THE FINANCIAL REPORTER

NEWSLETTER OF THE LIFE INSURANCE COMPANY FINANCIAL REPORTING SECTION

NUMBER 47 SEPTEMBER 2001

Letter from the Editor

by Thomas Nace

This is a busy time of year for our Section! By the time you receive this, the election results for the Society Board of Governors, as well as for the Financial Reporting Section Council should be known. Congrats to all the newly-elected! Thanks to the others who were willing to contribute their time and energy to making our profession better. From that viewpoint, you are all winners.

In addition, there are two Society meetings quickly approaching — the Valuation Actuary Symposium, which will be held in Boston on September 13–14, and the Annual Meeting in New Orleans on October 22–24. In this issue, we preview the latter with two articles. One summarizes the various financial reporting sessions offered and the second describes special financial reporting events scheduled for that meeting.

The Annual Meeting also marks the changing of the guard for the office of Section Chairperson. Our current Chair, Mike Eckman, will relinquish his responsibilities to Barry Shemin, our new Chair. A big round of applause is in order for Mike for a job well done. It has been a pleasure working with Mike on the newsletter and I know all of the members on the Council are grateful for his leadership over the past year.

At the same time, let's congratulate Barry on his new assignment and provide him with all of our support in the coming year to insure that he will have a successful term.

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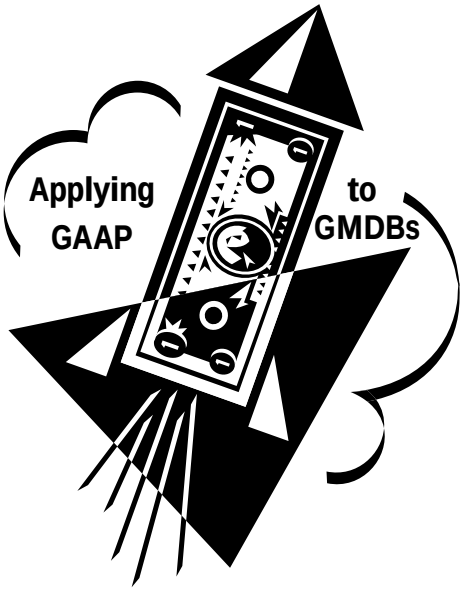
Applying GAAP to GMDBs

by Karen Sasveld and David Heavilin



Variable annuities (VAs) are currently one of the hottest products on the market with sales of $137.5 billion in 2000, up from $122.9 billion in 1999. The popularity of these contracts has been further boosted by various guarantees that are designed to protect the value of certain benefits provided under the contract. The most common of these is the Guaranteed Minimum Death Benefit (GMDB), which uses one of a variety of mechanisms to enhance the value of the death benefit in the event of weak market performance.

Unfortunately, GAAP guidance has not quite kept pace with the development of these new features. While guidance for statutory reserves is now available in the form of Actuarial Guideline 34, actuaries continue to search existing GAAP guidance for a valid reserving methodology for GMDBs. The issue of reserving for these guarantees is particularly important because of the disappointing performance in equity markets in 2000. At the end of 2000, the Dow Jones Industrial Average and S&P 500 lost 5% and 9% of their beginning of year values, respectively; the NASDAQ lost a whopping 40% of its year-end 1999 value. As a result, there is the potential for much larger payouts under GMDBs than at any previous time.

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In this Issue

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With Mike stepping down, you will want to read his final Chair's Corner article, which appears in this issue. Mike offers his own personal thoughts on the future of statutory accounting and the effect on the actuary's role in the financial reporting environment.

While I'm talking about changing roles, I do not want to neglect mentioning that I will be resigning as Section newsletter editor at the end of this year. As such, we are in the process of trying to recruit a replacement. See the "want ad" in this issue or call me if you think you might have an interest.

Our lead story in this issue deals with a topic somewhat neglected until recently — GAAP rules for GMDB (Guaranteed Minimum Death Benefits) associated with variable annuity products. The article is co-authored by Karen Sasveld and David Heavilin. The topic is part of a new SOP still in the works (and yet to be exposed) by AcSEC dealing with non-traditional long duration contracts and separate accounts.


Tom Nace

It just so happens that we are also able to provide you an overview of the entire SOP, thanks to David Scheinerman and Mary Saslow. Talk about synergy!

You will notice as you read through the newsletter that we have put together an issue that is jam-packed with some super technical articles. In addition to the two above just mentioned, we have the following:

Steve Grondin illustrates in his article a potential discontinuity in deficiency reserves that exists under XXX (i.e. where small changes in gross premium can account for large changes in deficiency reserves). Steve's insightful analysis is quite thought-provoking.

Joe Koltisko offers the first part of a two-part series of articles dealing with VOBA in a fair value environment. In this first part, Joe looks at the method described by Jim Milholland in an earlier issue of the newsletter (Issue #44) and relates it to the concept of fair value.

Ted Schlude does another bang-up job in summarizing the recent June NAIC Meeting. After reading Ted's review, you'll almost feel like you were there.

Thanks to all of the authors who contributed to this issue!

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THE FINANCIAL REPORTER

Issue Number 47 September 2001

Published quarterly by the Life Insurance Company Financial Reporting Section
of the Society of Actuaries
475 N. Martingale Road, Suite 800
Schaumburg, IL 60173
Phone: 847-706-3500 Fax: 847-706-3599
World Wide Web: *http://www.soa.org*

This newsletter is free to Section members. A subscription is $15.00 for nonmembers. Current-year issues are available from the Communications Department. Back issues of Section newsletters have been placed in the Society library and are on the SOA Web Site. Photocopies of back issues may be requested for a nominal fee.

Applying GAAP to GMDBs
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There is great variety among GMDB features currently offered in the VA market. The most typical guarantees are:

1. *Return of premium* – Although this is generally the most conservative option offered, guaranteeing only a return of premiums paid, the insurer is still exposed to some risk as the potential for negative returns in the stock market means that some portion of the premium paid may be lost over time, thereby requiring the insurer to pay out the amount of lost premiums upon death.

2. *Roll-up* – This guarantee pays the premium accumulated at a stated interest rate (usually 3 to 5%) at the time of death. The risks under this type of guarantee are similar in type to those inherent in the basic return of premium, although the degree of risk is greater.

3. *Ratchet* – At regular intervals, the death benefit is ratcheted up to reflect the gains in that period. Under this approach, the death benefit can never decrease from its prior level. Thus, a period of high returns followed by low returns may result in an annuity with a death benefit greatly in excess of the accompanying fund value.

4. *Lookback* – This guarantee pays the highest death benefit achieved at any time during the contract period.

These GMDBs are essentially options that are offered by the insurer to the contract holder. As such, we can use terminology that is normally associated with financial options to describe the status of GMDBs. An option is "in the money" if the benefit currently has intrinsic worth to the contract holder, meaning that if the contract holder were to die immediately (thereby exercising the option), an amount in excess of the account value would be paid. An option is "out of the money" if it has no current value upon exercise, but may become valuable in the future.

Addressing the Risks

There are several potential methods for dealing with the risks inherent in GMDBs, such as hedges, reinsurance or diversification. However, upon closer inspection, each presents certain difficulties. Although it is technically possible to hedge the GMDB risk, hedges are complicated by the fact that exercise of the option is involuntary and depends upon the death of an annuitant.

Additionally, if a hedge is used, frequent rebalancing is required, which may make the hedge prohibitively expensive. Fewer reinsurers are entering the market because of these difficulties, so it may be hard to find reinsurance for these benefits. Finally, the risks inherent in GMDBs are rarely diversifiable because the risks insured under the benefit are either dependent upon or highly correlated with a single factor — the performance of the U.S. equity market.

This last issue is tied to another complicating factor in the reserving for GMDBs. If a stock market downturn causes one contract's guarantee to be in the money, it will likely have the same effect on all other contracts issued around the same period and invested in similar funds, thus exacerbating the impact of the downturn. The resulting risk profile is a "cliff-type" profile; insurers who issue GMDBs earn good returns under the large majority of stock market scenarios but can face severe losses under a small number of extreme scenarios.

"Finally, the risks inherent in GMDBs are rarely diversifiable because the risks insured under the benefit are either dependent upon or highly correlated with a single factor — the performance of the U.S. equity market."

Existing Guidance

In looking to existing GAAP literature for guidance on the treatment of GMDBs, it seems reasonable to turn to SFAS 97. However, we begin by reviewing the statutory guidance presented in Actuarial Guideline 34. While this guidance is not applicable to the reporting of GAAP reserves, it offers a useful backdrop against which to review the available GAAP guidance.

Actuarial Guideline 34: Variable Annuity Minimum Guaranteed Death Benefit Reserves

The need for reserving guidance on the statutory side was clearly addressed by the introduction of Actuarial Guideline 34, which became effective in most states at the end of 1999. The guideline specifically requires that VAs with GMDBs be valued by assuming a specified drop in the value of the assets supporting the contract, followed by a recovery at a specified return rate. The immediate drops and assumed returns vary across 5 asset categories. The guideline also provides a mortality table to be used in the calculation and clearly describes the mechanics of the calculation.

SFAS 97: Accounting by Insurance Companies for Certain Long-Duration Contracts & Realized Gains & Losses on Investment Sales

SFAS 97 makes an important distinction between insurance and investment

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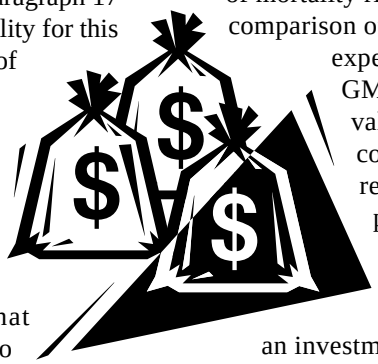
contracts. Under the terms of this statement, investment contracts are those that do not incorporate significant insurance risk. Insurance contracts may be of two types. Limited-pay contracts have fixed and guaranteed terms and a premium-paying period that is less than the period over which benefits are provided. Universal life-type contracts are long-duration contracts with terms that are not fixed and guaranteed.

If a VA is deemed to have significant mortality risk, it would generally qualify as a universal life-type insurance contract under SFAS 97. Under paragraph 17 of the statement, the liability for this type of contract consists of four parts:



i. The balance that accrues to the benefit of policyholders (i.e. the account value);

ii. Any amounts that have been assessed to compensate the insurer for services to be performed over future periods;

iii. Any amounts previously assessed against policyholders that are refundable on termination of the contract; and

iv. Any probably loss (premium deficiency) as described in SFAS 60.

If the cost of the GMDB is assessed as a percentage of account value each period and if the benefit is not currently in the money, then the cost might reasonably be judged to be an amount assessed to compensate the insurer for services (i.e. payment of the excess death benefit) to be performed in future periods. Alternatively, the GDMB could be interpreted as a premium deficiency. As defined in SFAS 60, a premium deficiency exists if existing liabilities and the present value of future gross premiums are insufficient to cover the present value of future benefits and to recover unamortized acquisition costs. The premium deficiency is recognized either by reducing unamortized acquisition costs or by increasing the policy liability.

Upcoming Guidance from the Task Force on Nontraditional Long-Duration Contracts

The Non-Traditional Long-Duration Contracts Task Force is currently addressing the issue of reserving for GMDBs on VAs. Initial indications suggest that the Task Force will uphold the split between investment contracts and insurance contracts as defined under SFAS 97; further, they may specify a test to determine the significance of mortality risk as measured by a comparison of the present value of expected benefits under the GMDB versus the present value of revenue on the contract. Insurers may be required to measure these present values over a wide range of scenarios. If, based on this test, the contract is judged to be an investment contract, it is likely that no additional reserve will be required or permitted, except for reserves related to incurred mortality events.

However, if it is judged to be an insurance contract, it is likely that an additional reserve will be calculated consistent with SFAS 97. The reserve would most likely be calculated under sections 17(b) and 17(d) of SFAS 97 (as defined in SFAS 60). The rationale for the additional reserve is that, to the extent amounts assessed exceed an amount proportional to the net amount at risk, a reserve should be held to recognize the portion of such assessments used to fund future benefits.

The recommendation of the Task Force, as outlined here, is tentative. This recommendation must be approved for exposure by AcSEC and the FASB, comments must be received and evaluated, and final guidance must be adopted by AcSEC and cleared by the FASB.

Current Practice

Insurers are currently using a wide variety of methods for determining what, if any, reserve to hold for GMDBs. Methods currently used in the industry include, but are not limited to:

1. *Zero reserve* – This method has the advantage of simplicity, and it seems to be consistent with existing guidance. However, based on early indications, it is most likely inconsistent with the guidance that will be proposed by the Task Force for those benefits that are in the money.

2. *GAAP = statutory* – Another method is to simply hold a GAAP reserve equal to the statutory reserve for the same contract. Unfortunately, this approach is not consistent with either the existing guidance or the Task Force's expected proposal. Further, the resulting reserve bears no relationship to the economic reality of the risk to which the insurer is exposed.

3. *N-year term reserve* – For benefits that are in the money, it may be reasonable to hold an n-year term reserve, where n may be one year or a longer period. For out-of-the-money benefits, no reserve is held. While this method seems to comply with current GAAP guidance, it is inconsistent with the expected Task Force guidance.

4. *AG34-type reserve with GAAP assumptions* – This approach has the advantage of incorporating a mechanism already in use. The replacement of statutory assumptions with GAAP assumptions removes some of the conservatism inherent in the mortality table required for AG34. However, while the immediate drop and recovery specified in the guideline is useful as a means of defining statutory reserves, it is probably not a best estimate of what will occur in the future, as required for GAAP assumptions by SFAS 97. Indeed, the AG34-style approach is probably too rigid and conservative for suitable application in a GAAP context.

5. *Accumulated historical GMDB charges* – This approach seems to be consistent with paragraph 17(b) of SFAS 97, which requires the insurer to accrue those amounts assessed against policyholders for services to be provided in the future. However, the method does not include any explicit mechanism for release of the reserve over time. Overall, though, the approach may be useful as a stopgap until the Task Force releases their guidance. It is simple to implement and is a reasonable proxy for the economic cost of the benefit.

6. *Canadian approach with some modifications* – The Canadian approach is a stochastic multi-scenario method. Future product benefits are modeled and reserves are held at the 75 CTE ("curtate tail expectation") level; this means that the most extreme 25% are averaged and held as the reserve. Additionally, capital is held such that reserves plus capital are sufficient at a 95 CTE level.

"The GAAP treatment of GMDBs is obviously an area ripe for the development of further guidance. The guidance being considered by the task force should certainly help to clarify this issue for future reporting dates and will be a welcome addition to the accounting literature."

Recommendations for Current Practice

Having reviewed the existing guidance, early indications of Task Force suggestions, and current industry practices, there are three approaches to the GAAP valuation of GMDBs that appear to have certain advantages over other methods currently used.

1. ***Zero Reserve for Out-of-the-money Benefits with SFAS 97 Reserve for In-the-money***
   Under this approach, for out-of-the-money GMDBs, the insurer would hold no additional reserve and would simply make a disclosure of the potential risk. However, once the benefit becomes in the money, it would be reasonable to hold a reserve consistent with the guidance under SFAS 97, perhaps in the form of a one-year term reserve. The approach is consistent with existing guidance, but it is unlikely to be consistent with the upcoming guidance released by the Task Force. Further, this approach may increase the volatility of the reported earnings as the benefit moves from being in the money to out of the money and vice versa. Finally, the reserve calculated under this method does not reflect the economic reality of the risk to which the insurer is exposed.

2. ***Accrue Past Net Cost as Reserve***
   As described in the section above on current practices, this approach has several advantages, the main one being that it is a reasonably simple way to approximate the true economic cost of the benefit. However, it is inconsistent with the approach likely to be recommended by the task force.

3. ***Stochastic Process***
   An alternative approach, which is not currently widely used, is to use a stochastic process to determine the reserve with stress testing performed on the tail of the risk profile curve. This is generally similar to the Canadian method. The main advantage of this approach is that it reflects the economic impact of the guarantee on the company's financial statements better than any other approach discussed thus far. Further, it gives management an improved understanding of the risk at hand. The method has several disadvantages as well. It is definitely more complex than the other methods discussed. It represents a more liberal interpretation of existing guidance. Finally, reserves may be somewhat more volatile under this method. However, for those companies willing to invest the time and cost to implement this method, the method provides valuable benefits in the form of a more economically realistic reserve, better management information and the ability to sensitivity test the reserve.

In Conclusion

The GAAP treatment of GMDBs is obviously an area ripe for the development of further guidance. The guidance being considered by the task force should certainly help to clarify this issue for future reporting dates and will be a welcome addition to the accounting literature.

While insurers wait for this guidance to be released, there are several approaches that could reasonably be justified under existing guidance. We have suggested three approaches that we believe to be reasonable stopgaps during this period. Each approach has significant advantages and disadvantages, which each company must weigh individually in determining the method that will work best for their block of business.

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Highlights of the June 2001 NAIC Life and Health Actuarial Task Force Meeting and Other Topics

by Raymond T. (Ted) Schlude

Editor's Note: Summarized below is what took place at the various task force and working group meetings of the NAIC in June, 2001.

Actuarial Opinion and Memorandum Regulation (AOMR) Revisions

The revisions to the AOMR were adopted unanimously by both the Life (A) Committee and Health (B) Committee. The major revisions to the AOMR include:

- Eliminates Section 7 Formula Reserve Opinion: The revised actuarial standards of practice "Analysis of Life, Health or Property/Casualty Insurer Cash Flows" and "Statements of Opinion Based on Asset Adequacy Analysis by Actuaries for Life or Health Insurers" will provide guidance to the opining actuary in determining what level of reserve/asset adequacy analysis is appropriate for the blocks of business to which the opinion applies.

- Regulatory Asset Adequacy Issues Summary: The model regulation requires that an executive summary of asset adequacy analyses be prepared by the actuary. Various information to be included in the summary is specified in the revised AOMR. Results, assumption differences from prior analyses, sensitivity testing, blocks subjected to analysis and treatment of reinsurance are examples of areas to be highlighted in the summary.

- Allows State of Domicile Opinion: Subject to requirements set forth by each state.

- Eliminates Required Interest Rate Scenarios: In favor of the Appointed Actuary's judgment as guided by the revised ASOPs.

The modified AOMR does not address state variation very well in the sense that states are still free to do what they want in accepting the opinion and the opining actuary will still be subject to the laws, regulations and regulatory policy as each state sees fit. The appointed actuary also has the option to continue to file a "this state" opinion (Section 8) as they have been for the last ten years.

The revised AOMR is scheduled to be adopted by the Executive and Plenary Committee at the Fall NAIC meeting. Currently, only a small portion of the AOMR is included in Appendix A of the codified NAIC Accounting Practices and Procedures Manual so it appears that the revisions will have to be adopted in the form of a revised regulation in each state.

Life Insurance (A) Committee

Summarized below is the work of several working groups reporting to the Life (A) Committee:

1. ***Life and Health Actuarial Task Force (LHATF):*** LHATF met prior to the NAIC meeting and discussed many ongoing projects. Items of note with an emphasis on life and annuities include:

- Actuarial Guideline MMMM – VAGLB Reserving Guideline: The group received an update report from the Academy of Actuaries on this project. The fund return database was updated for two years of recent data and the group has studied the advantages and disadvantages of using distributions other than the lognormal distribution. The Academy group is studying the feasibility of a calibration approach which would give the actuary flexibility to choose from several methodologies provided the approach qualifies based on calibration points. One simplified approach being considered is to use the lognormal, but with lower mean returns and higher standard deviations in order to thicken the tail exposure.

Future plans include finishing the calibration analysis, reviewing the feasibility of simplified alternatives such as representative scenarios or the Keel method, modification of the AG VAGLB as appropriate, and to work with the Life RBC Working Group toward a long-term non-formulaic VAGLB solution.

- Actuarial Guideline AXXX: LHATF split the draft actuarial guideline which clarifies XXX into two pieces by carving out specific reserving guidance for universal life shadow account products, for which consensus has not yet been reached. In order to keep the basic guideline moving forward, a separate guideline for shadow account reserving may be drafted at some point in the future. The current guideline will only reference shadow account products as ones which fall within the scope of XXX. A revised draft of the basic guideline is scheduled to be exposed in July, 2001. The guideline would apply retroactively to business written in 2000 and later consistent with the life policy model regulation (XXX).

- 2001 CSO Mortality Table: The regulators received a report from the Academy of Actuaries related to analysis of margins to be applied to the New Basic Table previously developed. Generally, the margin approach is similar to that used for the 80 CSO with a 15% margin overall, which varies by age and is subject to various smoothing criteria. This level of load covers the mortality of 15 of the 21 companies included in the underlying experience data.

LHATF recommended the new table for exposure. The goal is to have the table adopted by the Life (A) Committee in September and by Executive and Plenary in December, 2001. The table will most likely be available for use January 1, 2003 and mandatory by January 1, 2008, similar to the structure used for the 80 CSO model regulation.

The LHATF received a model regulation drafted by the ACLI which would implement the New CSO Table. Tentatively, X-factors in the XXX Model Regulation would apply and a minimum 20% has been used as a placeholder. The appropriateness of the 20% factor will be reviewed in the future. Based on the meeting discussion, this draft will be modified and a new draft model regulation will be exposed in July, 2001.

- Credit Disability Valuation Table: The A&H Working Group modified the Health Reserving Model Regulation to incorporate the recently developed Credit Disability Valuation Morbidity Table. LHATF adopted the changes and recommended them to the Health (B) Committee.

- Actuarial Guideline VL-GMDB: The LHATF adopted the previously exposed guideline and recommended it to the Life (A) Committee for adoption.

- Actuarial Guideline XYZ - Non-forfeiture for Products with Secondary Guarantees: The regulators heard a report related to testing performed on the exposed Actuarial Guideline XYZ.

The task force continues to discuss non-forfeiture generally, issues related to codification (single premium credit life refund reserves, disclosure note related to reserves that are higher than the codified standard), and various other issues.

2. ***Life Liquidity Risk Working Group:*** The Life Liquidity Risk Working Group heard a presentation from Federal Reserve Board representatives on their approach to financial regulation of banks. Next, they discussed Moody's approach to review of GIC/ funding agreement and similar spread based business exposures. The NAIC may take a similar approach to accumulate this type of information. New York indicated that as a result of its circular letter, there were not as many formal liquidity plans as it might have expected. Rather, companies are choosing to respond to all the questions in the New York circular letter. The working group abandoned consideration of a life RBC factor to address stress liquidity. Finally, an approach drafted by Mike Boerner (TX) focused on stress liquidity was discussed which would include comment from the appointed actuary and a company officer certification with respect to stress liquidity, as well as require New York circular letter type information.

3. ***Suitability Working Group:*** The Suitability Working Group met and discussed two issues with respect to the model regulation. Item 1 – IMSA - a reference to IMSA will create a safe harbor, but becomes problematic for regulators because currently no one is auditing IMSA and the IMSA reference is objected to by consumer groups because it provides a safe harbor for insurance companies. Regulators are hesitant to place an endorsement of IMSA in an NAIC model regulation. Item 2 – record keeping is a big issue for insurers. Some regulators would want records kept for all recommendations including those that do not necessarily result in a sale. Companies say that this will be nearly impossible and would prefer to maintain only recommendations that result in a sale.

4. ***Small Face Amount Working Group:*** The Small Face Amount Working Group heard a report from a smaller working group summarizing a frame work for disclosure with respect to policies where cumulative premiums could exceed the policy face amount. Rules would apply to new issues not inforce. The working group authorized the smaller work group to move forward in drafting a model regulation on disclosure. Finally, two states' specific guidance was discussed: (1) Illinois — a draft regulation specifies that it is a company's responsibility to search their records for multiple policies when notified of a death claim, and (2) Florida — a bill which died in the House would have required face amount increases for policies where premiums exceed a certain percentage of the face amount. That particular bill would have increased face by 50% if premiums exceed 250% of face amount, and would increase face by 150% if premiums exceed 500% of the face amount.

Accounting Practices and Procedures Task Force

Several accounting related working group meetings are summarized below.

1. ***Emerging Accounting Issues Working Group:*** The Emerging Accounting Issues Working Group (EAIWG) adopted various interpretations and discussed outstanding issues. With respect to disclosure of differences with codification, the EAIWG decided to require disclosure of differences between established and codi fied reserves if the company and auditor determine the differences to be material, even in cases where reserves are stronger than codification. It had been the opinion of LHATF that because codification specified a minimum standard and companies have always been free to hold a stronger reserve than the minimum standard, stronger reserves might not trigger a disclosable event in that case. Another argument relates to it being cumbersome to maintain a parallel set of reserves (minimums) when the emphasis of statutory accounting is on solvency and conservatism. This guidance just applies to reserves for new business issued in 2001 and later. Business issued prior to Jan 1, 2001 follows the laws and regulations of the domiciliary state.

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The EAIWG also adopted the NAIC's staff recommendation related to margin for adverse deviation in claim reserves. Even though SSAP No. 55 refers to "best estimate," the concept of conservatism is inherent to the estimation of reserves and as such should not be specifically prohibited in the consideration of management's best estimate.

2. ***Statutory Accounting Principles Working Group:*** The Statutory Accounting Principles (SAP) Working Group held the two meetings discussed below.

- Hearing Agenda: It was noted that the SAP Working Group has begun to consider comments related to Issue Paper No. 114 Accounting for Derivative Instruments and Hedging Activities. These comments and others will be discussed at an interim meeting on August 7, 2001. They plan to expose a revised issue paper prior to the September, 2001 NAIC meeting.

Next, Issue Paper No. 115 Investments in Foreign Subsidiary, Controlled and Affiliated Entities (SCAs) was discussed. The group decided to defer discussion of this paper and to consider all issues that have arisen related to SSAP No. 46 - Investment in Subsidiary, Controlled and Affiliated Entities. SSAP No. 46 did not provide specific guidance with respect to foreign SCAs.

- Meeting Agenda: The SAP Working Group discussed various proposals clarifying codification and directed them to the appropriate working group or committee to obtain additional feedback.

3. ***Financial Reporting Working Group - Risk Classification Subgroup:*** The Risk Classification Subgroup received a presentation outlining regulatory risk assessment framework as well as an American Academy of Actuaries report on Catastrophe Exposures and Insurance Industry Catastrophe Management Practices.

4. ***Separate Accounts Working Group:*** The Separate Accounts Working Group discussed the disclosure note with respect to guaranteed benefits provided by variable annuities and will proceed to develop a blanks proposal for such a note. The proposal would disclose the type of guaranteed benefit (death benefit vs. living benefit and detailed nature of the benefit including combinations), the dollar amount of account value to which the benefit applies, the reserve held, location of the reserve in the annual statement as well as relevant reinsurance related information.

Next, a proposal for accounting for the CARVM/CRVM allowance in the general account for modified coinsurance of variable products was discussed. The proposal by interested parties would be to increase the allowance in the assuming company's general account statement and reduce the allowance in the ceding company's general account statement for variable life and annuity reinsurance. The regulators asked that an example be drafted as well as a blanks proposal and will hold a conference call in late June, 2001 to discuss this topic further.

RBC, AVR/IMR & Invested Assets

1. ***Life RBC Working Group:*** Specific items discussed at the Life RBC Working Group meeting are described below.

- Common Stock Covariance: The Life RBC Working Group adopted the common stock covariance formula in concept at the March, 2001 NAIC meeting. The revised covariance formula will treat C-1 common stock risk as being independent of other C-1 asset risk. In addition, an adjustment to the base 30% common stock RBC factor would be made to recognize a company's Beta. The basic factor of 30% gets multiplied by the weighted average Beta for the insurer's common stock portfolio but is subject to a minimum value of 22.5% and a maximum value of 45%. If Beta is not available, then the maximum 45% would be used. This modification was adopted by Life RBC to be effective at 2001 year-end. Note that the base 30% factor was later changed to 20% as part of changes related to codification.

- C-3 Interest Rate Risk: The working group reviewed the results of December 31, 2000 annual statement filings prepared under the C-3 "cash flow scenario testing" instructions. Forty-eight companies were required to perform the testing:

> ***Lower C-3:*** 43 Companies - Most of these went down to the floor of 50% of base C-3 factors.
>
> ***Higher C-3:*** 5 Companies had C-3 factors increase but not above the 200% of base C-3 cap. One of the five companies hit the 200% cap.

It was noted by regulators, based on questions asked by their domestic companies, that there was some uncertainty related to the relationship of cash flow testing assumptions compared to cash flow scenario testing assumptions. The RBC instructions were clarified that there could be distinction between the two analyses because the scenario testing results are focused on the tail of the interest rate distribution rather than a range of plausible future events such as the N.Y. Seven scenarios. The

instructions were revised to specify "consistent assumptions" rather than "same assumptions" and also clarified to emphasize the importance of reviewing for reasonableness the results of the testing under severe scenarios. This instruction change was viewed as non-substantive and will be effective for 2001 year-end.

-Disability Income (DI) C-2 Factor Proposal: When Life RBC was originally adopted, the emphasis was on C-1 and simplified approaches were used for other risks like C-2 and C-3. The Academy of Actuaries performed analysis over the past 2 years related to refinement of DI factors as well as factors for other health lines for C-2 insurance risk. An initial DI proposal was presented in March and the regulators asked for additional analysis and sensitivity testing with particular emphasis on group LTD where the proposed C-2 factors were significantly lower as illustrated below.

	Group Long Term Disability C-2 Insurance Risk Factors	
Inforce Base	Current RBC	Proposed
First $50 million of premium	25%	15%
Premium Beyond $50 million	15	3

It was pointed out that even with the new factors, reserves plus RBC are intended to be adequate 95% of the time. Additional support and sensitivity analysis presented by the Academy convinced regulators to adopt the new C-2 factors for use at 2001 year-end for Life RBC.

- Codification Changes – Full Tax Proposal: The Life RBC Working Group adopted the interested parties tax proposal to take into account codification changes. The majority of the changes related to C-1 risk factors which now more fully need to take into account recognition of taxes given the creation of deferred tax liabilities (DTL's) and deferred tax assets (DTA's) by codification.

The most notable changes to C-1 factors and explanations are described below although C-1 factors for all asset types and classes were reviewed for appropriateness as part of this project.

(Please refer to the chart below the dotted line.)

Life RBC – 12/31/2001
Codification
Selected C-1 Risk Factors

Asset Category	Current RBC C-1 Factor	2001 YE RBC C-1 Factor	Comments
Bonds:			
1-US Govt	0.00%	0.00%	
1-Other	0.30	0.30	Because DTAs are subject to limitations, tax recognition = 35% x 75% = 26.25% (was 17.5%).
2	1.00	0.90	
3	4.00	3.40	
4	9.00	7.50	
5	20.00	17.00	
6	30.00	20.00	Recognize 35% tax rate similar to equities.
Preferred Stock:			
1	0.90%	0.80%	
2	2.50	2.20	Tax rate = 35% x 75% = 26.25%.
3	6.00	5.30	
4	13.50	11.00	
5	25.00	18.00	
6	30.00	20.00	Recognize 35% tax rate similar to equities.
Unaffiliated Common Stock (Base Factors)	30.00%	20.00%	Tax Rate = 35%

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Highlights of the June 2001 NAIC Life and Health Actuarial Task Force Meeting and Other Topics
continued from page 9

The RBC calculation would also recognize any DTAs and DTLs reflected in the balance sheet under codification. As noted, the Life RBC Working Group adopted this proposal to be effective for December 31, 2001.

2. ***Health RBC Working Group:*** The Health RBC Working Group received a report from the Academy of Actuaries related to progress made with respect to development of new C-2 factors for DI (proposal), LTC (under study) and Stop Loss (under study). The working group received the report but did not adopt the DI factors because this business is not currently as critical to HMO/HMDI entities as it is to life company RBC discussed earlier. Next, the working group considered the Academy's tax proposal to take into account codification changes. It was noted that there are already some formula differences between the Health, P&C and Life formulas such as AVR (life only) and common stock factors (15% for P&C, Health but 20% for Life) so Health RBC held off adopting the codification proposal.

   Recently, cost containment expenses have been modified for the life blank and health blank as well as the Accounting Practices and Procedures Manual into two categories: (1) quality assurance expenses and (2) cost containment expenses. The Health RBC Working Group will consider what changes need to be made to RBC as a result.

   An industry representative noted that the working group's prior decision to reverse DTLs/DTAs resulting from codification will be detrimental for many health entities with significant DTAs.

3. ***Recent RBC Conference Calls Related to Implementation of Codification:*** As a result of the summer meeting, the regulators have had several conference calls to attempt to resolve differences between the Life, P&C and Health formula treatment with respect to codification and taxes in particular. The current direction is to have an approach that is as consistent as possible across Life, P&C and Health.

   - All three RBC formulas will allow recognition of DTAs and DTLs in surplus used to compute adjusted capital.

   - An RBC sensitivity test will be required which reverses out of adjusted capital the impact of DTAs and DTLs.

   - Life Company RBC will be allowed to make the changes to the C-1 factors which the Academy has recommended to reflect codification changes to taxes (taxes are now recognized more immediately as a result of DTA's/DTL's).

   Even though the Life C-1 factors will be different than Health and P&C, it was felt that there are already other differences in the RBC formulas and accounting frameworks and that the revised C-1 factors are appropriate for Life RBC. The Financial Condition (E) Committee will vote on this approach in early July, 2001.

4. ***AVR/IMR Working Group:*** The AVR/IMR Working Group adopted changes to AVR factors to reflect the implications of codification with respect to deferred tax assets and liabilities consistent with changes made by the Life RBC Working Group.

. . . .

The next NAIC meeting will be held in late September, 2001 in Boston.

***Raymond T. (Ted) Schlude, FSA, MAAA, is a consulting actuary at Milliman USA in Chicago. He can be reached at* ted.schlude@milliman.com.**

CHAIR'S CORNER

by Michael V. Eckman

This month's Chair's Corner is definitely an editorial in which I state my own opinion and not necessarily that of my company or the Section. I hope that it generates some thought and discussion.

For many months, I have had the wonderful distraction of a new office building being built across the street from me. I find that the planning and just-in-time delivery of the construction material to be very fascinating. As each two-floor segment is finished, a new shipment of I-beams and other material arrives. The I-beams are hoisted by a crane up to their proper position and bolted into place. Cross members are connected, floor beams are laid, and the building takes shape.

Each of the heavy pieces of steel appears to fit just right. All of the many holes in the I-beams are drilled just right so that the construction looks from my vantagepoint to be as easy as putting Legos together. I only wish that our financial reporting systems, especially statutory, were planned with such care and forethought. We have long dealt with statutory, tax, and GAAP reporting. Each of these has its own purpose and rules. Many companies also use embedded value and asset liability management models to help assess risk. We are now discussing, studying, and some are proposing fair value and international accounting standards.

For many years, the Academy of Actuaries has been considering a Unified Valuation System (UVS) that is probably the closest we will come to the type of planning that goes into a new building. I think that unless statutory accounting does get an overhaul, the actuarial profession will suffer. As more and more complicated patches are applied to the current system and each state presses its own agenda, management will consider statutory accounting more of an obstacle to be overcome than a tool of value. The current trend in regulation with multiple actuarial guidelines and separate opinions and certifications for new products will turn the actuary into someone who is forced to be more concerned about the detailed wording of the laws than the nature of the risk the company has taken on.

Consider Regulation XXX. The second version of this regulation was adopted in 1999 after many years of debate and the belief that the problems of the original had been overcome. First, not all of the states have adopted it. Second, not all of the states that adopted it use the same wording or interpret it the same way. Third, companies responded by designing new products to specifically avoid the provisions of the law. One reason for the desire for circumvention was that the companies thought that the reserves resulting from Regulation XXX were redundant.

Now, consider the financial reporting, valuation, and appointed actuaries' roles in applying Regulation XXX. Instead of concentrating on the risks that the company has assumed in issuing a certain product, the actuaries have to be concerned with each state's version of the law and X factor testing. Try explaining the non-decreasing requirement for X factors to a management that has seen mortality improvements.

Consider Codification. As its name implies, this was an attempt to standardize some statutory accounting principles. But, all of the existing valuation laws remain in place. Codification requires the disclosure of any company's variance from the codification rules. KPMG's analysis of the June meeting of the NAIC reported that the Emerging Accounting Issues Working Group (EAIWG) considered SSAP No. 51. The discussion focused on "the proper reporting under Appendix A-205 for the situation where a state requires a higher standard, such as a more conservative mortality table, than the SSAP 51 and Appendix A-820 requirements, or the situation where a company chooses a higher standard even when not required by their state. The EAIWG reached tentative consensus that any reserve amount calculated on a state prescribed or permitted valuation basis that is materially different (either higher or lower) from the reserve amount calculated on the A-820 valuation basis must be disclosed." If you hold a materially higher reserve than required by the standard valuation law (A-820), you have to disclose the amount of additional reserve. It is a little like traveling through a small town and being stopped by the local sheriff because you were driving 25 MPH in a 30 MPH zone.

Now put codification and Regulation XXX together. Codification contains Regulation XXX. Earlier this year, there was discussion as to whether this meant that a state adopting Codification was, in effect, adopting Regulation XXX. The answer currently appears to be no. But if you hold Regulation XXX reserves and your state of domicile does not require that you do, you have to disclose the amount of the additional reserve.

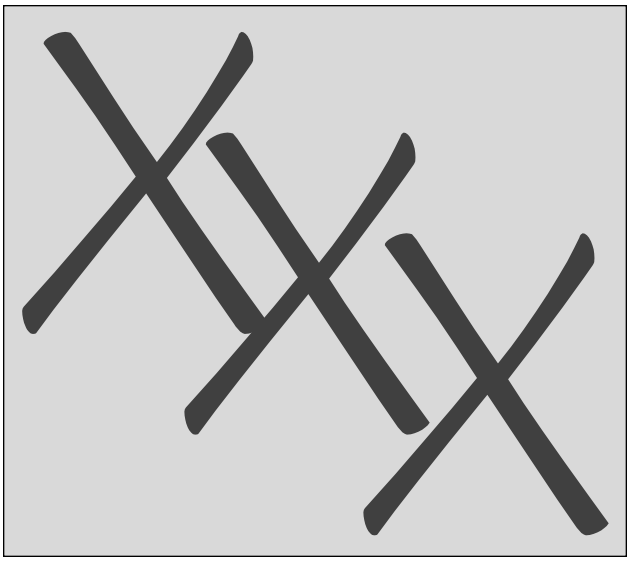
Instead of spending our time discussing the detailed wording of each state's valuation law, we should be determining the appropriate reserve and capital for the risk we underwrite. If we are too busy dealing with the details of the valuation law, tax law, GAAP accounting, and other details, management will find someone else to do it. As well intentioned as the various opinions and certifications are, providing multiple opinions and certifications is not going to earn either actuaries or state regulators credibility.

I would like to see something come of UVS. There are many obstacles to overcome, including tax considerations. If we cannot come up with a type of UVS, I fear that management will just consider statutory valuation to be a compliance exercise and an obstacle to be overcome. Management may look to someone other than the appointed or valuation actuary for help in making business decisions that involve risk.

Michael V. Eckman, FSA, MAAA, is second vice president and appointed actuary of ING ReliaStar in Minneapolis, MN. He is chairperson of the Financial Reporting Section and can be reached at **mike.eckman@reliastar.com.**

XXX and Minimum Standards

by Steven F. Grondin



The Valuation of Life Insurance Policies Regulation (XXX) has generated a great amount of discussion, especially with respect to how to set and test X factors and which product designs are subject to XXX. While these are important areas that warrant much attention, they have overshadowed (Oops, can I use that word, "over-shadowed?") a paradigm shift in the calculation of premium deficiency reserves (PDR). This paradigm shift is the change from one minimum standard of valuation to separate minimum standards for basic reserves and PDR. This article will focus on how XXX seeks to implement this concept and its effect on PDR calculations.

In a net premium reserving methodology, PDR result if the net premium is greater than the gross premium actually charged. Since the present value of the gross premiums is less than the present value of net premiums assumed in the reserve formula, the present value of this "deficiency" is set up as an additional reserve. Prior to the 1976 Amendments to the Standard Valuation Law (SVL), the net premium used in this comparison was the net premium computed under the method, mortality and interest rate actually used to calculate the reserves. However under this manner of computation, PDR could result from simply using interest or mortality assumptions more conservative than minimum standards.

The 1976 Amendments rearranged the way of thinking about PDR. They eliminated the term deficiency reserves, but instead defined the minimum reserve on "deficient" policies. Deficient policies are those whose gross premium is less than the net premium computed under the method used to compute the basic reserve, but using the minimum allowable standards of mortality and interest. The minimum reserve is the greater of the reserve calculated under the chosen method, mortality and interest rate and the reserve calculated under the same method but with minimum standards of mortality and interest and using gross premiums when less than net premiums. This remedied the PDR problems that could be caused by using a conservative basis, by both using the same net premium regardless of the choice of mortality and interest and recognizing the excess of conservative reserves held over minimum standard reserves. Unfortunately, the offset of PDR by reserves in excess of the minimum standards set the stage for what I consider an anomaly in XXX's attempt to establish separate minimum standards for basic reserves and PDR.

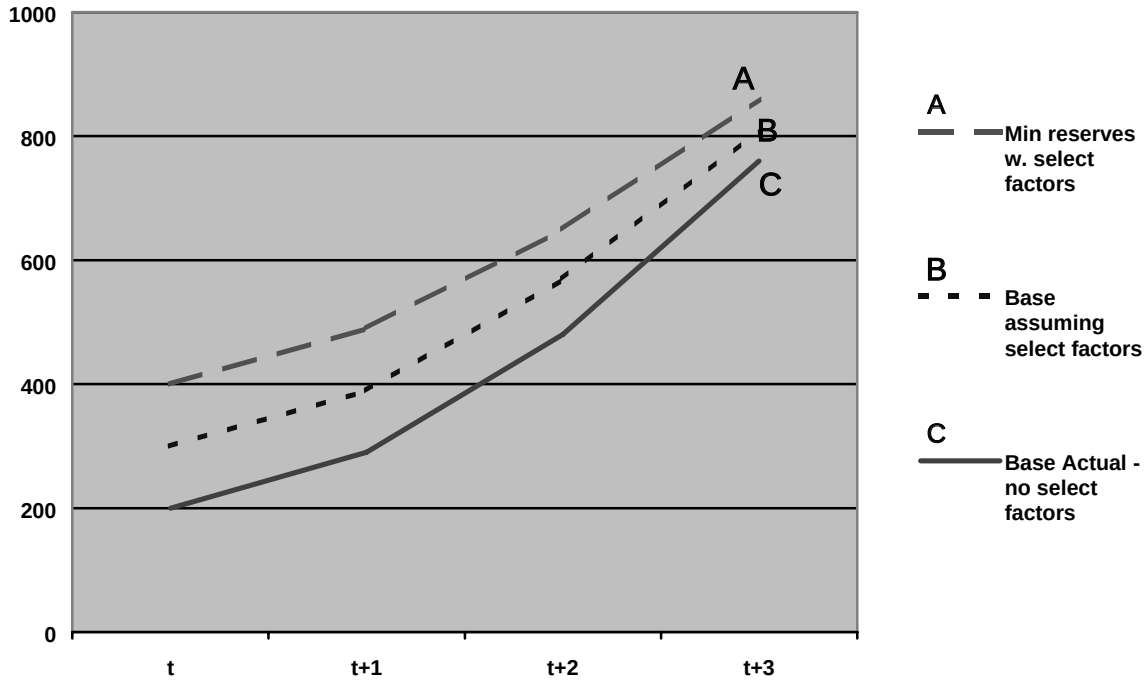
When the 1976 Amendments were approved, there was only one minimum mortality standard for males and one for females. With the introduction of the 1980 CSO tables, the minimum mortality standard became a choice between the 1980 CSO tables with or without 10-year selection factors. However, any one plan still had just one minimum mortality standard for both basic reserves and PDR. As the Report in TSA XXXIII (p. 617) states, "The basis chosen for a particular plan should be used to value both the basic life insurance reserve and the deficiency reserve." It was not until the adoption of the Smoker/Nonsmoker Regulation (NAIC #812) that the separate minimum mortality standards could apply to basic reserves and PDR on the same policy. Unlike XXX, though, the Smoker/Nonsmoker Regulation is not specific on how to apply these separate minimum standards.

One of the purposes of XXX was to free companies from the PDR burden of early 1970's mortality on business priced and underwritten over 20 years later. What XXX did not attempt to address was the conservatism the 1980 CSO provided to the basic reserves, at least partially to avoid possible tax implications. To manage this split, XXX permits a separate choice of basic reserve mortality and PDR mortality, allowing PDR to be calculated under what is essentially company experience mortality, subject to certain restrictions. Specifically, Section 5(a) addresses the calculation of base reserves referencing the use of the 1980 CSO table and an option to include one of several specified select factors. Section 5(b) defines deficiency reserves as the Quantity A less the basic reserves. The Quantity A equals the recalculation of the base reserves using gross premiums when less than the net premium, the 1980 CSO table, and options for select factors that include company specific X factor adjustments. But does XXX successfully "de-couple" the mortality basis for basic reserves and PDR? Yes and no. Yes, because if the policy is not deficient, then calculations under Section 5(b) are not required by the SVL. However, if the policy ends up being deficient, then the answer is no. A close examination of XXX shows how this dichotomy happens.

Quantity A is calculated using PDR mortality. There is no mention of recalculating the basic reserve using mortality

different from that elected in Section 5(a). Given a constant interest rate, the level of reserves on a product is strongly influenced by the slope of the mortality used. The steeper the mortality, the greater amount of pre-funding is needed for future years. Both select tables available under XXX will generally yield higher basic reserves than the 1980 CSO without select factors. The IRS has recognized this, thus the prohibition on select tables for tax reserves. Therefore, if the policy is deficient and different mortality is chosen for basic reserves and PDR, the excess of basic reserves calculated using PDR mortality over basic reserves actually held is included in the PDR. In essence, the PDR mortality is imposed on the basic reserve.

This can be illustrated in the following chart. The minimum reserves are represented by line A, the base reserves are represented by line C. Note that the excess of line B (bases reserves recalculated using the same mortality as the minimum reserves) over line C is included in the excess PDR.



This unequal treatment of policies that are deficient compared to those that are not has an interesting consequence. Consider PDR as a multivariate function, one of whose variables is gross premium. Prior to XXX, PDR was a continuous function with respect to gross premium; that is, a small increase in the (deficient) gross premium would yield a small decrease in the PDR. Now with XXX, policies with different mortality bases have a discontinuity in the PDR function with respect to the gross premium variable in the neighborhood of the net premium. If the gross premium were just a little above the net premium, there would be no PDR, regardless of the difference between Quantity A and the basic reserve. If the gross premium were one penny less, non-trivial PDR could result, not from any big premium deficiency, but simply because two minimum standards interact despite the intention that they should be separate. This discontinuity could put more pressure on the valuation actuary to "nudge" the X factors down than if the PDR function was continuous.

The accompanying Table 1 (page 13) demonstrates the discontinuity. It shows basic reserves for whole life and level level premium 20-year term, for age 35 male non-smokers using 1980 CSO Male Nonsmoker, 1980 CSO Male Nonsmoker with 10-year selection factors and 1980 CSO Male Nonsmoker with 19-year selection factors (X = 100%), all age last birthday. It shows the minimum PDR that would result if the policies were deficient and used 1980 CSO Male Nonsmoker with no selection factors as the basic reserve mortality table and the other two choices as the PDR mortality table. Because of the non-decreasing requirement imposed on X factors by XXX, any choice of X factors would be at least as steep as the 19-year selection factors, possibly resulting in even larger discontinuities.

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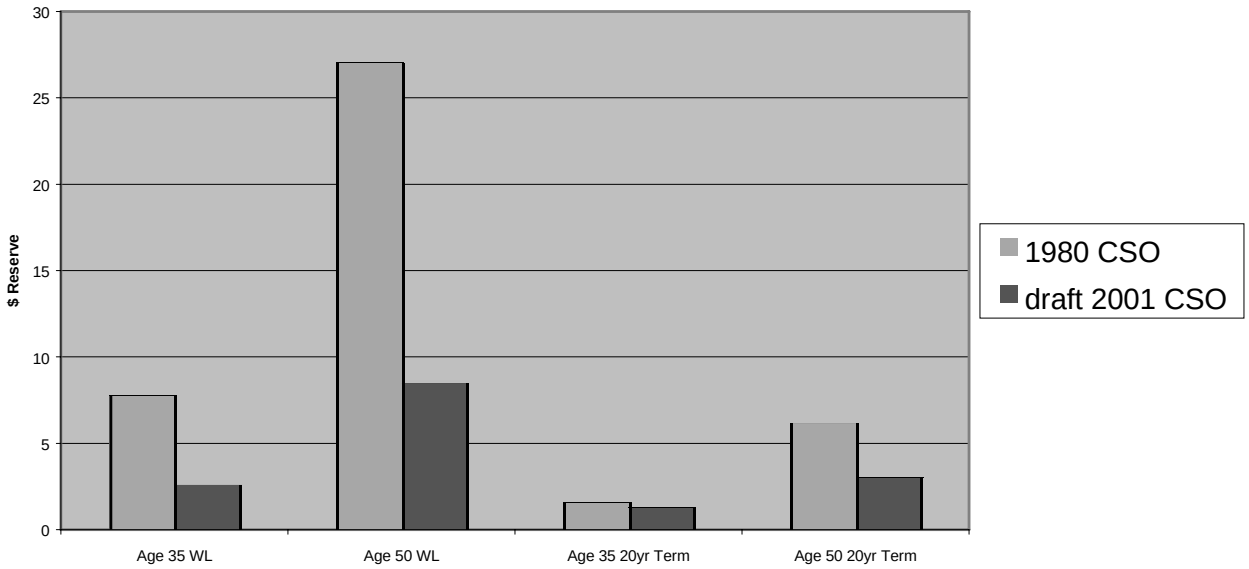
XXX and Minimum Standards
continued from page 13

With the adoption of the new 2001 CSO table, the effect of the discontinuity is lessened for at least some ages and plans. The chart below shows varying levels of reduction in the maximum discontinuity between the select table reserves and the ultimate table reserves for male nonsmokers. However, the discontinuity remains, and could be larger if X factors are used.

Maximum Discontinuities on a Reserve/1000 Basis



Is this inequitable treatment of deficient policies a goal of XXX? Not one of the drafters of XXX with whom I spoke said this was an anticipated, much less desired, effect. On the contrary, all of the literature that I have found that discusses the concept of separate mortality bases for basic reserves and PDR does not differentiate between deficient and non-deficient policies. How can this dichotomy between deficient and non-deficient policies be resolved? The Commissioners could permit the interpretation that the basic reserves used in Section 5(b) are basic reserves recalculated on the same mortality basis as the Quantity A. This would effectively "de-couple" the minimum standards for basic reserves and PDR for deficient policies, putting them on an equal basis with non-deficient polices, true to the spirit of XXX. It would retain the minimum minus basic concept introduced in the 1976 Amendments. It would restore continuity to PDR, reducing the pressure to "game" the system. Finally, it would restore an expected pattern to PDR, one that starts high and gradually decreases, a credible pattern that matches well with the concept of the present value of future premium deficiencies.

As a disclaimer, it should not be inferred that the views I have expressed are those of my employer, nor do these views reflect how my employer calculates its reserve liabilities. They are solely my personal professional opinion.

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TABLE 1

Whole Life	**CSO80 MNSALB, CRVM curtate**								**Terminal Reserves**	
AGE=35	α 1.6555024		β 11.152845							
	0.00	9.85	20.05	30.60	41.51	52.78	64.42	76.43	88.83	101.61
	114.79	128.36	142.33	156.71	171.51	186.71	202.30	218.26	234.56	251.19
	268.13	285.38	302.94	320.80	338.92	357.29	375.86	394.59	413.40	432.27
	451.17	470.08	489.01	507.95	526.86	545.66	564.27	582.56	600.40	617.75
	634.61	651.01	667.01	682.67	698.01	712.99	727.50	741.43	754.66	767.18
	779.00	790.22	800.98	811.48	821.91	832.53	843.62	855.57	868.74	883.35
	899.33	916.16	932.56	945.78	1000.00					
Whole Life	**CSO80 MNSALB 10yr Select, CRVM curtate**								**Terminal Reserves**	
AGE=35	α 1.2416268		β 11.076016							
	0.00	10.13	20.55	31.24	42.32	53.66	65.37	77.48	89.98	102.89
	116.04	129.59	143.55	157.91	172.68	187.86	203.43	219.37	235.64	252.25
	269.17	286.39	303.93	321.76	339.86	358.20	376.75	395.44	414.24	433.08
	451.95	470.83	489.73	508.64	527.53	546.31	564.89	583.15	600.97	618.29
	635.13	651.50	667.48	683.12	698.44	713.39	727.89	741.79	755.01	767.51
	779.31	790.51	801.26	811.74	822.16	832.77	843.84	855.77	868.93	883.51
	899.48	916.28	932.66	945.86	1000.00					
Whole Life	**CSO80 MNSALB 19yr Select, CRVM curtate**								**Terminal Reserves**	
AGE=35	α 0.678756		β 10.603394							
	0.00	10.23	20.71	31.48	42.64	54.27	66.31	78.78	91.63	104.92
	118.66	132.81	147.40	162.41	177.89	193.66	209.70	225.94	242.32	258.78
	275.55	292.62	310.00	327.68	345.62	363.80	382.19	400.72	419.35	438.03
	456.73	475.45	494.19	512.93	531.65	550.27	568.69	586.79	604.45	621.63
	638.31	654.55	670.38	685.89	701.07	715.89	730.26	744.05	757.15	769.54
	781.24	792.34	803.00	813.39	823.72	834.23	845.21	857.03	870.07	884.53
	900.35	917.01	933.25	946.33	1000.00					
Minimum Terminal Deficiency Reserves Using CSO80 MNSALB 10 Yr Select										
AGE=35	0.00	0.28	0.50	0.64	0.81	0.88	0.95	1.05	1.15	1.28
	1.25	1.23	1.22	1.20	1.17	1.15	1.13	1.11	1.08	1.06
	1.04	1.01	0.99	0.96	0.94	0.91	0.89	0.85	0.84	0.81
	0.78	0.75	0.72	0.69	0.67	0.65	0.62	0.59	0.57	0.54
	0.52	0.49	0.47	0.45	0.43	0.40	0.39	0.36	0.35	0.33
	0.31	0.29	0.28	0.26	0.25	0.24	0.22	0.20	0.19	0.16
	0.15	0.12	0.10	0.08	0.00					
Minimum Terminal Deficiency Reserves Using CSO80 MNSALB 19 Yr Select										
AGE=35	0.00	0.38	0.66	0.88	1.13	1.49	1.89	2.35	2.80	3.31
	3.87	4.45	5.07	5.70	6.38	6.95	7.40	7.68	7.76	7.59
	7.42	7.24	7.06	6.88	6.70	6.51	6.33	6.13	5.95	5.76
	5.56	5.37	5.18	4.98	4.79	4.61	4.42	4.23	4.05	3.88
	3.70	3.54	3.37	3.22	3.06	2.90	2.76	2.62	2.49	2.36
	2.24	2.12	2.02	1.91	1.81	1.70	1.59	1.46	1.33	1.18
	1.02	0.85	0.69	0.55	0.00					

20 Year Term	**CSO80 MNSALB, CRVM curtate**								**Terminal Reserves**	
AGE=35	α 1.6555024		β 3.303061							
	0.00	1.63	3.23	4.76	6.23	7.60	8.86	9.99	10.96	11.75
	12.33	12.65	12.69	12.41	11.75	10.66	9.04	6.80	3.83	0.00
20 Year Term	**CSO80 MNSALB 10yr Select, CRVM curtate**								**Terminal Reserves**	
AGE=35	α 1.2416268		β 3.1889973							
	0.00	1.88	3.65	5.30	6.89	8.29	9.59	10.77	11.81	12.68
	13.18	13.42	13.38	13.02	12.27	11.08	9.37	7.02	3.94	0.00
20 Year Term	**CSO80 MNSALB 19yr Select, CRVM curtate**								**Terminal Reserves**	
AGE=35	α 0.678756		β 2.4378301							
	0.00	1.69	3.23	4.65	6.02	7.40	8.71	9.93	10.99	11.92
	12.69	13.23	13.52	13.49	13.15	12.23	10.62	8.17	4.69	0.00
Minimum Terminal Deficiency Reserves Using CSO80 MNSALB 10 Yr Select										
AGE=35	0.00	0.25	0.42	0.54	0.66	0.69	0.73	0.78	0.85	0.93
	0.85	0.77	0.69	0.61	0.52	0.42	0.33	0.22	0.11	0.00
Minimum Terminal Deficiency Reserves Using CSO80 MNSALB 19 Yr Select										
AGE=35	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.00	0.03	0.17
	0.36	0.58	0.83	1.08	1.40	1.57	1.58	1.37	0.86	0.00

New GAAP Guidance Likely to Be Promulgated for Non-Traditional Products and Separate Accounts

by David C. Scheinerman and Mary S. Saslow

Editor's Note: For more discussion of GAAP reserves for GMDBs, see the article in this issue by Karen Sasveld and David Heavilin.

Introduction

- Should "bonuses" granted on annuity and life insurance contracts be deferred or expensed immediately?
- What is the appropriate accounting for contracts that provide multiple account balances?
- Should (and, if so, how should) insurers reserve for minimum death benefit guarantees?
- Should insurers reserve for enhanced annuitization options such as guaranteed minimum income benefits?
- What is the appropriate accounting for separate accounts in which the insurer bears the investment risk?
- How should an insurer account for seed money investments?

These are some important GAAP accounting questions that are being addressed by the Accounting Standards Executive Committee (AcSEC) of the American Institute of Certified Public Accountants (AICPA). This article provides an overview of some of the key issues addressed and accounting guidance being drafted for a proposed "Statement of Position" (SOP), entitled "Accounting and Reporting by Insurance Enterprises for Certain Non-Traditional Long-Duration Contracts and for Separate Accounts." An exposure draft of the SOP is expected to be presented to AcSEC and the Financial Accounting Standards Board (FASB) in the third or fourth quarter of this year for approval, after which it would be released for public comment.

Sales Inducements

A bonus immediately credited to a contract holder's account balance, a persistency bonus credited after a specified period, and an enhanced interest rate credited during an initial contract period are examples of sales inducements. The draft SOP defines sales inducements as amounts that are explicitly identified in the contract and are (1) incremental to amounts the enterprise credits on similar contracts without enhanced returns; and/or (2) higher than the contract's expected renewal crediting rates.

AcSEC debated whether sales inducements should be (1) expensed as credited to policyholders, or (2) deferred and expensed over the life of a book of contracts. The former treatment is generally consistent with the accounting guidance for obligations that are payable on demand, which requires accretion of any debt discount to the first possible put date. However, the existing accounting model for investment contracts and universal life-type contracts treats such obligations as long-duration contracts, not as obligations that are payable on demand, even though they are immediately surrenderable. This is evidenced by the fact that qualifying acquisition costs are deferred and amortized over the estimated life of a book of contracts. As further support for deferral, proponents note that recognizing a loss upon issuance of a contract would be inconsistent with the economics of the transaction and with the accounting principle of generally having no immediate accounting gain or loss upon entering into a fair exchange (except when accounting for loss recognition).

AcSEC has tentatively concluded that sales inducements meeting specified criteria should be deferred and expensed over the life of the book of contracts, consistent with the existing long-duration contract accounting model. However, AcSEC believes that sales inducements are not "acquisition costs" or "issuance costs" but instead are benefits payable to contract holders and therefore concluded that such costs should be amortized to benefit expense. AcSEC concluded that consistent with the long-duration model, deferred sales inducements should be amortized using methodology and assumptions similar to that used for deferred acquisition costs. In keeping with the FAS 97 model, which is based on account balance and does not anticipate surrenders, sales inducements are credited to the contract holder account balance (and deferrable amount capitalized) without reduction for anticipated surrender charges, persistency, or early withdrawal contract features. Thus, even if the insurer anticipates that a certain percentage of the sales inducement will ultimately not be paid to the contract holders, the full sales inducement should be recorded.

Liability Valuation

Insurers have introduced annuity and life insurance contracts with features not contemplated when FAS 97 was written, such as contracts with multiple account balances and multiple benefit features. As a result, there is diversity in practice

with regard to the accounting for contracts with such non-traditional terms. The proposed SOP guidance interprets several aspects of the FAS 97 liability valuation model, including the definition of the "balance that accrues to the benefit of policyholders" (commonly referred to as the account balance) and the accrual of an additional liability for death benefits and other insurance benefit features.

Definition of Account Balance
The draft describes the accreted account balance as equaling:

(a) deposit(s) net of withdrawals;
(b) plus amounts credited;
(c) less fees and charges assessed;
(d) plus additional interest; and
(e) other adjustments (e.g. appreciation, depreciation)

The draft SOP provides that additional interest should be accreted to that balance which is available in cash or its equivalent using the effective yield method through the contractual maturity date (or through the interest reset date if earlier). For example, in the case of a persistency bonus, the additional amount to be credited would be accreted to the liability through the end of the persistency period since at that time it will be credited to the account balance. If there is more than one potential account balance, the accreted account balance is based on the highest contractually determinable balance that will be available in cash or its equivalent at contractual maturity or reset date. Moreover, the accreted balance should not reflect any surrender adjustments such as market value surrender adjustments, surrender charges or credits.

The draft SOP provides guidance for two-tiered annuities for which one account balance is available in cash and another balance is available for annuitization only. Currently, some companies establish a liability for the greater of these two balances. However, assuming the annuitization option is not available in cash or its equivalent, the draft guidance would provide for an account balance liability accreted to the lower-tier amount available in cash at contract maturity.

Another example of a contract impacted by the draft SOP is a modified guaranteed annuity (sometimes referred to as market value adjusted annuity or MVA) that may have one account balance payable at maturity and another payable upon surrender. There is currently diversity in practice as to whether the accreted balance or the market adjusted balance is reported at each balance sheet date. The proposed guidance would require recording of the accreted balance, excluding any positive or negative market adjustment that would result in the event of surrender.

The draft SOP also provides guidance for contracts that provide a return based on the total return of a contractually referenced pool of assets such as variable annuity and variable life contracts offered through separate accounts and experience-rated pension products offered in the general account. The proposed SOP provides that the liability recorded should be based on the fair value of the referenced pool of assets, with any changes in the liability recorded as an expense. Similarly, if the contract provides a return based on an interest rate index, the accreted account balance should be based on the interest rate index value at the balance sheet date.

An example of a potentially impacted product would be an experience rated (often referred to as "participating") group annuity contract. If the contract references a particular pool of assets of the insurer and the return available at any given withdrawal date is based on that pool, the SOP will require the liability for such contracts to be based on the fair value of the pool of assets (with any changes in the liability recorded as an expense). In contrast, present practice is to record the liability consistent with the accounting for the related assets.

Additional Liability for Death Benefit and Other Insurance Benefit Features
Insurers continue to offer variable annuities with enhanced guaranteed minimum death benefits (GMDB) beyond the traditional return of premium- for example, a death benefit equal to deposits less withdrawals accumulated at a specified interest rate or a ratcheted death benefit based on the highest account balance at any policy anniversary date. There is currently diversity in practice with regard to the accounting for such features: some insurers record an additional liability for such policyholder benefits and others record no additional liability under the theory that the mortality risk is insignificant or perhaps under the theory that the FAS 97 deposit model does not provide for such an additional accrual.

AcSEC has tentatively concluded that annuity contracts with such death benefit or other insurance benefit features should first be analyzed to determine whether such contracts meet the definition of an insurance contract. This analysis requires the insurer to determine if the mortality and morbidity risk is "other than nominal" as that term is defined in FAS 97 and

"There is currently diversity in practice as to whether the accreted balance or the market adjusted balance is reported at each balance sheet date. The proposed guidance would require recording of the accreted balance, excluding any positive or negative market adjustment that would result in the event of surrender."

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if fees assessed or insurance benefits are not fixed or guaranteed. If this is the case, the contract is classified as a FAS 97 universal-life contract. Significance of the mortality and morbidity risk is determined by comparing the present value of expected excess insurance benefit feature payments (insurance benefit amounts in excess of the account balance) to the present value of fees assessed against contract holders, under reasonably possible outcomes (e.g., through stochastic modeling). This analysis may differ from current practice of determining significance of insurance risk based on a single best estimate scenario.

If the contract is a universal-life type contract and if fees for the insurance benefit do not vary in proportion to the insurance coverage provided for each period, the draft SOP requires the insurer to establish a liability (in addition to the account balance) to recognize the portion of such fees that compensate the insurer for excess insurance benefit payments to be provided in future periods. Support for this additional accrual is by analogy to the FAS 97 requirement to record an additional liability for amounts assessed to compensate the insurer for services to be provided over future periods.

Under the draft SOP, the liability for insurance benefits for such universal life type policies is determined as of each valuation date by:

1) Multiplying the cumulative assessments by the current estimated ratio of the present value of total expected excess insurance benefit payments (and settlement costs) to the present value of total expected assessments over the life of the contract (the bene fit ratio)

2) Subtracting cumulative excess insurance benefit payments and settlement costs, and

3) Adding accreted interest

In effect, a retrospective reserve calculation is required for the insurance benefit feature. Note that the benefit ratio should be estimated using revised assumptions if actual experience or other evidence suggests such revisions, resulting in periodic unlocking adjustments to the liability.

AcSEC also considered whether any additional liability should be accrued during the accumulation phase of an annuity contract for enhanced annuitization options such as guaranteed minimum income benefits (GMIBs) and two-tiered annuities. AcSEC recognized that an insurer may implicitly or explicitly charge an additional fee to the contract holder for such benefits, that some view GMIBs as similar in substance to GMDBs, and that there is potential economic benefit to the various annuitization benefits being offered. However, FAS 97, in describing the annuitization phase of a contract, states that "if purchased, the annuity is a new contract to be evaluated on its own terms." AcSEC therefore concluded that because an annuitization option is an elective benefit that is not part of the accumulation phase of an annuity contract from an accounting standpoint, recognition of an additional liability for such potential benefit is prohibited during the accumulation phase of the contract. Thus, in the case of a two-tiered annuity where the second tier interest crediting rate is only available if the contract is annuitized, no liability would be recorded for that excess interest during the accumulation phase of the contract (consistent with the aforementioned requirement that a liability only be accreted to the amount available in cash or its equivalent). The existing liability at the date of annuitization would be treated as a single premium used to purchase a new annuity contract.

Separate Accounts

The proposed SOP concludes that separate account assets and liabilities should be reported as summary totals in the balance sheet at fair value, provided that the separate account meets all of the following criteria:

- The assets reside in a legally recognized separate account,
- The separate account assets supporting the contract liabilities are legally insulated from the general account liabilities of the insurance company,
- The insurer must invest the contract holder's funds within the separate account as directed by the contract holder or in accordance with specific investment objectives or policies, and
- All investment performance, net of fees, is contractually passed through to the contract holder, and the account values are based entirely on the fair value of the directed investments.

Investment performance on separate accounts meeting the above criteria should be accounted for by offsetting amounts earned on separate account assets with amounts credited to the contract holder in the income statement. Liabilities and expenses related to any associated minimum guarantees, though, would be reported as general account liabilities.

Thus, certain products (such as guaranteed investment contracts, equity indexed annuities, market value adjusted fixed annuities, fixed account options of variable annuities), that may be provided through and currently accounted for as separate accounts, will likely need to be accounted for and reported as general account products.

If an insurer invests non-contract-holder-related funds in a separate account, such an investment would also not meet the above criteria. Thus, the separate account assets underlying the insurer's investment would be reclassified and accounted as general account assets. A typical situation would be seed money

investments. If such a separate account is one in which contract holders may purchase additional units, then the assets underlying the insurer's interest in the separate account should be classified and accounted for in a manner consistent with similar assets held by the general account.

In addition, the SOP outlines that if the separate account meets the above criteria, any assets transferred from the general account to the separate account should be recorded at fair value. Losses on such transfers should be recognized immediately in earnings. Gains should be recognized to the extent of the contract holder's proportionate interest in the separate account, provided the transfer otherwise meets the criteria for gain recognition.

Conclusion

Recent annuity and life product innovations have led to product designs not contemplated at the time FAS 60 and FAS 97 were written, and, as a result, a diversity of practice on the accounting treatment for such products has developed. The AICPA, through its Accounting Standards Executive Committee, has developed draft accounting guidance which is anticipated to be exposed for comment later this year. The implications of the guidance are significant, and we recommend that financial reporting and product development actuaries assess and consider these draft recommendations in their financial and product management plans as well as provide input when the draft SOP is exposed for public comment.

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Attending the Annual Meeting in New Orleans?

Check Out the Financial Reporting Section Events Scheduled

If you are planning on attending the Annual Meeting this year, be sure to note two events sponsored by the Financial Reporting Section. The first is the Financial Reporting Hot Breakfast, scheduled for Tuesday, October 23 at 7:30 a.m. In addition to a good meal to start off the day, you will be able to attend an open meeting of the Financial Reporting Section Council. Last year the breakfast was very well attended. If you remember, the Section Council received a lot of valuable input from the members on topics like the newsletter, the Section Web Page and meeting sessions and seminars. The meeting promises to be very informative once again, and we look forward to your participation in what has turned out to be an annual success.

The second event is planned for later that same day, Tuesday October 23. A reception will be held at the meeting hotel from 5:30 to 7:00 p.m. for all Section members. This event will give members a chance to socialize on an informal basis as well to hone their networking skills. Whichever is your preference, we hope you will make a point to attend the reception. Tickets will be collected at the door.

The reception is open to Section members and their registered guests only. Please indicate guest attendance on the registration card for the meeting.

So mark your calendars — Tuesday, October 23. Start off the day with the Section Hot Breakfast and end the day with the Section Reception. Sandwiched in between will be a very meaty agenda, for sure!

On the Fair Value of Business Acquired (part I of II)

by Joe Koltisko

There is a fair amount of controversy surrounding the approach Jim Milholland [4] advocates for determining the value of business acquired (VOBA) for insurance purchase GAAP. VOBA (also known as PVP, PVFP, CIP, VIF) is the intangible asset representing the value assigned to contracts already in force. It is the portion of the total purchase price deemed attributable to existing business. It is the prospective mark-to-market of the familiar DPAC intangible asset. Long duration life contracts, in particular, would seem to require a VOBA asset, since profits in the later durations have not been earned by the purchase date. Here I will refer to the Milholland method for calculating VOBA as "MdM."

Milholland's approach is attractive, since it directly derives VOBA from a statutory appraisal. When we use actuarial appraisals to set purchase and sale prices for blocks of business, the resulting VOBA marks the balance sheet to market. Any "economic goodwill," or price paid in excess of the actuarial appraisal value of the in-force block will be allocated to GAAP goodwill, so it has also been called the "fixed goodwill" method. Ordinary direct methods (such as the EITF method, see [5] pg. 390-391) may unfairly depress earnings. They do that because they keep implicit, and may ignore, certain necessary costs insurers face when they assume risks. This translates into an excessively high VOBA and high VOBA amortization costs. The root cause of the problem is lack of clarity about the mechanism which links risk margins, cash flows, and the risk discount rate.

The dispute among accountants is whether the actuarial appraisal method - based on statutory profits and allowance for the cost of capital — distorts the resulting VOBA. "How can this stat stuff be GAAP?" is a common reaction. In this article I will try to show why MdM is consistent with direct fair valuation of an insurer's liabilities, which is what GAAP purchase accounting is all about. I will apply some of the insights that have come to light over the last few years which link the indirect actuarial appraisal valuation method to the direct "option pricing" valuation method. The bottom line is, MdM can work. However, accountants should be aware that when an actuarial appraisal clearly misrepresents the true value of a block of business, it is wrong to apply MdM. We would reject an appraisal that unfairly distorts operating expenses. The same should happen when an appraisal uses a distorted hurdle rate.

In this half of the article I will recap MdM, derive an alternate decomposition, and then interpret it using the fair valuation approach described by Luke Girard [1][2]. I'll provide a simple example to illustrate the formulas and concepts. The second installment will focus on the link between PGAAP earnings, cash flows, and the risk discount rate. It will illustrate pricing and reporting in several practical situations.

MdM Algebra

MdM uses two equations to solve for two unknowns, VOBA and the related deferred tax liability. Recall that it starts with a fair and complete buyer's actuarial appraisal of the block of business. I will use the following notation:

VOBA	Value of business acquired
DTL	GAAP deferred tax liability
ES	After tax market value of excess surplus assets
TS	Pretax book value of required surplus
EV	Appraisal value of in-force block, net of the cost of capital
PVDE	Present value of distributable earnings = TS + EV
SV	Statutory reserves
TV	Tax reserve
PGV	PGAAP reserves
PD	Tax basis proxy DAC asset balance
BVA	GAAP book value of invested assets backing SV and TS
MVA	Market value of invested assets backing SV and TS
TVA	Tax value of invested assets backing SV and TS
GW	Goodwill
PP	Purchase price

Note PP = GW + ES + PVDE
The tax rate is assumed to be 35%. In this article GW, ES and non-modeled assets/liabilities are all zero.

The MdM simultaneous equations are:

a) VOBA = EV + (PGV– SV) – (MVA – BVA) + DTL
b) DTL = 35% * [(VOBA + MVA – PD – TVA) – (PGV – TV)]

Here (b) is simply the definition of the deferred tax liability. VOBA is a pretax temporary difference while appraisal values are typically after tax, so we have to add back the DTL in (a).

In words, (a) says the VOBA is the same as the intangible portion of the appraisal value, increased to offset any PGAAP liabilities that were understated in the stat appraisal, decreased to offset any PGAAP assets that were understated in the stat appraisal, plus the amount of deferred tax liability. Since the GAAP balance sheet will show initial equity equal to the purchase price, goodwill will show up only if the buyer pays more than the appraisal value for the in-force block.

One can of course solve the original equations if all the data are available and we have high confidence in data quality. As an alternative to reviewing the stat reserves, we can solve (a) directly from the GAAP and tax books alone. Make the assumption that BVA = SV + TS and then combine the terms EV+TS and substitute with PVDE.

Then (a) reduces to:

(a1) VOBA = PVDE + PGV – MVA + DTL

and substituting the definition of DTL from (b) gives:

c) VOBA = [PVDE – 35%*(TVA + PD – TV)] / (1–35%) – (MVA – PGV)

These terms have a natural interpretation in Luke Girard's work on the fair value of liabilities.

Fair Value Algebra

Girard[1, 2] demonstrates that it is always possible to rearrange the elements of an ordinary indirect actuarial appraisal into the form

d) DDE = RSA + (1-35%)* (MVA' – MVL) + 35%*(TA' – TL), where

DDE Discounted value of distributable earnings
RSA Market value of the assets supporting target surplus
MVA' Market value of assets supporting statutory reserves
TA' Tax basis assets supporting statutory reserves, including tax DAC
TL Tax basis liabilities supporting statutory reserves
RP Required profit = capital charge on what the shareholder owns
MVL Market value of liabilities, defined below

This is an algebraic decomposition, which is proved recursively. We can apply it regardless of the hurdle rate used in the appraisal.

Girard does it with a special definition of MVL. MVL is the present value, at the asset portfolio yield, of benefits, expenses, future premium, and an item called "required profit". Required profit is a charge, at the cost of capital rate, for required surplus, reserve conservatism, and tax timing differences. Each of these is part of what the shareholder owns at a given point in the projection. Alternately we can load required profit into a spread below the portfolio yield to define a discount rate to apply to product cash flows only. In either case we can perform a direct valuation of asset and liability cash flows, and reproduce the actuarial appraisal value. We can do this for any given interest rate path and vector of hurdle rates.

To skip ahead for a moment, which set of interest rate paths and vector of hurdle rates is correct? I would advocate starting with a market-derived economic scenario set to value assets and liabilities consistently but separately. Pure insurance issues, such as uncertainty in non-economic assumptions, may further reduce the value investors would pay for the direct liability cash flows. Given the value and the fair return for assets and liabilities separately, we can determine a consistent vector of hurdle rates for net free cash flow. In practice, this approach could be used to check if the scenarios, assumptions and hurdle rates used in the appraisal process generate a materially different value from the market-based value.

In reviewing Girard [1,2], note the subscripts. MVL_t and RP_{t+1} appear circular. Next period required profit depends on today's liability but to value the liability we need required profit. It turns out it is possible to revise the definitions to remove the circularity, to start at the ending year of the projection and work backwards. That helps avoid spreadsheet errors. The original definitions are used below since they are more intuitive.

Girard defines a "tax basis adjustment" item TBA', equal to the last term of equation (d). This is capital currently invested in an interest-free loan to the government. To see that, suppose we sold the business tomorrow (and ignore tax items triggered by the sale). The buyer would assume assets with a tax value equal to TA' and tax liabilities equal to TL. That would create taxable income of TA' – TL, and the buyer would need to pay TBA' to the government. Since statutory assets backing reserves always equal statutory reserves, TBA' is residual, best estimate statutory deferred tax asset (with no valuation allowances). Note that most of this work was published before the codification of statutory accounting, so we need to distinguish TBA' from the actual statutory deferred tax liability or asset, which should be counted with the other statutory reserves or assets.

Girard [1,2] separates required surplus from the market value of other product assets, and from the consideration of tax assets in TBA'. This is for ease of exposition. Without changing the resulting RP or MVL, we can throw them back in for this discussion of VOBA. Let

PVDE = DDE

by definition

MVA = MVA' + RSA
TA = TA' + tax basis of surplus assets
TBA = 35%* (TA – TL) = TBA' + 35%* tax basis of surplus assets

So (d) becomes

(d1) PVDE = (1–35%)*(MVA – MVL) + TBA

and related required profit is:

$RP_{t+1} = (k – i) * (MVA_t – MVL_t) + [k/(1–35\%)]*TBA_t$

where k is the cost of capital hurdle rate and i is the return on invested assets, MVA_t

Note if TA = MVA and TL = MVL, (d1) simplifies to PVDE = MVA – MVL.

Fronting tax payments is in effect a tax on the fair value of future profits at a rate higher than the statutory percentage.

By substituting in (c) we derive:

(e) VOBA = [PVDE – TBA] / (1 – 35%) – (MVA – PGV)

In words, to calculate VOBA under (e), start with an actuarial appraisal, reduce it by the tax basis adjustment, gross it up for the tax rate, and subtract the net tangible insurance assets on the PGAAP balance sheet. This is one of the simplest and cleanest ways to apply MdM.

We need the two-step process in (e) of subtracting the TBA and then grossing up for taxes precisely because FAS 109 requires an undiscounted tax liability. There is no need to distinguish between

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temporary and permanent tax differences in this calculation. All the future tax benefits or costs are in PVDE, while TBA just reallocates part of that value to the portion that would be paid to the government at sale.

Further simplification is possible:

(f1) VOBA = (MVA – MVL) – (MVA – PGV) using (d1) and (e)

(f2) VOBA = PV[asset CF less liability CF and RP, at portfolio yield] - (MVA – PGV)

(f3) VOBA = PV[pretax reported PGAAP profit margins, at a risk rate]

The profit margins in (f3) consist of earned revenues and incurred expenses for the product portfolio. Common practice is to discount the PGAAP earnings at a "reasonable risk rate," which actuaries and accountants negotiate under professional scrutiny.

By definition of MVL, (f2) follows from (f1) and shows VOBA is the same as the value of all future asset and liability cash flows, less those generated by "excess" invested assets (invested assets held in excess of the PGAAP liability).

To apply (f2), we could also project the best estimate asset cash flows, benefits and expenses together, then discount at a "risk rate." Here RP exactly measures the load for the cost of capital in the appraisal. The correct "risk rate" to apply in this situation would simply load RP as a spread onto the portfolio return. Since this calculation is highly leveraged, it may easily produce a risk rate outside of the 8% – 15% range.

The Link to GAAP

(f3) follows from (f2) with several transformations. First note that the PV of the excess asset cash flows at the portfolio yield should equal the market value of the excess assets. We are left with

(f2.1) VOBA = PV[product asset CF less liability CF and RP, at portfolio yield]

which says that VOBA is the best estimate (fully prospective) pretax investment, benefit and expense cashflows for the product portfolio, again discounted at a rate which depends on the portfolio yield and RP.

Now, what is the risk rate in (f3)? According to the minutes of the July 23, 1992 EITF meeting minutes (described in [5], p 391), the key factors to consider in establishing the risk rate are: the yields generated on similar currently issued business; the cost of capital to the acquiring entity; the discount rate implicit in the seller's offering price; the general interest rate environment; and the potential impact of changes in the regulatory environment. Critically, accounting conventions govern the relationship between the explicit *cash flows* in (f2.1) and projected future *profit margins*. The mapping between the systems used to project these two is often inexact. But let's face it, even if we could get around the systems issue, the ordinary practice of financial reporting involves setting up a range of implicit as well as sanctioned explicit margins and pads to projected earnings — which is another way of expressing our uncertainty about what the actual earnings will turn out to be.

Now, required profit (RP) as calculated above is an indirect function of our uncertainty about actual earnings. I contend that the EITF guidance is vague enough that it will usually be possible to load the calculated RP amount into reasonable (perhaps implicit) conservatism in the PGAAP reporting methods and assumptions, and to negotiate a risk rate, such that the relationship in (f3) holds. If benefit cash flows really were quite certain, there ought to be low statutory reserves, a low capital requirement and / or a low cost of capital hurdle rate, resulting in a small RP. There would also be no basis to dispute the PGAAP reserves with the auditors.

The simple example attached below has a relatively bald-faced example of what can happen under FAS 60. "True" best estimate benefits and expense cash flows in the last period are $940. If we can make the case that $957 is a plausible, reasonable expectation for the cash flow, and then discount this at 5.3% instead of the actual asset yield of 6.9%, we get the PGAAP reserve in the example of $909. Having argued this far, it is straightforward to discount the resulting profit margin, which is the interest on the reserve less the incurred benefits, at 16% to come up with the desired VOBA.

Clearly, the risk rate must adjust for the accounting conventions that link profit margins on a GAAP basis to expected cash flows, and (like the appraisal hurdle rate) it also depends heavily on leverage. The resulting risk rate may fall outside of the 8% – 15% range, but it is hard to say whether that is unreasonable because of the wide range of functions it performs.

Finally, and most intuitively, further simplifying (f1) gives:

(g) VOBA = PGV – MVL,

VOBA should be the margin in the PGAAP reserves, in addition to that required in a fair valuation of the liabilities. Conversely, if PGAAP reserves are fully at fair value, fully consistent with expected cash flow and risk, there should be no VOBA. Now, I don't think it is desirable to replace the reserve accounting software with currently available cash flow testing software. It is more practical to produce the PGAAP reserve with incremental changes to the methods, assumptions and data in the GAAP reporting system. Milholland[4] provides an example in which UL PGAAP liability is calculated directly, and it is greater than the account value because of a relatively high crediting rate on current policies. Initial VOBA can come from a separate appraisal calculation.

QED for installment 1 of the article — (f3) and (g) show that MdM can be consistent with GAAP. Clearly (f3) says nothing about the future amortization basis. There is no support for using statutory distributable earnings as a substitute for the required amortization basis, that is, in place of premium for FAS60, gross profits for FAS 97 and gross margins for FAS 120 products.

Note again that all of the values above

should be calculated from the buyer's perspective at the purchase date. Planned expense cuts should boost PVDE, for example. TBA should include any tax assets and liabilities that are created at the purchase, for example through an election to treat the purchase of a company's stock as if it were the direct purchase of assets. PVDE should also include tax benefits or losses created at sale. When the buyer will only take cash, for example, the sale of assets can affect the IMR and the resulting PVDE above.

If all the values are calculated from the buyer's perspective, it stands to reason that the PGAAP liability and the VOBA should also make some allowance for the friction costs that insurers necessarily incur when they assume risks in a regulated market. Under the EITF approach, these friction costs would likely be included implicitly in the valuation assumptions. MdM is simply making one of those costs explicit. The decomposition in (f3) shows the wide range of complex duties that the discount rate handles under the EITF method. Among others, it allows for uncertainty in assumptions, tax timing costs, capital costs, timing differences between when margins are earned and cash flows are paid, and leverage. To decide if the risk rate is reasonable, we need to allow for all those functions explicitly.

The best evidence that MdM is appropriate is its consistency with the appraisal hurdle rate. Given that a particular block is worth X at a hurdle rate of H, what happens if the buyer then pays X to acquire the block? Under MdM, as under fair value, the reported rate of return on equity will also turn out to be H.

If the appraisal assumptions supporting PVDE in (e) are unrealistic and off-market though, the result may be garbage. The hurdle rate is usually one of the most critical assumptions in an appraisal. As we have seen, the paradigm that projects net leveraged cash flows and discounts at a hurdle rate is a frighteningly blunt instrument. It is a challenge to demonstrate that the hurdle rate is consistent with the assumptions driving the cash flows. For instance, one can allow a margin for interest rate risk by projecting path-dependent cash flows under a scenario set; or one can use a level scenario projection and a high discount rate. How high? Well, ask three experts and get three answers. Auditors feel manipulated by such expert opinion; their natural reaction is to disallow consideration for the cost of capital.

Fortunately a new and better understanding of what hurdle rates are and where they come from is emerging from all the recent debate on fair value. It turns out that by decomposing the functions that the risk rate performs, we can produce a stable, auditable value for the cost of capital.

The Price of Capital

In equilibrium marginal costs adjust to equal marginal price. But why is it that appraisals are usually performed with a flat constant IRR hurdle rate? It seems to imply that the acquirer will manage leverage, product mix, and overall investment risk to maintain a constant rate of return. Setting this "transfer pricing" role aside for the moment, over the life of the projection the leverage, policyholder risk, and investment risk are changing from period to period. It must be that marginal required rate of return, or "price" for the value tied up in this particular business, is changing as well.

Following Girard [1,2], if we start with a cost of capital, we can derive RP and the liability spread that produces the same value for the company. What if we don't know the hurdle rate or the price of the block? Following Girard [3], if we start with the right liability spread we can derive the implied net hurdle rate, or price of capital at that time.

The basic relationship is that

[MV assets , less value of tax costs] * (1+i)
– [Fair value of liabilities , less value of tax costs] * (1+d)
= Distributable earnings

The right asset spread is provided by investment professionals' interpretation of market rates. The right liability spread depends on the credit risk of the buyer and on investors' appetite for uncertainty in the liability cash flows. Tax costs play a critical role. The right discount rate to apply to distributable earnings is a function of the after-tax value and risk on each side of the balance sheet. This approach can be used to determine the value of a block of business directly, under a particular scenario. Given the block's value, we can compute a level IRR consistent with future distributable earnings in that scenario. The approach can be applied with a multi-scenario set, to validate the hurdle rate level and appraisal sensitivities.

The discussion of required profit (RP) above is incomplete. One major component of it involves the taxes paid on the investment income of the assets that support conservatism in the stat reserves and target surplus. The next half of the article will shine a spotlight on that relationship. Accountants should accept MdM when it applies a leverage- and risk- adjusted hurdle rate, because the resulting "cost of capital" performs the same function that implicit and explicit margins for conservatism perform in ordinary GAAP reporting.

PGAAP is one area where fair value analysis for liabilities clearly has a place. There are complications and challenges with directly valuing assets and insurance liabilities, but the potential gains are tremendous. The gains include internal consistency, transparency, direct extension to the investment environment, and auditability. Better information provides the opportunity to create value.

Simple Example

A simple one-period example is available from the author, which applies the formulas described above. In a multiperiod projection, the beginning of period MVL must accumulate to pay benefit, expense and required profit cash flows at the end of each period and fund the MVL at the end of the period. If you're interested in receiving a copy of the spreadsheet, e-mail Joe Koltisko at *joseph_koltisko@agfg.com.*

Application tips

Here is a brief recap of some considerations presented in this article:

- To apply MdM, for example as in (e), evidence is needed that the appraisal hurdle rate is appropriate and consistent with value and risk on each side of the balance sheet. Sources of

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evidence include capital raising activities, pricing policies, debt structure, comparable transactions — all may provide some insight. Direct estimation based on the price of capital will be described in the next installment.

- Be sure that all the transactions and adjustments that will occur at close are included in the appraisal's present value of distributable earnings. These include tax and statutory effects triggered by the sale.

- In general, valuation spreads carry too much of the burden. When it is unclear where a spread comes from or how it functions, try translating it into an explicit load to cash flows. Ideally, the dollar amount and timing of such cash flow loads should be reconciled to explicit fees or potential variation in assumptions.

- Where possible, when applying a discount rate to net leveraged cash flows, validate the result with a separate calculation of the value of the components. The appropriate discount rate for an insurer's liabilities includes a positive load for contribution to credit risk, and an adjustment downward to charge for tax costs.

- MdM does not support the use of distributable earnings as a proxy for the required amortization basis. At a minimum, capital flows and statutory conservatism need to come out of the DE stream if it is to be used for this. Since these items are greater in the early years, the net effect of using DE rather than product margins as the amortization basis probably is to front-end amortization expense for FAS 97 products.

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1) Luke Girard, "Fair Value of Liabilities — are the AAM and OPM Really Different?" *Risks & Rewards* No. 25, March 1996.

2) Luke Girard, "Market Value of Insurance Liabilities: Reconciling the Actuarial Appraisal and Option Pricing Methods," *NAAJ* vol. 4, no.1, January 2000.

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Annual Meeting Preview

The Annual Meeting of the Society of Actuaries will be held in New Orleans on October 22-24. By now, members should have received materials on the meeting agenda and registration information. In the event that you are still undecided about your attendance, below is the current list of financial reporting sessions scheduled for the Annual Meeting.

If you haven't signed up yet, maybe these sessions will encourage you to do so. But hurry, as time is running out.

Session	No.	Type	Date/Time
Statutory Reserving Update - Life Products	5	PD	Oct. 22, 10:30
Statutory Reserving Update - Annuity Products	6	PD	Oct. 22, 10:30
Enterprise-Wide Risk Management in the Global Marketplace	17	IF/CS	Oct. 22, 10:30
Bridging the GAAP Between IRR and ROE	26	PD	Oct. 22, 2:00
"Fair Value" and the International Accounting Standards Committee (IASC)	30	PD	Oct. 22, 2:00
GAAP Accounting for Derivatives: SFAS 133	42	TS	Oct. 22, 2:00
Financial Reporting Section Hot Breakfast	49	SM/BG	Oct. 23, 7:30
Report of the Long-Term Care Experience Committee	60	PD	Oct. 23, 8:30
GAAPs Around the World	76	PD	Oct. 23, 10:30
Dynamic Financial Condition Analysis Update	86	OF	Oct. 23, 10:30
Regulation XXX: Maintenance Mode	89	WS	Oct. 23, 10:30
Buy vs Build — A Debate	104	D	Oct. 23, 2:30
Financial Reporting Section Reception	115	SM	Oct. 23, 5:30
Variable Product Valuation Topics	136	BG	Oct. 24, 8:00
IRC Section 807 and Beyond — Tax Reserves For Life Insurance and Annuities	139	WS	Oct. 24, 8:00
Beyond the Risk Return Survey	150	TS	Oct. 24, 10:00
GAAP Accounting for Derivatives: SFAS 133	152	WS	Oct. 24, 10:00
Codification: Implementation Issues for Actuaries	153	WS	Oct. 24, 10:00
Statutory Reserving Update — Life Products	162	WS	Oct. 24, 12:00
Statutory Reserving Update — Annuity Products	163	WS	Oct. 24, 12:00

Editor's Note: for a complete description of the topics to be covered at each session, refer to your Annual Meeting program or the program online at http://www.soa.org/sections/product/devmeeting.html.