or in other comprehensive income (OCI)).

- d. The same measurement approach should apply to both unit-linked and participating contracts.

Nine members of the IASB voted in favor of this decision, four voted against, and one abstained.

The FASB tentatively decided that the measurement of the liability should reflect the expected present value of the cash flows, discounted at current rates, using the contractual measurement basis for the underlying items in which the policyholder participates. The majority of FASB members supported this decision.

There will be further discussion of this subject since the types of contracts considered did not include those issued in the United States and other jurisdiction where the board has full discretion over how much to pay.

May 16—Insurance Working Group Meeting

The meeting was well attended by 10 IASB and three FASB members, respectively. In addition, Hans Hoogervorst, the incoming IASB chairman, attended for the morning session and also was the only IASB board-level representative at the dinner that followed. One comment he made was that there seemed to be considerable unanimity among the preparers and users in the sessions he attended and that was a sign that resolution could be reached. Of course, this ignored that the IASB doesn't agree with this unanimity.

There were four agenda topics discussed and two additional topics that came up that turned out to be the most controversial.

Participating Contracts

The discussion at the IWG was lively. After I pointed out that the definition of par contracts included in the paper for the meeting did not apply to most U.S. par contracts, it was quickly acknowledged and not discussed further.

The remaining discussions centered on whether the board's paper worked for the unit-linked and 90/10¹

CONTINUED ON PAGE 16

contracts that are prevalent in Europe and elsewhere. The Working Group agreed that it generally worked for unit-linked contracts (including U.S. variable contracts) but the Europeans had problems with how it worked for 90/10 contracts, particularly how to handle things like own stock, home office real estate and other items that cannot be held at market value. (These are not normally problems for U.S. variable contracts.) Staff agreed they need a paper to cover U.S.-type contracts and FASB staff will be drafting one.

Convergence

The industry representatives next started a vigorous discussion of the need for the IASB and FASB to reach agreement on the standard. Several IWG members recommended that the IASB should wait for FASB to catch up before issuing a final standard. There was little opposition expressed.

While it seemed very doubtful at the time that the IASB will wait for FASB, more recent developments suggest that this is not impossible.

Use of OCI for Changes in Liabilities Due to Changes in Discount Rate

The industry representatives repeated their desire to be able to use OCI for changes in both market value of assets and the parallel changes in liability values due to changes in the discount rate. The IASB staff tried to make the case that identifying the assets backing insurance liabilities was impossible, but I pointed out that we already do it for Loss Recognition testing and other purposes. Essentially all of the preparers at the table, and several of the users, agreed that OCI for both assets and liabilities provided a good result. IASB staff was unconvinced.

Unbundling

Essentially, there was agreement among Working Group members that with the exception of situations where there was a clear lack of interrelation, there would be very little unbundling. As I noted previously, one of the problems is that several of the analysts at the table asked for more unbundling, when what they really meant was more disclosure, more gains by source analysis and just more information in general. In the end, several IASB members were not happy with the consensus that there should be very little unbundling.

Modified Approach for Short-Term Contracts

P&C industry representatives argued for no discounting in the calculation (essentially keeping the Unearned Premium Reserves as in U.S. GAAP).

Discount Rates

The final hour was billed as a report on the boards' discussion on discount rates. It turned out to be something very different.

IASB staff reported that they had thought about the issue and they now believe that there should be one yield curve used for discounting for each currency. Keep in mind that the discount rate is supposed to be a risk-free rate plus an illiquidity adjustment.² It's difficult to know how to have a single yield curve when Euro-denominated policies are issued in countries with very different risk-free rates.

Also, this represented a surprising clarification to the IASB's position. It was thought, for instance, that the illiquidity adjustment would be different for single premium immediate annuities and universal life contracts because the former have no withdrawal benefit; this new staff position would require the same discount rate for both, with an adjustment for the different liquidity in either the risk margin or cash flows. Furthermore, this position does nothing to alleviate the industry's concerns about the volatility this will introduce into the income statement.

IWG members and observers (and some board members I spoke with) left the meeting confused about how this is supposed to work.

May 17–18

Assets Backing Insurance Liabilities

The board tentatively decided not to change the requirements for presenting gains and losses on assets held to back insurance contract liabilities. The board noted that this decision was based on the assumption that changes in the carrying amount of the insurance contract liability are not presented in OCI. If that were to change, as the industry has been urging via the HUB Group, the treatment of assets backing insurance contract liabilities might need to be revisited. This would be one way to allow assets and liabilities to be treated consistently

despite the IASB's unwillingness to reopen IFRS 9 on Financial Instruments.

Risk Adjustments

The IASB and FASB continued their discussion on Insurance Contracts by considering how risk should be reflected in the measurement of an insurance contract liability. The IASB tentatively decided that the measurement of an insurance contract should contain an explicit adjustment for risk. The FASB tentatively decided that:

- a. An insurance contract measurement model should use a single margin approach that recognizes profit as the insurer satisfies its performance obligation to stand ready to compensate the policyholder in the event of an occurrence of a specified uncertain future event that adversely affects that policyholder.
- b. An insurer satisfies its performance obligation as it is released from exposure to risk as evidenced by a reduction in the variability of cash outflows.
- c. An insurer should not remeasure or recalibrate the single margin to recapture previously recognized margin.

The IASB and FASB will continue to explore whether the two approaches could be made comparable through disclosures.

May 31–June 2

Reinsurance

The IASB and FASB finally had a substantive discussion of accounting for reinsurance. They tentatively decided:

1. If a reinsurance contract does not transfer significant insurance risk because the assuming company is not exposed to a loss, the reinsurance contract is nevertheless deemed to transfer significant insurance risk if substantially all of the insurance risk relating to the reinsured portions of the underlying insurance contracts is assumed by the reinsurer. A loss is defined as an excess of the present value of the cash outflows over the present value of the premiums. This dealt with an important clarification requested by commentators on the Exposure Draft (ED).
2. An insurer should assess the significance of insurance risk at the individual contract level. Contracts

entered into simultaneously with a single counterparty for the same risk, or contracts that are otherwise interdependent that are entered into with the same or a related party, should be considered a single contract for the purpose of determining risk transfer.

3. A cedant should not recognize a reinsurance asset until the underlying contract is recognized, unless the amount paid under the reinsurance contract reflects aggregate losses of the portfolio of underlying contracts covered by the reinsurance contract. If the reinsurance coverage is based on aggregate losses, the cedant should recognize a reinsurance asset when the reinsurance contract coverage period begins. An onerous contract liability should be recognized if management becomes aware in the pre-coverage period that the reinsurance contract has become onerous. All members of the IASB and the FASB supported this decision.
4. The ceded portion of the risk adjustment should represent the risk being removed through the use of reinsurance.
5. If the present value of the fulfillment cash flows (including the risk adjustment under the IASB's tentative decisions) for the reinsurance contract is:
 - a. Less than zero and the coverage provided by the reinsurance contract is for future events, the cedant should establish that amount as part of the reinsurance recoverable, representing a prepaid reinsurance premium and should recognize the cost over the coverage period of the underlying insurance contracts.
 - b. Less than zero and the coverage provided by the reinsurance contract is for past events, the cedant should recognize the loss immediately.
 - c. Greater than zero, the cedant should recognize a reinsurance residual or composite margin.
6. The cedant should estimate the present value of the fulfillment cash flows for the reinsurance contract, including the ceded premium, and without reference to the residual/composite margin on the underlying contracts. This should be done in the same manner as the corresponding part of the present value of the fulfillment cash flows for the underlying insurance contract or contracts, after remeasuring the underlying insurance contracts on

CONTINUED ON PAGE 18

The IASB discussed whether changes in the discount rate should be recognized as an adjustment to the residual margin or in profit or loss in the period of the change, to the extent that these changes create an accounting mismatch. No decision was made.

initial recognition of the reinsurance contract.

7. When considering nonperformance by the reinsurer:
 - a. The cedant would apply the impairment model for Financial Instruments when determining the recoverability of the reinsurance asset.
 - b. The assessment of risk of nonperformance by the reinsurer should consider all facts and circumstances, including collateral.
 - c. Losses from disputes should be reflected in the measurement of the recoverable when there is an indication that on the basis of current information and events, the cedant may be unable to collect amounts due according to the contractual terms of the reinsurance contract.

All members of the IASB and the FASB supported these decisions.

JUNE MEETINGS

Whether to Unlock the Residual Margin

The IASB tentatively decided that the residual margin should not be locked in at inception. Eight IASB members supported and seven members opposed this decision. The FASB has already tentatively decided to propose a single-margin approach. However, the FASB also indicated that if it were to adopt an approach that includes both a risk adjustment and a residual margin, they would not favor unlocking a residual margin.

How to Unlock the Residual Margin

The IASB tentatively decided that an insurer should:

- a. Adjust the residual margin for favorable and unfavorable changes in the estimates of future cash flows used to measure the insurance liability. Experience adjustments would be recognized in profit or loss. Eleven IASB members supported this decision and four opposed it.
- b. Not limit increases in the residual margin. Twelve IASB members supported and three opposed this decision.
- c. Recognize changes in the risk adjustment in profit or loss in the period of the change. Nine IASB members supported and six opposed this decision.
- d. Make any adjustments to the residual margin prospectively. Ten IASB members supported and five members opposed this decision.

The IASB discussed whether changes in the discount rate should be recognized as an adjustment to the residual margin or in profit or loss in the period of the change, to the extent that these changes create an accounting mismatch. No decision was made.

The FASB did not vote on how to unlock the residual margin.

Allocation Methods for the Residual Margin

The IASB tentatively decided that:

- a. the residual margin should not be negative, and
- b. insurers should allocate the residual margin over the coverage period on a systematic basis that is consistent with the pattern of transfer of services provided under the contract.

Acquisition Costs

The boards tentatively decided that the acquisition costs to be included in the initial measurement of a portfolio of insurance contracts should be all the direct costs that the insurer will incur in acquiring the contracts in the portfolio. The costs should exclude indirect costs such as software dedicated to contract acquisition, equipment maintenance and depreciation, agent and sales staff recruiting and training, administration, rent and occupancy, utilities, other general overhead and advertising.

In addition, the IASB tentatively decided that no distinction should be made between successful acquisi-

tion efforts and unsuccessful efforts, while the FASB reiterated its decision in ASU 2010-26 (EITF 09-G) that the acquisition costs included in the cash flows of insurance contracts will be limited to those costs related to successful acquisition efforts. The FASB's position was subsequently endorsed in a private meeting the American Council of Life Insurers had with the chief accountant of the SEC.

Presentation of the Statement of Comprehensive Income

The boards indicated a preference for the presentation model outlined in Example 2 in Appendix A of Agenda Paper 3A /FASB Memo No. 70A. The example presents the underwriting results of contracts measured under the building-block approach separately from contracts measured using the modified approach and includes volume information as follows:

1. Underwriting Margin

- a) Building-block approach underwriting margin reflecting:
 - i. Change in/release of:
 1. Risk adjustment (IASB)
 2. Residual margin (IASB)
 3. Composite margin (FASB)
 - ii. Experience adjustment related to the current period disaggregated as:
 1. Premium due
 2. Claims incurred
 3. Expenses incurred
 4. Expected net changes in the liability for the period
 - iii. Changes in assumptions
 - iv. Gains and losses at initial recognition
- b) Modified approach underwriting margin reflecting:
 - i. Change in/release of
 1. Risk adjustment (IASB)
 2. Composite margin (FASB—if applicable)
 - ii. Premium revenue (based on the release of the pre-claims obligation grossed up for amortization of acquisition costs)
 - iii. Claims incurred
 - iv. Expenses incurred
 - v. Amortization of acquisition costs included in the pre-claims obligation

- vi. Experience adjustments related to the current period
 - vii. Changes in assumptions
 - viii. Changes in additional liabilities for onerous contracts
2. Investment performance:
 - a) Investment income
 - b) Interest accreted on the expected net cash flows
 - c) Changes in discount rate

The boards discussed whether they would require all insurers to present each of the above line items in all cases on the statement of comprehensive income, rather than in the notes. No decision was made.

THE SEC PAPER

On May 26, the SEC issued a paper titled “*Work Plan for the Consideration of Incorporating International Financial Reporting Standards into the Financial Reporting System for U.S. Issuers—Exploring a Possible Method of Incorporation.*”³ In brief, the paper suggested that one method for adopting IFRS would be what has been called the “condorsement” method. Under this approach, the FASB would work to try to make U.S. GAAP and IFRS become the same over a period of time, perhaps five years. In the end, if differences remain, that would be acceptable. Future IFRS would be reviewed as they are promulgated and perhaps included into U.S. GAAP.

While only a suggestion of one possible approach—the SEC is considering others—this paper received considerable comment within the industry. This is largely because the IASB and FASB have been having difficulty agreeing on several important standards including Insurance Contracts and Financial Instruments.

All things considered, both boards and staff deserve commendation for the progress they made this quarter. There is hope that the major issues will be resolved by September, although without any meetings in August, this will be a challenge.

Always remember:

Insurance accounting is too important to be left to the accountants! ■

END NOTES

- 1 Contracts where the shareholders may receive no more than 10 percent of the earnings on participating portfolio. This is common outside the United States (with some countries having 80/20 or 70/30 splits) and in the United States in some jurisdictions for par contracts sold by stock companies.
- 2 Remember that the discount rate is always the risk-free rate plus an illiquidity adjustment. The top-down or bottom-up approach is only how to calculate it. The target is the same.
- 3 <http://www.sec.gov/spotlight/globalaccountingstandards/ifrs-work-plan-paper-052611.pdf>

PBA Corner

By Karen Rudolph



Karen Rudolph, FSA, MAAA, is consulting actuary, Milliman, Inc., Omaha, Neb. She can be reached at Karen.rudolph@milliman.com.

In this issue of PBA Corner, I outline the recent activity of the NAIC Life Actuarial Task Force (LATF) VM-20 Subgroup activities as they resume bimonthly conference calls. I also mention the discussions of the Academy's Life Reserve Working Group (LRWG) as they resume periodic conference calls to discuss issues that have been channeled back to the Academy by LATF in light of feedback from the VM-20 impact study.

VM-20 RECENT CLARIFICATIONS

Exclusion tests and reinsurance ceded

Section 8D2a of VM-20 requires the exclusion tests to be reevaluated when determining the pre-reinsurance ceded reserve. Specifically, if the group of policies cannot demonstrate passing either exclusion test (stochastic or deterministic reserve exclusion test) on a pre-reinsurance ceded basis, whereas it does pass when considering reinsurance ceded, then the pre-reinsurance ceded reserve amount must be determined based on the pre-reinsurance ceded exclusion test result. This requirement makes sense for the stochastic reserve exclusion test, since reinsurance cash flows can be included or omitted in determining the exclusion test ratio. The deterministic reserve exclusion test, however, is currently only defined on a pre-reinsurance ceded basis. In the deterministic exclusion test the net premiums used in comparison to the guaranteed gross premiums are only defined on a direct basis. The LATF VM-20 Subgroup members have decided to wait for results of the impact study to consider if further changes to the exclusion test requirements are necessary.

Stochastic exclusion options

An amendment proposal form was adopted which clarifies three distinct options (formerly written as two) for implementing the stochastic exclusion test: (i) calculating the safe harbor exclusion test ratio, (ii) actuarial demonstration and (iii) certification by a qualified actuary that the group of policies is not subject to material interest rate risk or asset return volatility risk. Prior to this clarification, it was thought that the demonstration and certification together were one option. Variable life and universal life secondary guarantee (ULSG) are not eligible for the certification approach.

The demonstration option must satisfy certain criteria found in VM-20. VM-20 provides no substantive criteria on the certification approach.

Stochastic exclusion ratio parameters

The stochastic exclusion ratio is based on a deterministic reserve amount using anticipated experience assumptions. Section 6B2 was clarified to include mortality assumption language. Specifically, mortality improvement beyond the projection start date may not be reflected in anticipated mortality experience assumptions for purposes of the stochastic exclusion ratio calculation.

Industry mortality table

VM-20 requires an industry mortality table for purposes of blending with actual company experience or for use when no credible company mortality data yet exists. The Academy provided an amendment proposal which named the 2008 VBT as the industry standard. In response, the American Council of Life Insurers (ACLI) resurrected a letter written in 2009 to the Society of Actuaries expressing concerns related to the construction and use of the 2008 VBT tables under a principle-based system. The VM-20 Subgroup (i) acknowledged the ACLI's concern, (ii) adopted the amendment naming the 2008 VBT as the industry table, (iii) recognized that mechanisms are in place to update the table when an improvement is available and (iv) noted that the timing of new table development and VM-20's operative date is imperfect.

Asset cash flows

VM-20 includes language requiring the company to reflect uncertainty in the timing and amount of asset cash flows in the model. The LATF VM-20 Subgroup added language to clarify that this requirement does not apply to asset default assumptions since they are prescribed.

Reinsurance reserve credit calculations

Language was added to Section 8C to clarify that the determination of the pre-reinsurance ceded deterministic or stochastic reserve will be subject to the 98 percent to 102 percent collar on starting assets. However, the group noted Section 7D1c provides consideration

for the starting asset amount being outside this collar as long as supporting documentation is provided. An explanatory guidance note was also discussed. For the final decision on this topic, the subgroup will wait for impact study results (this is a mid-priority sensitivity in Phase II of the impact study).

Margin determination

Language was added in Section 9 Assumptions to clarify that the company is permitted to change the method of determining margins from the method used in the prior year, if the rationale for the change and the impact on the minimum reserve is disclosed.

Dividend liability

Language was added to Section 7C6 to clarify the company's treatment of dividends and dividend liability and their effect on the modeled reserve. The liability for dividends declared but not yet paid continues to be established according to statutory accounting principles and reported separately from the statutory reserve. If the cash flow model used to calculate the deterministic or stochastic reserve omits the dividends that give rise to this dividend liability, then no adjustment need be made to the resulting modeled reserve amount. If the cash flow model includes the dividends that give rise to the dividend liability, then the resulting modeled reserve should be reduced for the amount of the dividend liability.

Valuation mortality assumption process

Currently drafted but not yet incorporated in the working draft as of June 30, 2011, are the Academy's clarifications surrounding the determination of valuation mortality assumptions. These changes are intended to clarify areas of confusion as indicated by the impact study underway. Below is a synopsis of the changes. For a complete read-through, see the most recent VM-20 working draft or amendment proposals.¹

Credibility segment: Its purpose is to determine whether a group of policies qualifies for the simplified method or not. It is defined by groups of policies with similar underwriting methods. Distinct underwriting methods include, for exam-



ple, guaranteed issue and fully underwritten policies. Each credibility segment has a corresponding credibility data set, which includes the most recent three years' claims and in-force data of all policies currently in the credibility segment, or that would have been in the credibility segment at any time during the period over which experience is being evaluated.

- i. If the number of deaths within the credibility data set for a credibility segment is less than 30, the company uses the simplified method in determining the prudent estimate mortality assumption.
- ii. If the number of deaths within the credibility data set for a credibility segment is at least 30, the company uses experience mortality rates blended with industry experience where the blending is according to the company's selected credibility procedure.
- iii. The credibility segment is also used to determine an aggregate credibility factor for use in the calculation of mortality margins. If (ii)

CONTINUED ON PAGE 22

above is followed, the aggregate credibility factor is determined by the credibility segment. If (i) above is followed, the aggregate credibility factor is 0. The basic formula for the mortality margin (Section 9C5) is $CF \times rf + (1-CF) \times cv$ where CF is the aggregate credibility factor; rf is the random fluctuation component and cv is the company variation component.

Mortality segment: Within a given credibility segment are multiple mortality segments. These segments are defined by policies within the credibility segment that have similar mortality experience. The company may define a separate mortality segment for each gender and risk class combination, for example. It is the company mortality experience at the mortality segment level that is blended with an appropriate industry table. The method of blending is defined by the company's chosen credibility procedure. The blending procedure recognizes the credibility of the experience data within the mortality segment. In other words, as the credibility in the experience data set for a mortality segment increases, the credibility adjusted (blended) experience rates produced by the credibility procedure will approach the actual experience rates.

Lately there has been discussion about the level of granularity to be used in determining the credibility within a mortality segment. If determined at a highly granular level, inconsistencies can arise. For example, if a super preferred risk class has minimal credibility (according to the credibility procedure chosen) while a nonsmoker risk class has higher credibility, the credibility-adjusted experience rates for the nonsmoker risk class could potentially be lower than the credibility-adjusted experience rates for the super preferred risk class. This is because the latter would be highly dependent upon the corresponding industry table. Margins and credibility blending processes are high-priority sensitivities of the impact study Phase II analysis.

VM-02: NONFORFEITURE

The LATF PBR Process and Coordination Subgroup

discussed changes to the nonforfeiture law that are necessary to align the nonforfeiture requirements with the new Valuation Manual. VM-02 is the chapter in the Valuation Manual that defines minimum nonforfeiture mortality and interest. The Standard Nonforfeiture Law for Life Insurance (SNFL) will be modified to recognize the operative date of the Valuation Manual and to recognize that the Valuation Manual will define the mortality and interest basis applicable for issues on or after the operative date of the Valuation Manual.

There remains a question, however, as to whether the option to use the prior calendar year's nonforfeiture basis still exists for policies issued on or after the operative date of the Valuation Manual (SNFL Section 5. H(1)).

An ACLI proposal for new appendices to the Valuation Manual is also being discussed. These appendices would contain the definition and resources for the various Commissioners Standard mortality tables and industry experience mortality studies and tables, as well as appendices for other critical assumptions that are referred to by the Valuation Manual. The benefit of the appendices would be to describe the table, when it was adopted by the NAIC, and where to find the official copy of the rates. Rules for the use of the tables would continue to be found in VM-02 for nonforfeiture, VM-20 for life reserves, VM-26 for credit life reserves, and so on. ■

END NOTES

- 1 During the June 30 LATF VM-20 Subgroup call, New York regulators were of the opinion these changes were not entirely clarifications, but rather reflected a change to the Academy's original intent. LATF is expecting to review New York's recommended wording in future calls.

IAA Discount Rate Project Update

By Frank Grossman

A long time ago, when financial reporting actuaries had discovered how to project cash flows but had not yet encountered phenomena such as deferred acquisition cost (DAC) assets and contra-liabilities, a question arose as to whether and how to reflect the time value of money in their calculations. That is, how might one go about discounting those future cash flows to arrive at useful actuarial present values? Foundational writings such as Kellison's *The Theory of Interest* certainly helped with the requisite algebra. But determining an appropriate rate of discount posed a challenge back then and—fair to say—remains the case for some actuaries even today.

There is, however, good news to relate regarding this long-standing issue. The International Actuarial Association (IAA) has recently undertaken the preparation of a monograph addressing both the conceptual framework for determining discount rates, and practical techniques for their measurement from a financial reporting perspective.

The monograph will span various areas of actuarial practice—life, non-life and pension financial reporting—aiming to contrast and compare different approaches. The document will have three main sections: a conceptual framework describing methods; practical examples in the form of case studies; and references to relevant technical papers. The current estimated length of the monograph is approximately 300 pages. The monograph's audience is intended to primarily be practicing financial reporting actuaries who have a basic statistical background, and also actuarial students seeking a greater understanding of the topic.

The Discount Rate Project's (DRP's) objective is well within the IAA's strategic mandate: "Facilitating and providing educational material that is accessible to all actuaries everywhere" and, in particular, "(To) facilitate the use and expansion of the scientific knowledge and skills of the actuarial profession ... to help enhance the scope, availability, and quality of actuarial services offered by individual members of its member associations."

Financial support for the DRP has been provided by The Actuarial Foundation, the Actuarial Profession

of the United Kingdom, the Australian Institute of Actuaries, the Canadian Institute of Actuaries, the Casualty Actuarial Society and the Society of Actuaries (SOA) Financial Reporting Section.

The project is managed under the auspices of IAA's Insurance Accounting Committee (Sam Gutterman, chairperson) and the Actuarial Standards Subcommittee (David Congram and Francis Ruygt, co-chairpersons). Congram is leading an Ad-Hoc Project Oversight Group (APOG) comprised of 15 actuaries, with IAA staff support. All of the DRP's financial sponsors are represented on the APOG, as are the IAA Pensions & Employee Benefits, Social Security, and Enterprise and Financial Risk Committees. The monograph's author team was determined by a Request for Proposals (RFP) process in early autumn 2010, and is Milliman.

A two-month public exposure period is scheduled to begin early in fall 2011. Readers are referred to the IAA website for more information about this process (e.g., the draft document and response details).

The DRP's deliverable, a comprehensive discount rate monograph, is a follow-up to the successful stochastic modeling monograph published by the IAA in spring 2010. (Our section co-sponsored this prior project too.) The IAA extends its thanks to all members of the SOA Financial Reporting Section for their ongoing support of these actuarial education initiatives.

The IAA has been working together with the International Accounting Standards Board's (IASB's) staff on the basic issue of how to incorporate the time value of money into their standards. Hence, the DRP represents an important opportunity for our profession to provide fundamental educational materials for possible application to financial reporting practice on the global stage. Just one more reason for section members to take a close look—once beach blankets are put away and the languid dog days of summer conclude—at the forthcoming discount rate monograph's exposure draft, and by extension the development of financial reporting standards over the horizon. ■



Frank Grossman, FSA, FCIA, is a senior actuary at AEGON USA who enjoys the eight months of the year not devoted to year-end financial reporting. He can be reached at fgrossman@aegonusa.com or 319.355.3963.

Market-Consistent Term Insurance Premiums and Liabilities

By James Milholland



James Milholland, FSA, MAAA is a retired Partner from Ernst & Young. He can be reached at actuary@milholland.com

What does it mean to be market-consistent? Can insurance products be priced and valued in a market-consistent fashion?

John Jacob discusses market consistency in his article “Actuaries and Assumptions” in the March 2011 issue of this newsletter.¹ The emphasis in his article is the selection of inputs or assumptions. He makes the observation, for example, that a truly market-consistent approach would use a binomial function for the lapse assumptions.

Anna Rita Bacinello uses a binomial function in her demonstration of calculating a fair premium for an annual premium participating life contract.² She assumes that a contract terminates if its cash value exceeds what she refers to as the “continuation value.” The contract does not terminate if the value to continue is greater than the value to surrender. Bacinello uses market-consistent techniques for the financial elements of the pricing and refers to the result as a fair premium. “In this connection, we will term *market values* (or *prices*) the outcomes from the valuation of purely financial elements, and *fair values* (or *fair premiums*) the final results obtained by combining financial and actuarial valuation tools.”³

There appear to be limits to which market-consistent techniques are, and perhaps can be, applied to insurance. This article addresses the limits to market consistency by questioning whether there in fact can be a market-consistent level annual premium for a term life insurance contract. For simplicity, the example considers only mortality. Interest, expenses and margins are disregarded. Expected mortality is from the 1990–95 Society of Actuaries basic male age nearest birthday table.

PREMIUM CALCULATION

Consider a two-year term insurance contract. The policyholder pays the first premium for a death cover for one year and for the option to renew for a second year. If the market for insurance had the characteristics of markets contemplated by the term “market-consistent,” there would be a robust market for term insurance and the policyholder would, at the end of the first year, con-

sider if he should pay the second premium or cancel his contract and purchase a new one-year contract. If the policyholder is healthy, he will purchase a new contract if the premium is less than the second-year premium on his original contract. This means that the insurer that issues the two-year contract must charge a one-year select term rate in the second year of the contract to avoid having only unhealthy lives in its portfolio after the first year.

The premium for the first year then must be the amount needed for the death benefits in the first year and for the option to renew. The option to renew is easily priced. It is the amount of extra mortality associated with the second year after underwriting as compared to the expected mortality for one year of newly underwritten mortality.

Because of the option to renew, there is value in the contract. The presence of the value means that the insurer does not anticipate surrenders. If, at the end of the first year, the policyholder were to decide that he no longer needs insurance, he would not terminate his contract; rather, he would sell it for its value. It would remain in-force and continue to be an obligation of the insurer.

The following table and calculations illustrate this concept.

Table 1: Expected benefits for a one-year and two-year term insurance contract, both terminating at age 55

	Death benefits for 10,000,000 exposure	
	Attained age	
	53	54
Two-year term at age 53	1,406	1,990
One-year term at age 54		1,470

The price of the option, the excess benefits in the second year of a two-year contract as compared to a one-year contract, is $520 = 1990 - 1470$. The first-year premium must be 1926 ($1406+520$), which is the price of the insurance for the first year plus the price for the guarantee that the policyholder can purchase insurance for the second year at the same rate as a person who has just been through underwriting and has qualified for new insurance. The policyholder pays for the guaranteed ability to purchase insurance in the second year. With these market constraints in effect, the first-year premium is 1926 and the second-year premium is 1470. The premium pattern is not level. It also doesn't follow the select and ultimate mortality pattern associated with annually renewable term insurance.

The pricing approach can be extended to longer terms. If a policyholder purchases an n-year term policy, the premium in each of the renewal years must be the same as for a newly underwritten contract for the remaining term. The premium for the first year then is the first-year mortality plus the extra mortality over the next n-1 years as compared to a new contract for n-1 years.

The following tables illustrate premiums for term contracts ranging from one to 10 years in duration, all terminating at age 55. Table 3 shows the premiums based on the expected payments in Table 2.

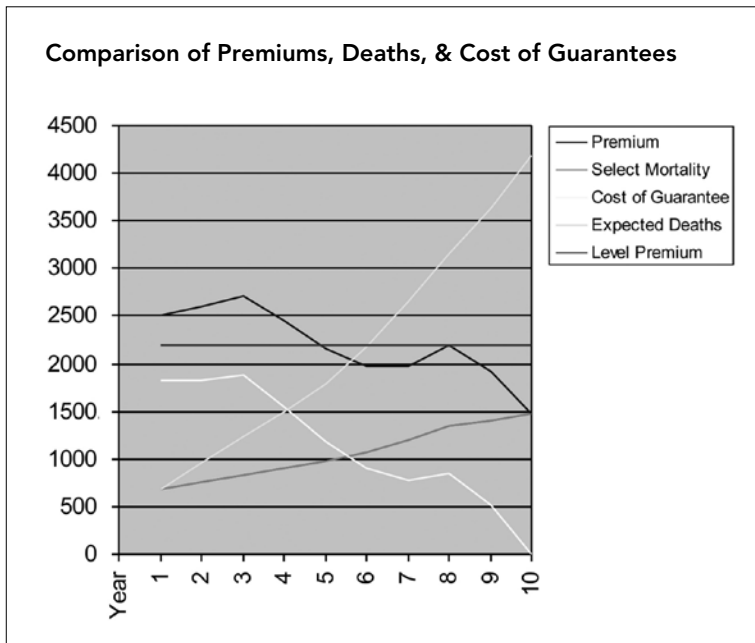
Table 2: Expected payments for 10,000,000 exposure for contracts with terms ranging from one to 10 years

Age at issue	Term	45	46	47	48	49	50	51	52	53	54	Total
45	10	685	968	1,232	1,493	1,795	2,173	2,648	3,148	3,631	4,178	21,951
46	9		759	1,039	1,287	1,580	1,952	2,390	2,907	3,483	4,049	19,447
47	8			836	1,100	1,346	1,701	2,147	2,647	3,205	3,872	16,853
48	7				903	1,190	1,489	1,878	2,336	2,859	3,480	14,135
49	6					978	1,309	1,665	2,087	2,551	3,099	11,689
50	5						1,077	1,457	1,875	2,329	2,797	9,534
51	4							1,199	1,632	2,119	2,612	7,562
52	3								1,344	1,835	2,406	5,586
53	2									1,406	1,990	3,395
54	1										1,470	1,470

CONTINUED ON PAGE 26

Table 3: Premiums for term insurance of one to 10 years ending at age 55

Age at issue	Term	45	46	47	48	49	50	51	52	53	54	Total
45	10	2,504	2,594	2,718	2,446	2,155	1,972	1,976	2,191	1,925	1,470	21,951
46	9		2,594	2,718	2,446	2,155	1,972	1,976	2,191	1,925	1,470	19,447
47	8			2,718	2,446	2,155	1,972	1,976	2,191	1,925	1,470	16,853
48	7				2,446	2,155	1,972	1,976	2,191	1,925	1,470	14,135
49	6					2,155	1,972	1,976	2,191	1,925	1,470	11,689
50	5						1,972	1,976	2,191	1,925	1,470	9,534
51	4							1,976	2,191	1,925	1,470	7,562
52	3								2,191	1,925	1,470	5,586
53	2									1,925	1,470	3,395
54	1										1,470	1,470



The following graphic shows a comparison of the premiums for the 10-year contract to a level premium and to the expected deaths. It also shows the annual charge for the renewal option (or cost of the guarantee), along with the one-year select mortality. The peculiar shape of the premium and option curves are a result of the pattern of first differences in the mortality rates. They may reflect genuine characteristics of mortality curves or they may reflect that the smoothing underlying the construction of the table did not anticipate its use for this purpose.

As already noted, the premium each year is the same regardless of the issue age. It is a function of the attained age and the remaining term of the contract. Meanwhile, the insurer will have a liability that is a function of the age at issue and the original term.

MEASURING THE LIABILITY

The liability is the amount needed for the guarantee of future insurability. It can be thought of as the amount that has been collected for the guarantee for future insurability at the one-year select rate that has not yet been utilized. It can be calculated as the amount of premium collected less the expected death benefits to date. Alternatively it can be calculated as the expected future death benefits in excess of the future premiums. The liability also represents the market value of the contract, given the premise of the paper that there is a robust market in which the contract could be sold. Table 4 shows the liability at the end of each year for the same range of contract terms as in previous tables.

Table 4: Market-consistent liability for term insurance contracts ranging from one to 10 years, terminating at age 55

Age at issue	Term	45	46	47	48	49	50	51	52	53	54
45	10	1,819	3,445	4,931	5,884	6,243	6,042	5,371	4,413	2,707	0
46	9		1,835	3,514	4,673	5,247	5,267	4,853	4,137	2,579	0
47	8			1,882	3,228	4,037	4,308	4,137	3,681	2,401	0
48	7				1,542	2,507	2,991	3,089	2,944	2,010	0
49	6					1,177	1,840	2,151	2,254	1,629	0
50	5						895	1,415	1,731	1,326	0
51	4							777	1,336	1,142	0
52	3								846	936	0
53	2									519	0
54	1										0

CONCLUSIONS

The premiums calculated on the premise of market consistency are not premiums that would be marketable in the real world. Since so-called market-consistent liabilities are based on realistic cash flows, they are not comparable to the liabilities in Table 4. The illustration demonstrates that real-world term insurance pricing reflects that insurance is not sold in an environment that has the characteristics found in markets that are referenced when searching for market-consistent inputs. If insurance policies were sold in such markets, there would be no need to search elsewhere for inputs. This observation is not new, but the illustrations draw attention to the fact that the term “market-consistent” can be ambiguous and potentially misleading if the actuary does not fully disclose how he has chosen methods and selected inputs.

Most actuarial calculations that are labeled “market-consistent” are in fact hybrid calculations. The fact that not all inputs are market-consistent suggests that actuaries should disclose which inputs and methodologies are market-consistent and which are not. More importantly, actuaries should disclose why use of market-consistent inputs or methodologies is reasonable and appropriate. They should explain the purpose of using market-consistent inputs for some inputs and not for others. These disclosures may be important even if the measurement principle is not fair value or

market-consistent. For example, extensive disclosures of the approach to inputs are anticipated in the emerging international accounting standard for insurance.

It is encouraging to see that actuaries are actively addressing the use of concepts from financial economics and the concept of market consistency in particular. In addition to reading Jacob and Bacinello, cited above, interested actuaries should read the transcript of a discussion of real-world versus risk-neutral assumptions by Burden and Ireland at a meeting of the Society of Actuaries in 2005.⁴ There is also a good overall discussion in Day, “Financial Economics and Actuarial Practice,” by the July 2004 *North American Actuarial Journal*.⁵ ■

END NOTES

- ¹ John Jacob, “Actuaries and Assumptions,” *The Financial Reporter*, Issue 84, March 2011, accessed June 29, 2011: <http://www.soa.org/library/newsletters/financial-reporter/2011/march/frn-2011-iss84.pdf>.
- ² Anna Rita Bacinello, “Pricing Guaranteed Life Insurance Participating Policies with Annual Premiums,” *North American Actuarial Journal*, Vol. 7, No. 3, July 2003, accessed June 29, 2011: http://www.soa.org/library/journals/north-american-actuarial-journal/2003/july/naaj0307_1.pdf.
- ³ *Ibid.*, p. 5.
- ⁴ Tamara Burden, Graham D. Ireland, Julia Lynn Wirch, “Back to Basics: Risk Neutral vs. Real World,” Record of the Society of Actuaries, Vol. 31, No. 1, accessed June 29, 2011: www.soa.org/files/pdf/003_bk_new-life05.pdf.
- ⁵ Tony Day, “Financial Economics and Actuarial Practice,” *North American Actuarial Journal*, Volume 8, No. 3, July 2004, accessed on June 29, 2011: <http://www.soa.org/library/journals/north-american-actuarial-journal/2004/july/naaj0403-6.pdf>.

SOCIETY OF ACTUARIES Financial Reporting
Section

475 N. Martingale Road, Suite 600

Schaumburg, Illinois 60173

p: 847.706.3500 f: 847.706.3599 w: www.soa.org

The Financial Reporter

Non Profit Org
U.S. Postage
PAID
Carol Stream, IL
Permit No 475