THE FINANCIAL REPORTER

NEWSLETTER OF THE LIFE INSURANCE COMPANY FINANCIAL REPORTING SECTION

NUMBER 45 MARCH 2001

Letter from the Editor

by Thomas Nace

George Allen, former head coach of the Washington Redskins, had a motto: the Future is Now. As we enter a new century (for real this time), those words seem truer than ever.

Many of you may remember how utterly futuristic George Orwell's novel, *1984*, seemed to readers back in the middle of the just completed century. Who would have thought that when he portrayed the emergence of Big Brother, Orwell was actually prognosticating the advent of the most unsuccessful reality TV show to air at the end of the 20th century. (The future is now?)

Or take the epic movie, 2001, *A Space Odyssey*. A talking computer named Hal goes haywire and takes control of a space ship and the passengers on it. When this movie hit the silver screen back in the late 60's, was anyone really thinking of the Y2K bugs that would hit at the end of the century? (The future is now?)

Seriously, though, the beginning of a new year and a new century is accompanied by reflective thoughts as to the potential which our profession and our Section can achieve. The world, as well as our industry, will continue to evolve through many changes in this and the upcoming years. How we as actuaries are able to adapt to these changes, or more importantly, how successful we are at being able to take an aggressive role in shaping the future of our profession, will influence the significance which the actuary will possess in the future.

Starting with this year, this day, we can build onto the foundation of an already strong, viable profession in order that the actuary next year and the year after will be part of a profession which can prosper and grow and make a difference. What we do today will certainly

(continued on page 2, column 1)

Stochastic DAC Unlocking for Variable Annuity Products

by Alastair Longley-Cook, Dick Shaw, Mike Sherrill, and Jay Vadiveloo

As variable annuities have become an increasingly important share of assets under management for many insurers, the issue of how to deal with Deferred Asset Cost (DAC) unlocking for a product with such volatile profit streams has become a primary concern. A volatile stock market and stricter guidance from the SEC on materiality and earnings management have compounded the problem. Current deterministic practices for handling DAC amortization according to FASB 97 have become problematic. New methods are needed. One possibility developed by the authors, and found to be effective in practice, utilizes stochastic modeling of profit streams and a corridor approach to unlocking.

The products we have addressed are deferred annuity products in the accumulation stage, subject to FASB 97 accounting, and having a significant variable (equity) fund component; however, the method could be applied to variable life insurance products as well. Before describing the new approach, a brief review of current practice and its limitations will help define the issues.

Current Practices

Under FASB 97, most acquisition expenses are deferred. A deferred acquisition cost asset (DAC) is created and amortized in proportion to the present value (PV) of future margins earned. This process is normally performed by issue year and utilizes an amortization rate at issue (AR_0) such that:

$$DAC_0 = AR_0 \text{ x (PV of future margins).}$$

The DAC balance is adjusted (unlocked) periodically to recognize actual margins earned and any changes in projected margins. For each accounting period:

(continued on page 3)

In this Issue

Letter from the Editor
by Thomas Nace 1

Stochastic DAC Unlocking for Variable Annuity Products
by Alastair Longley-Cook, Dick Shaw, Mike Sherrill, and Jay Vadieveloo 1

Chairperson's Corner
by Mike Eckman 7

Highlights of the December 2000 NAIC Life and Health Actuarial Task Force Meeting and Other Topics
by Raymond T. (Ted) Schlude 8

Universal Life, No-Lapse, and the Law vs. Free Markets
by David J. Hippen 14

To Admit or Not to Admit — Is That the Question?
by Kenneth W. Faig Jr. 18

Notice to all New York Actuaries 21

Survey of Section Members Provides Input on Newsletter — Method of Distribution Tops List of Comments
by Thomas Nace 22

A Summary of the UVS Project
by Dave Sandberg 24

Treasurer's Report....26

Spring Meeting Preview 27

Volunteers Wanted 28

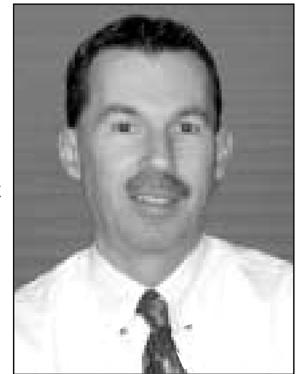
Letter from the Editor
continued from page 1

influence tomorrow. Yes, the future is now.

Leading us into the future is our new Section Chair, Mike Eckman. Mike has an article in this issue of the newsletter, where he addresses the Section members for the first time. See the Chair's Corner. In his article, Mike talks about the results of the survey conducted of Section members at the Annual Meeting, covering a variety of topics.

Along these same lines, I have written a more detailed article addressing the results of the survey as they pertain to the newsletter. The results are interesting, and the overall response was quite encouraging. It is great to know that the members value the newsletter, and we will certainly attempt to address any of the concerns/ suggestions posed as part of the survey.

Our lead article is by Alastair Longley-Cook and deals with a topic that I first saw presented (by Alastair) at the Valuation Actuary Symposium last fall. I was so impressed by his presentation, that I just had to have him replicate it as an article for the newsletter. The article deals with DAC unlocking for variable annuities, using stochastic modeling.


Tom Nace, Editor

David Hippen has written an article with his views on the issue of nonforfeiture requirements for Universal Life-type policies, particularly in light of current no-lapse guarantees. The article is thought-provoking as well as timely.

Also in this issue, Ken Faig takes a look at the accounting issues associated with due premiums. A topic we often tend to push off to the accountants, it has relevance to every financial reporting actuary, especially with the adoption of codification.

Last year the Section contributed funds to support the UVS Project. Dave Sandberg reports back on exactly what the project entailed as well as the overall results and next steps in the process.

Finally, Ted Schlude does another excellent job of keeping us current with industry issues, when he provides an overview of the December NAIC meeting. If you have a tough time staying up to speed with all that is going on in the industry, this is as good a summary as you will find.

Enjoy!

***Tom Nace, FSA, MAA, is vice president with PolySystems Inc., Pennsauken, N.J. He can be reached at* tnace@polysystems.com.**

THE FINANCIAL REPORTER

Issue Number 45 March 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.

Chairperson
Michael V. Eckman, FSA
Vice-Chairperson
Barry L. Shemin, FSA
Treasurer
James P. Greaton, FSA
Secretary
Clark P. Manning, Jr., FSA

Editor of *Financial Reporter*
Thomas Nace, FSA
PolySystems, Inc.
6981 North Park Drive, West Bldg. - Suite #303
Pennsauken, NJ 08109
Phone: (856) 663-8711
Fax: (856) 663-8712
E-mail: *tnace@polysystems.com*

Council Members:
John F. Bevacqua, FSA
Theodore J. Kitsos, FSA
S. Michael McLaughlin, FSA
Stephen J. Preston, FSA
David Y. Rogers, FSA

Staff Liaison, Lois Chinnock
Phone: (847) 706-3524
Email: *lchinnock@soa.org*

DTP Coordinator, Joe Adduci
Phone: (847) 706-3548
Fax: (847) 273-8548
Email: *jadduci@soa.org*

Expressions of opinion stated herein are, unless expressly stated to the contrary, not the opinion or position of the Society of Actuaries, its Sections, its Committees, or the employers of the authors. The Society assumes no responsibility for statements made or opinions expressed in the articles, or criticisms, and discussions contained in this publication.

Copyright © 2001 Society of Actuaries. All rights reserved.
Printed in the United States of America.

Stochastic DAC Unlocking for Variable Annuity Products
continued from page 1

DAC at beginning of the period
+ interest earned on DAC
+ new capitalizations
– DAC amortization
+ (-) DAC catch-up
= DAC at end of period.

The DAC unlocking process involves the calculation of a stream of historical and projected margins for each business block, or cohort, as of time t. A revised amortization rate (AR_t) is then calculated for each cohort using the amount capitalized at issue (DAC_0) such that, on a present value basis:

$DAC_0 = AR_t$ x (PV of historical and future margins).

Then the revised, or unlocked, DAC balance at time t (DAC_t) for each cohort is calculated as:

$DAC_t = AR_t$ x (PV of future margins).

The DAC catch-up then equals the unlocked DAC balance less the current DAC balance. A positive catch-up is a contribution to GAAP earnings; a negative catch-up is a reduction to GAAP earnings.

According to current practice, DAC unlocking is generally done annually. In the past, some companies have spread the DAC catch-up equally over the coming four quarters. Some companies have performed quarterly unlocking, but frozen the year-end AR's for the coming year. Generally, DAC unlocking is based on a *single* set of assumed future margins (deterministic approach).

Limitations of Current Practices

Current practice does not adequately address the volatility in actual and future margins (and DAC catch-ups) caused by volatility in equity returns. This volatility affects the retrospective as well as prospective aspects of the unlocking calculation. Large swings in the equity markets during a reporting period cause large swings in the DAC catch-up. In effect, retrospective and prospective deviations from previous assumptions are collapsed into the current reporting period, resulting in a leveraged volatility in GAAP earnings.

To deal with this problem, some ad hoc adjustment techniques have emerged. Among them are:

- Projecting a market correction in the future to avoid a significant DAC catch-up;
- Use of a conservative level future equity return rate;
- A disconnect between the retrospective and prospective calculations, with changes reflected in one but not the other.

Strict interpretation of FASB 97 may be in conflict with such adjustment techniques. For instance, Paragraph 23 states, "Estimated gross profit...shall be determined based on the best estimate of that individual element...without provision for adverse deviation." This may cause a problem for the first two methods, and the third is questionable from a consistency standpoint.

In addition, the increased focus by the SEC on management of earnings and the potential abuse of the "materiality" safe harbor may prevent audit approval of such techniques and disallow any phase-in of DAC catch-up.

In a June 1999 enforcement action, the SEC determined that W.R. Grace used "excess reserves" to manipulate their reported quarterly and annual earnings. Subsequently, the Chairman of the SEC, Arthur Levitt, made it clear in his pronouncements that the management of earnings through "cookie jar" reserves would not be countenanced. The complete Grace enforcement action can be found at *http://www.sec.gov/enforce/adminact/34-41578.htm.*

In August of 1999, the SEC promulgated SEC Staff Accounting Bulletin No. 99 - Materiality, which expressed the view that "Exclusive reliance on certain quantitative benchmarks to assess materiality in preparing financial statements and performing audits of those financial statements is inappropriate; misstatements are not immaterial simply because they fall beneath a numerical threshold. The bulletin can be found at *http://www.sec.gov/rules/acctreps/sab99.htm.*

Certain practices, not in conformance with GAAP but permitted as immaterial, have become untenable. With these clarifications of the accounting framework intent, current deterministic approaches with ad hoc adjustments, including any kind of catch-up phase-in, may no longer provide acceptable solutions to the volatility issue. The stochastic DAC unlocking approach was developed with this in mind.

Stochastic DAC Unlocking Model

Rather than using a single deterministic projection of future profit margins from the variable accounts, these profit streams are generated stochastically. Future equity returns for the projection period are randomly generated using an equity model reflecting historic patterns appropriate to the equity funds being considered. Variable fund balances are generated based on these random returns. Variable margins are then calculated based on best estimate spread assumptions. Projected fixed margins are projected deterministically using best estimate assumptions. No conservatism is factored into any of these calculations.

Each set of projected profit margins generates an unlocked DAC balance and associated AR. From these, a distribution of aggregate DAC balances is constructed. A corridor is defined between two predetermined percentiles. The current DAC balance is then compared to the distribution of unlocked DAC balances. If current

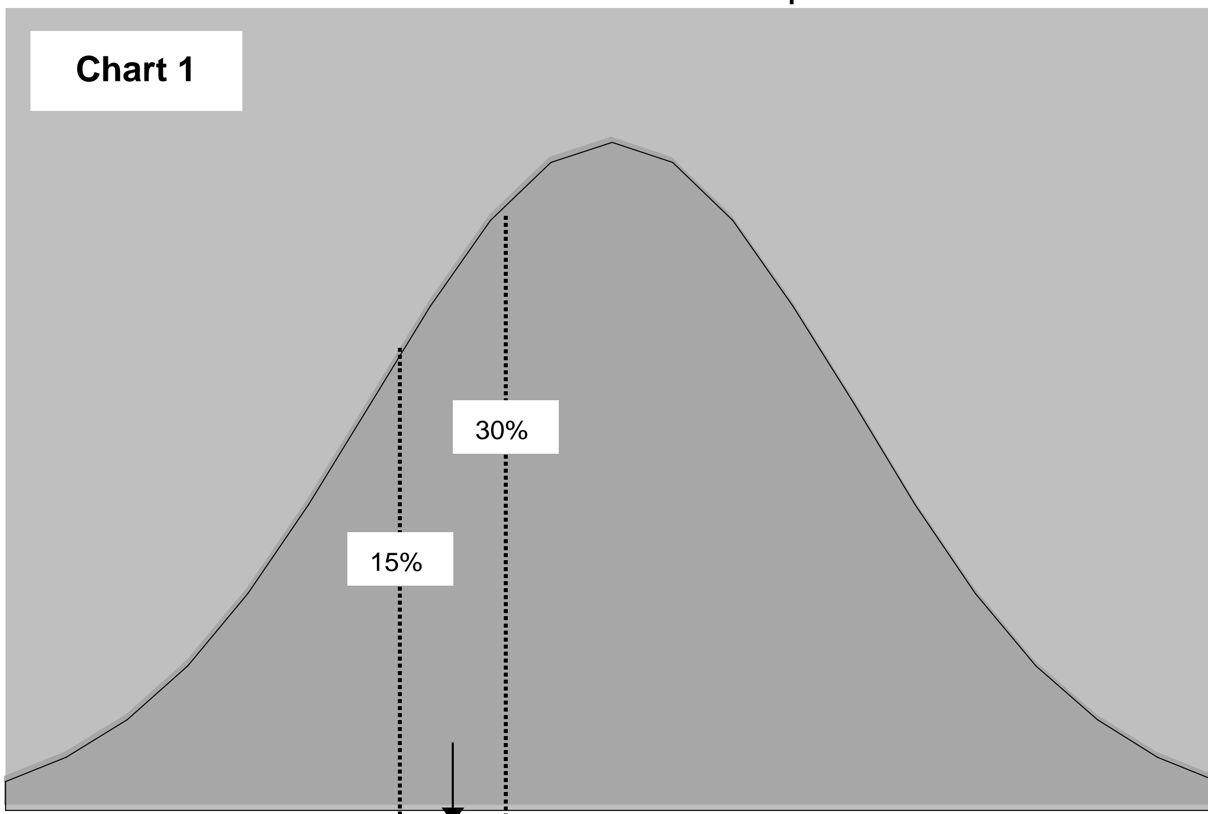
Stochastic DAC Unlocking for Variable Annuity Products
continued from page 3

DAC falls within the corridor, no catch-up results. If current DAC falls outside the corridor, the catch-up equals the amount needed to bring the DAC balance to the nearest corridor boundary.

The stochastic DAC methodology provides established confidence bounds to avoid the use of arbitrary or inconsistent future equity return assumptions. If the current DAC balance is within the corridor, the future equity return assumption that produces it is deemed acceptable as a best estimate, and no catch-up results. If the current DAC balance is outside the corridor, the future equity return assumption that produces it is deemed unacceptable as a best estimate. A new future equity return assumption is then determined that results in the closest corridor boundary as the unlocked DAC. The catch-up equals the amount needed to bring the current DAC balance to the nearest corridor boundary, and this amount can be viewed as the minimum catch-up needed to make the future equity return assumption acceptable as a best estimate.The width and position of the corridor will depend on several considerations, including the shape of the unlocked DAC distribution, existence of product guarantees, expectations regarding future equity market performance, etc. All things being equal, a fairly narrow corridor, say 10-20%, centered around the distribution's mean may be appropriate, e.g., 45%-55%. If, however, there are valid reasons for including an element of conservatism (as none has been included so far), then a corridor to the left of the mean (i.e., lower DAC balances) may be appropriate, e.g., 15-30% (approximately 1/2-1 standard deviations below the mean).

Despite FASB 97's prohibition against a specific provision for adverse deviation, the general concept of conservatism is permitted. Paragraph 57 states, "Conservatism may suggest the more conservative of two equally likely alternatives should be used in an accounting measurement." In this case, one could argue that the alternatives represented by the left half of the DAC distribution are equally likely as the right half. Choosing the left half, as a conservative measure, may be appropriate in the presence of greater than normal uncertainty regarding the equity markets or significant product guarantees. The corridor within the left half provides a criterion for a conservative best estimate for GAAP purposes.

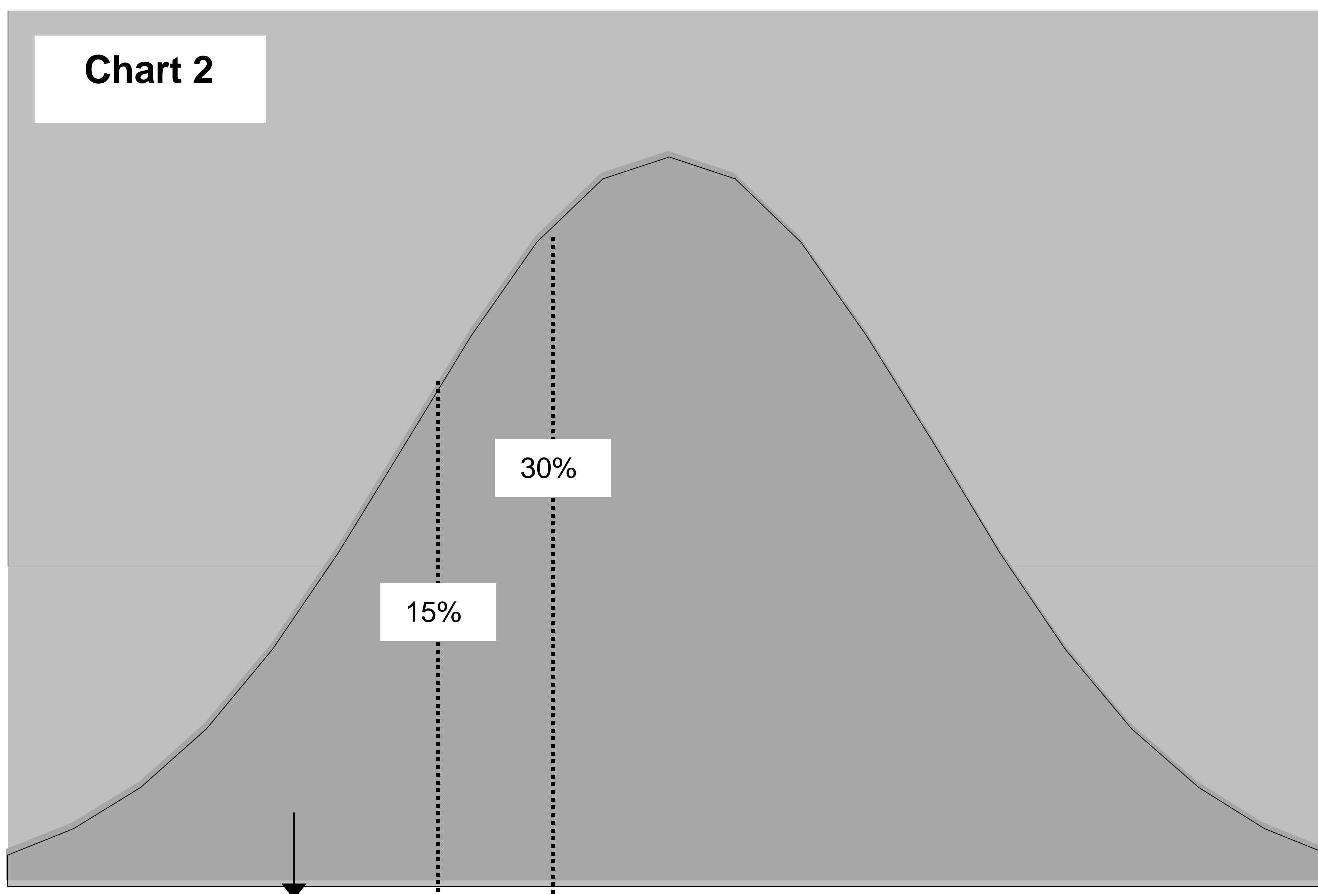
As an example of the above case, consider the following charts, where the curve represents the distribution of unlocked DAC balances, the corridor is set at 15-30%, and the arrow indicates the current DAC balance. In the first chart, the current DAC balance (arrow) is in the corridor, so no catch-up is necessary.



In the second chart, the current DAC balance is below the corridor, so a catch-up is necessary to bring it to the left edge of the corridor as shown in the third chart. The amount of the catch-up is the distance the arrow moves.

Distribution of Possible DAC Values

DAC Below Corridor – Positive Catch-up Required



Implementation Issues and Possible Solutions

Clearly, additional work is required to perform stochastic DAC unlocking. Some of the implementation issues along with possible solutions are discussed here.

First, a capital-market scenario generation system is needed to produce a reasonable probability distribution for equity returns. In some straightforward cases, a normal distribution with a long-term average historical mean and standard deviation may be adequate. Refinements to such a standalone equity model could include a fatter-tailed distribution and the assumption of mean reversion. Depending on the fund being modeled, adjustments to reflect the characteristics of the specific fund may be appropriate. If the characteristics are significantly different, individual funds may need to be modeled separately. Distribution parameters also need to be modified if the funds have a fixed income component.

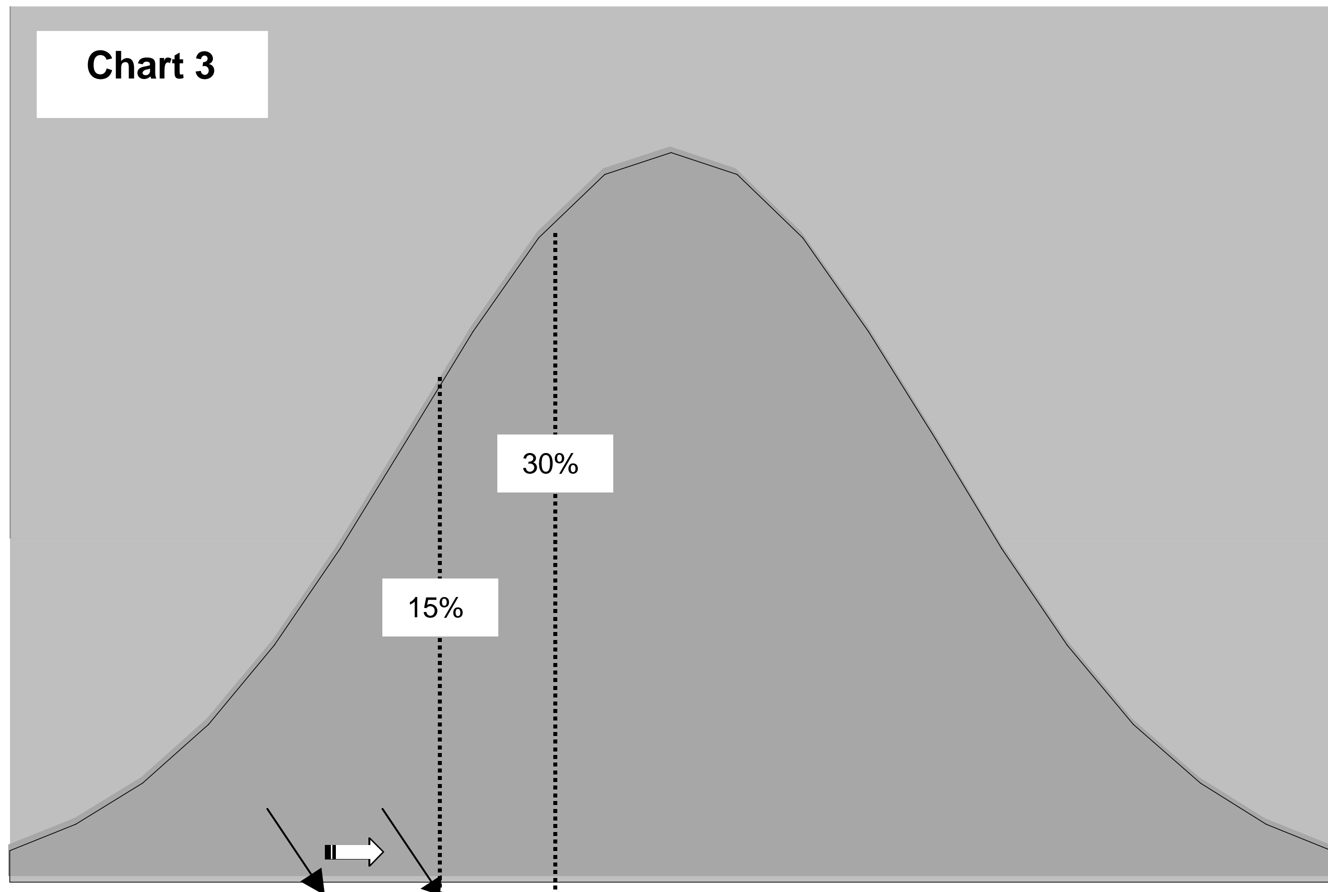
It may also be appropriate to incorporate dynamic lapse assumptions in the model (i.e. higher lapses/transfers when returns drop). Ideally, a capital-market scenario generation system with internally consistent equity returns, interest rates, and policyholder behavior assumptions should be used to produce a distribution of profit margins that reflect all material parameters.

We have found it advisable to start off with a baseline *deterministic* projected set of margins using best estimate assumptions and a long-term average equity return. The baseline run can then use the company's valuation system to generate projected fund values and margins. The stochastic model can be built off this baseline run using a spreadsheet model.

The mean of the stochastic DAC distribution should be close to the DAC of the baseline run. If done quarterly, simplification techniques could include basing the current quarter's catch-up on the prior quarter's inforce, and freezing AR's based on year-end unlocking. Allocation of catch-up to business blocks

(continued on page 6)

Stochastic DAC Unlocking for Variable Annuity Products
continued from page 5



can be based on current DAC balance by business block.

To facilitate audit approval, stochastic models and assumptions should not be too complex, nor constitute a black box. Building the model off a set of projections generated by a baseline valuation system makes it easier to audit, as does proper documentation of procedures, creation of audit trails, and ongoing communication.

Conclusions

The stochastic DAC unlocking approach reduces the leveraged volatility in the DAC catch-up caused by short period market swings. It also avoids perception of "manipulation" of assumptions to avoid unplanned swings in earnings due to DAC catch-up volatility. It is consistent with FASB 97 and the movement towards fair value accounting. In addition, the distribution of future profit margins allows for a risk analysis of the company's exposure to adverse capital market scenarios.

Alastair Longley-Cook, FSA, MAAA, is consulting actuary at Tillinghast-Towers Perrin in Weatogue, CT. He can be reached at **Longlea@towers.com.**

Dick Shaw, ASA, MAAA, is a consulting actuary at Aetna Financial Services in Hartford, CT. He can be reached at **ShawRE@aetna.com.**

Michael S. Sherrill, ASA, MAAA, is an actuarial associate at Aetna in Hartford, CT. He can be reached at **SherrillMS@aetna.com.**

Jay Vadiveloo, FSA, MAAA, is vice president and appointed actuary at Aetna Financial Services in Hartford, CT. He can be reached at **VadivelooJ@aetna.com.**

CHAIR'S CORNER

by Mike Eckman

Like many of you, I am currently involved in several high priority projects that require continuing education. These projects include statutory, tax, and GAAP accounting. In addition, now that my company, like some of yours, is part of an international concern, there is a new need for knowledge in the international accounting area. Since the Financial Reporting Section is in the business of continuing education, we on the Council want to be sure we are working to meet the needs of our members.

At the Society's Annual Meeting last October, we asked the attendees at the Financial Reporting Section Breakfast to complete a survey and indicate some topics that they would like to see on future meeting programs and that deserved funding. Responses were submitted by about 50% of those present.

In talking to other section chairs and Society staff, I found that this was a response rate well above normal and considered excellent. The responses indicated the wide range of interest of the Section and a desire to use the resources of the Section for worthy projects. As we move into 2001, the Section Council will use the survey responses to help make decisions.

There was great interest in continuing the GAAP seminars. A few responses wondered if the new textbook could replace the seminar, but more saw it as an additional resource. Ninety-two percent of those responding want us to continue funding research, as we did for the UVS project. There were com-ments that the research should be focused and have a practical application. The Council will continue to en- tertain proposals for research and take an active role in making sure the research is practical and that the results are available to the membership.

Numerous ideas were given for future research projects as well as session topics for future Society meetings. The variety of the suggestions confirms that we have members working along the entire gamut of financial reporting activities and at a variety of levels.

One of the interesting combinations of responses was that some thought that Regulation XXX had been over-exposed as a meeting topic, and yet Regulation XXX, including the X-factor calculation in particular, was often mentioned as a potential research topic and meeting topic. I believe that combinations of responses like this indicate that we have members who are at different points on the learning curve and that we have to be attentive to this in setting topics.

Many of the responses focused on statutory codification, international accounting standards, fair value accounting, capital requirements for insurance and other financial institutions, and performance management including benchmarking. There were several requests with respect to quantification of risk, including funding for mortality and morbidity studies as well as X-factor research.

The responses to the section of the survey regarding the newsletter indicated that members think highly of the newsletter and want to see a balance of both current events and in-depth articles. Last year, the Council discussed the distribution of the newsletter and considered alternatives. The survey confirmed that most want a hard copy of the newsletter even if it were available on the Web site or by e-mail. Recently, we have incurred the expense of sending the newsletter by first class mail in an effort to get it into members' hands quickly. As we move through the year, we will strive to make the newsletter even better and more timely.

Mike Eckman

Members would also like us to use the Society's Web site for activities that range from communication to education. I know that other Sections have experimented in this area, and we will use their experience in considering proposals. Deb Poorman has taken on a new position created by the Council as the Web Content Manager and is anxious to take advantage of the Web as a communication, reference, and education tool.

As you can see, we do have a challenge in pleasing the membership over the next year, and we will work to fund research and design sessions and seminars to meet the demands. The newsletter and other communications will keep you informed. We will continue to ask you for opinions and input. We are planning an Annual Meeting section breakfast session similar to last year's. Since any of these initiatives have to be staffed, I hope that you will be willing to volunteer to help us meet the expectations.

***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.**

Highlights of the December 2000 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 life insurance portion of the NAIC Life and Health Actuarial Task Force meeting and other selected meetings of the NAIC in December, 2000.

LHATF Special Topics Meeting - Development of a New CSO Mortality Table

A half day was spent discussing the development of a new CSO Mortality Table. The SOA has completed the basic table and will soon be sharing the results on its Web site. Michael Taht and Faye Albert presented the work completed by the SOA (experience table) and AAA (valuation table) to date. A summary of their presentations is provided below.

1) Basic Table Update
Key features embodied in the updated table include:

- 1990-1995 Experience was combined with Bragg/VA data at IA>75 and AA>85-90.
- Duration 1-5 experience is included in the table (prior tables had excluded duration 1-5 because of substantial variation by company).
- Select Period: Tables reflect a 25-year select period at the main insuring ages supported by actual experience. This eliminates discontinuities in grading from select to ultimate that are present in existing valuation tables.
- Six Basic Tables: Male/Female, Smoker/Non-smoker/Aggregate.
- Issue Ages: 0-99/Ultimate Attained Age: 120 (modified by LHATF to 130).
- Mortality Improvement: From midpoint of 1990-1995 experience period to valuation table date (2001), but not beyond the valuation date. Improvement Factors (approximately):

Males:	1% @ 20-75 graded to 0% @ 90-95
Females:	.5% maximum

- Underwriting: Data used includes all underwriting classes except Guaranteed Issue and Simplified Issue.
- Preferred Risk: No explicit recognition of preferred risk other than that implicit in the 1990-1995 experience. Thought to be a relatively small impact for this experience period. It was noted that preferred risk has been studied separately by the SOA on two occasions.
- Eighteen companies were included in the experience base.
- ETI: No explicit data was captured for ETI this time due to a shift in product mix toward UL from traditional permanent business.
- AIDS: No modifications for AIDS have been made.

As discussed, the basic experience table will be on the SOA Web site for exposure in December, 2000.

2) Margins in Mortality
The discussion related to margins focused on the fact that when the 1941, 1958, and 1980 CSO Tables were developed, emphasis was on permanent insurance sales. The impact of margins on permanent plans is not as dramatic as for term insurance.

In year 2000, 63% of new sales are term insurance based on face amount and 19% based on premium. Term insurance reserves will be heavily impacted by margins in mortality. The Academy and regulators will study further the margin appropriate for the new CSO mortality table.

3) Reflecting Company Experience in Valuation Mortality
In discussing whether to recognize actual company experience in valuation mortality, a comparison of XXX guidance and Canadian valuation methodology was provided.

XXX X-Factors
Levels of Experience

– Company Experience from Line of Business

– Company Experience from Related Lines

– Reinsurance Experience

– Industry Experience

Regulation and ASOP calls for statistical analysis and professional judgment to be used by valuation actuary with respect to the appropriateness of X factors.

Canadian Valuation
Levels of Experience

– Company Studies

– Inter-company Studies

  • CIA

  • SOA

Blend based on credibility of company experience data. More explicit (formulaic) guidance is provided to the valuation actuary on blending company and industry experience.

It was also pointed out that XXX only deals with deficiency reserves, not basic reserves, which are valuation mortality based, while Canadian valuation takes place in a gross premium valuation context.

One regulator, Larry Gorski, expressed an interest in pursuing the use of Bayesian statistics for blending actual company experience, inter-company experience, and expectations with respect to the future. This received support from some other members of LHATF.

Discussion next shifted from theory to practice. Various industry representatives pointed out the real need for a new valuation table to replace an out-of-date 1980 CSO table and preferred not to have discussions relative to reflection of actuarial judgment at this time. They asked LHATF to concentrate on developing a base valuation table as a common reference benchmark to be used for new issues. Discussion related to experience recognition should be kept separate, especially given the importance of the new table from a tax reserve standpoint. A new basic table for tax purposes will lessen the need for companies to search for innovative ways to create profitable products.

It is hoped that a valuation table absent the recognition of actual company experience, underwriting and marketing differences, and other items will be completed in year 2001.

Life and Health Actuarial Task Force Regular Meeting

The following topics were discussed at the regular LHATF meeting.

1) Proposed Changes to the Actuarial Opinion and Memorandum Regulation (AOMR)
LHATF made minor revisions to the AOMR amendments which would allow a state of domicile opinion. The result was to make it clear that a company can continue to operate under the same structure that currently exists (that is, a "this state" reserve opinion in aggregate). The alternatives only allow a company the option to file a state of domicile opinion under certain conditions acceptable to the Commissioner.

Both the ACLI and NALC object to the revisions. For the ACLI, the objection relates to the fact that the amendment does not appear to accomplish the original goal of simplifying the opinion process because the amendment allows three options to be elected or rejected by the Commissioner and therefore creates potentially even more variation.

The NALC objections relate to the elimination of the Section 7 opinion and the impact on cost for small companies of doing a Section 8 opinion. Regulators point to the revisions to the ASOP which allow various simplified methods other than cash flow testing, judged to be appropriate by the valuation actuary, to gain comfort with respect to reserve adequacy. In addition, they cited general support from most actuaries related to a requirement for some level of reserve adequacy analysis to be performed by the valuation actuary at a minimum.

LHATF voted to expose the AOMR with these minor revisions with adoption by LHATF contemplated in March, 2001.

The major revisions are briefly summarized below:

– Eliminates Section 7 Opinion

– Allows State of Domicile Opinions (under a process as approved/endorsed by Commissioner)

– Requires Regulatory Asset Adequacy Issues Summary (Executive Summary)

– Eliminates Required Interest Scenarios in Favor of Appointed Actuary's Judgment

The Actuarial Standards Board has issued exposure drafts of the Standards of Practice that would apply to the valuation actuary under this modified framework. The comment deadline is March 31, 2001.

2) Revisions to Actuarial Guideline IX-A (Actuarial Guideline IX-C)
The current draft with respect to substandard annuity valuation mortality is dated September 8, 2000. This guideline received no comment during the most recent exposure period and was adopted by LHATF for adoption by the Plenary and Executive Committees at the March, 2001 NAIC meeting. It has an effective date of January 1, 2001.

3. Variable Life Reserves - AG VL GMDB
The Academy provided a report to the LHATF with recommendations for a short-term solution on AG-VL GMDB. This guideline had been exposed with two reserve method alternatives X and Y.

The X version is a more conservative reserve approach in that it only takes into account positive net death benefits in the valuation process. The Y version allows credit for negative net death benefits in early years under policies with large initial deposits where the death benefit guarantee would not kick in.

As these two options had been on the table for some time, and the industry was divided as to X and Y, LHATF decided to eliminate option Y in favor of the more conservative option X and exposed AG-VL GMDB for comment.

4) Variable Annuities with Guaranteed Living Benefits (VAGLB)
Based on the discussion that took place at the September, 2000 NAIC meeting, the Academy is in the process of reviewing draft Actuarial Guideline MMMM on

(continued on page 10)

Highlights of the December 2000 NAIC Life and Health Actuarial Task Force Meeting and Other Topics
continued from page 9

VAGLB reserving and performing additional testing and analysis in order to reconcile some of the differences of opinion within the Academy group with respect to capital requirements and reserving.

Items of note at the December meeting include an amendment to the current draft version of Actuarial Guideline MMMM proposed by California and supported by other members of LHATF to impose a minimum reserving standard equal to accumulated charges for the VAGLB benefit(s). There would also be a reasonableness requirement for the resulting reserve based on moderately adverse conditions. Because California's annual valuation bulletin instructs companies to follow the most recent draft of AG MMMM at 2000 year-end, this draft actuarial guideline will be the reserve standard in California at December 31, 2000. The idea being that until an acceptable reserve standard is endorsed by LHATF via a final AG MMMM, at a minimum, regulators do not want charges for these benefits falling to a company's bottom line statutory profit. There is no mechanism for release of these reserves as contracts lapse or mature.

Given that the Life RBC Working Group adopted placeholders for VAGLB capital requirements as of 1999 year-end of 1% or 2% of account value depending on whether the related VAGLB is above or below water, it appears that as of 2000 year-end the combined reserve/capital requirement will be stringent. LHATF exposed the amended AG MMMM for comment.

5) XXX Discussion
Two documents related to XXX were discussed at the LHATF meeting. The first document provides the fact sheet, which was approved to be distributed to commissioners to make them aware of what type of product designs are in the marketplace that may be of interest from the standpoint of XXX application. The Life (A) Committee will send this document to commissioners of each state.

The second document discussed was a survey of industry and regulators with respect to issues (products/reserving) identified during year 2000 with respect to XXX and what applicability and reserve mechanics might be.

Finally, LHATF appointed an Actuarial Guideline subgroup consisting of California, New York, Connecticut, Illinois, and North Carolina to explore the concept of an Actuarial Guideline on XXX. Issues to be reviewed by the subgroup include:

- Should the AG be expanded beyond secondary guarantees?
- Should the ART or Level Premium Approach be used for secondary guarantees?

6) Nonforfeiture for Universal Life with Secondary Guarantees (AG XYZ)
This working group continues to use the ACLI template (retrospective accumulation), which would recognize the relative level of actual gross premiums including provision for expense allowance via an adjustment factor to be applied to the basic nonforfeiture mortality table used to generate nonforfeiture values. The plan is to have a formal proposal for XYZ well before the March, 2001 NAIC meeting.

7) General Nonforfeiture Project
A one-page discussion note related to nonforfeiture was discussed by LHATF. The direction currently being contemplated has been described as constrained discretion. Conceptually, provided nonforfeiture credits and charges fall within a reasonable level, discretion would be left to the company to manage those credits and charges, but if they fell out of the range of reasonableness, then more regulatory scrutiny would be triggered. LHATF will continue to work on non-forfeiture in 2001 to try to reconcile differences in treatment of guaranteed and non-guaranteed elements in policy designs.

8) UVS Update
LHATF was updated on recent developments with respect to UVS. Recently, the SOA sponsored a seminar on UVS. Seminar highlights were presented by David Sandberg. The seminar focused on inforce business, not viability nor high impact/low frequency events. It was noted that International Standards may be headed toward a UVS type approach to valuation and that the AAA was restructuring its committees to focus on solvency generally, rather than trying to fit reserve/capital solutions into the existing regulatory structure, which has been extremely difficult and time consuming over the last few years.

LHATF plans to have a joint conference call with the Life Liquidity Risk Working Group and Life RBC Working Group to discuss how they might take a more holistic approach to reserving and capital requirements. LHATF will spend four hours at the next NAIC meeting discussing how they might develop a plan for a future valuation process that accommodates new innovative products more directly into the regulatory reserve and capital framework.

9) 2000 Year-end Valuation Letters
Larry Gorski (Illinois) released a draft version of his annual year-end valuation letter, which has since been finalized and issued. In addition, the California 2000 year-end valuation bulletin was issued in September, 2000.

Finally, Tom Foley announced that he will be stepping down as chair of LHATF after five years as the chair.

LIFE INSURANCE (A) COMMITTEE

1) Life Liquidity Risk Working Group: Topics discussed at the Life Liquidity Risk Working Group meeting include:

- New York Circular Letter No. 33 (2000): The first topic discussed was the final New York circular letter entitled “Issues Regarding Liquidity” to be completed by all licensed companies for year-end 2000 and due to be filed by April 1, 2001. The focus is on stress liquidity with two sets of questions. The first set contains a liquidity plan focus, then a second set of more detailed questions follows. Small companies (<$100 million of assets) that have a formal written liquidity plan are exempt from the more detailed questions unless New York follows up with additional questions. The filing must be certified by CFO signature.

- Minnesota Bulletin 99-4: This bulletin forbids rating agency or default type bailout provisions in GICs.

- Academy Report to NAIC’s Life Liquidity Risk Working Group: The third document discussed was a comprehensive final report from the American Academy of Actuaries on Liquidity Risk. This report defines liquidity risk and then focuses on stress liquidity, sources of liquidity risk, sources of liquidity, risk reduction techniques, and measurement tools for stress liquidity exposure. It also summarizes rating agency approaches, possible regulatory actions, and liquidity risk management used by banks. Finally, a sample set of company illustrations is provided.

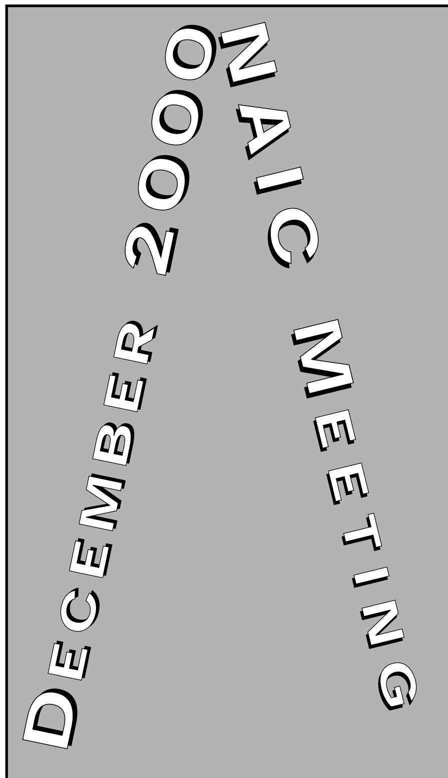
- Interim Report from Life Liquidity Risk Working Group to Life (A) Committee: This document was provided to the Life (A) Committee and identifies a void in the regulatory framework with respect to liquidity risk in that it is not addressed by RBC or AOMR. The report also describes possible directions for future work by the NAIC.

- CIA Educational Note on Liquidity Risk Management: The final document discussed was the CIA Educational Note on Liquidity Risk Management issued in March, 1996.

A conference call will be scheduled to discuss the future direction to be taken by the Life Liquidity Risk Working Group.

2) Suitability Working Group: Material discussed at the Suitability Working Group meeting includes an outline of discussion topics and two drafts: Suitability of Sale of Life Insurance and Annuities Model Regulation and the Unfair Trade Practices Act. Discussion focused on how to create the proper balance between insurer and producer responsibilities and the use of the term “suitable” in the context of securities laws and litigation. Finally, exemptions from the model were discussed, credit insurance in particular.

3) Small Face Amount Working Group: The working group requested that the industry provide more detail regarding pricing practices used for small face amount policies. Concern on the part of regulators continues to relate to policies where the policyholder may ultimately pay premiums that exceed the face amount provided by several times.



ACCOUNTING PRACTICES AND PROCEDURES TASK FORCE

Several accounting related working group meetings are summarized below.

1) Statutory Accounting Principles Working Group: This working group conducts both a hearing and a regular meeting.

- Hearing Agenda: SSAP #80 was adopted, which incorporates XXX, the Synthetic GIC and Guaranteed Separate Accounts Model Regulations into Codification effective January 1, 2001.

- Meeting Agenda: At the meeting agenda, the revised Reinsurance Question and Answer document created by LHATF several years ago was incorporated into Appendix A-791 of the codified manual. They also discussed Issue Paper #107, which will allow admission of certain health care receivable assets such as pharmaceutical rebates, claim overpayments and receivables from providers. Because non-admitted assets are (1) those that are specifically non-admitted or (2) those that are not specifically described as admitted, these assets will be non-admitted at January 1, 2001 when codification takes effect. Health organizations will need to get their state of domicile to allow a prescribed or permitted practice until the SSAP related to Issue Paper #107 is adopted into codification, at which point the rules for admitting these assets will be prescribed by codification.

2) Separate Accounts Working Group: The Separate Accounts Working Group reviewed changes made to the Annual Statement Instructions as they pertain to VAGLBs. The 2001 annual statement now requires disclosure in the footnotes with respect to type of VAGLB risk (GMAB, GMIB, etc.), associated account value, amount of reserve held, location of

(continued on page 12)

Highlights of the December 2000 NAIC Life and Health Actuarial Task Force Meeting and Other Topics
continued from page 11

"Regulators were not persuaded to change the calculation of total adjusted capital to include these assets if they are, in fact, non-admitted, because of the expectation that ultimately they will become admitted."

reserve in annual statement and the associated reinsurance reserve credit taken.

The working group also reviewed product trends in separate accounts and discussed the continued difficulty of incorporating reserve and RBC requirements for new products into the existing regulatory framework. Other items discussed included adding a VAGLB and GMDB exposure disclosure to the annual statement with respect to benefits that are above and below water (these amounts are needed for RBC calculations anyway). The possibility of adding a disclosure in the notes with respect to the exposure under a 10% market drop was also discussed.

RBC AND AVR/IMR

1) Life RBC Working Group: The Life RBC Working Group began its meeting with a general discussion related to use of RBC in a National Treatment Framework. RBC was originally intended to identify poorly capitalized companies and was not intended to be used as a ranking formula. Criteria reflected in the National Treatment Framework include using a multiple of RBC to determine a qualification threshold for National Treatment. Regulators feel that RBC needs refinement in this context in particular with respect to VAGLBs and other innovative product features. A joint conference call between Life RBC, LHATF and the AVR/IMR working groups will be held to discuss these issues.

Other items discussed:

– Codification Tax Structure Recommendation: In order to get changes made to the 2001 RBC formula, the Academy proposed a structure that allows maximum flexibility with respect to the treatment of taxes without locking the regulators into a pre-tax or post-tax factor approach or as to whether DTAs and DTLs will be considered in the computation. Under the proposal, all calculations of C-1 through C-4 would be done on a pre-tax basis, then an adjustment for tax effect would be made. The Life RBC working group adopted the recommendation for structural change without committing to the factors, tax adjustments, or DTA/DTL issues.

– Real Estate C-1 Proposal: The Academy proposal for changes to Real Estate as a result of codification changes as to how real estate is classified in the statutory statement (GAAP basis) was rejected by the Life RBC Working Group. Companies will have to continue to maintain internally the old statutory classifications with respect to foreclosed real estate in order to properly calculate RBC on the old basis.

The reason for the rejection appeared to be because the proposal currently would result in a net decrease in C-1 related to real estate because the real estate market is currently in a favorable cycle, which under the proposal would have been recognized in the C-1 risk requirement. Under the rejected proposal, unfavorable cycles would have generated a higher RBC requirement, as well.

– C-4 Structure Recommendation: As a result of codification, the format of Schedule T has changed so the C-4 formula in RBC was changed accordingly. The intention is to continue to apply C-4 factors to premiums that are included in the guaranty fund assessment base.

– C-1 Common Stock Covariance Recommendation: The regulators adopted a format for recognizing common stock covariance without committing themselves to factors per se which are still under review. The formula change would recognize common stock independence from other C-1 risks and, in addition, the 30% factor is proposed to be adjusted by a company's weighted average beta for its common stock portfolio subject to a minimum of 22.5% and a maximum factor of 45%. In addition, there would be a concentration factor applied to the five largest common stock holdings of an additional 50% of the RBC amount otherwise required.

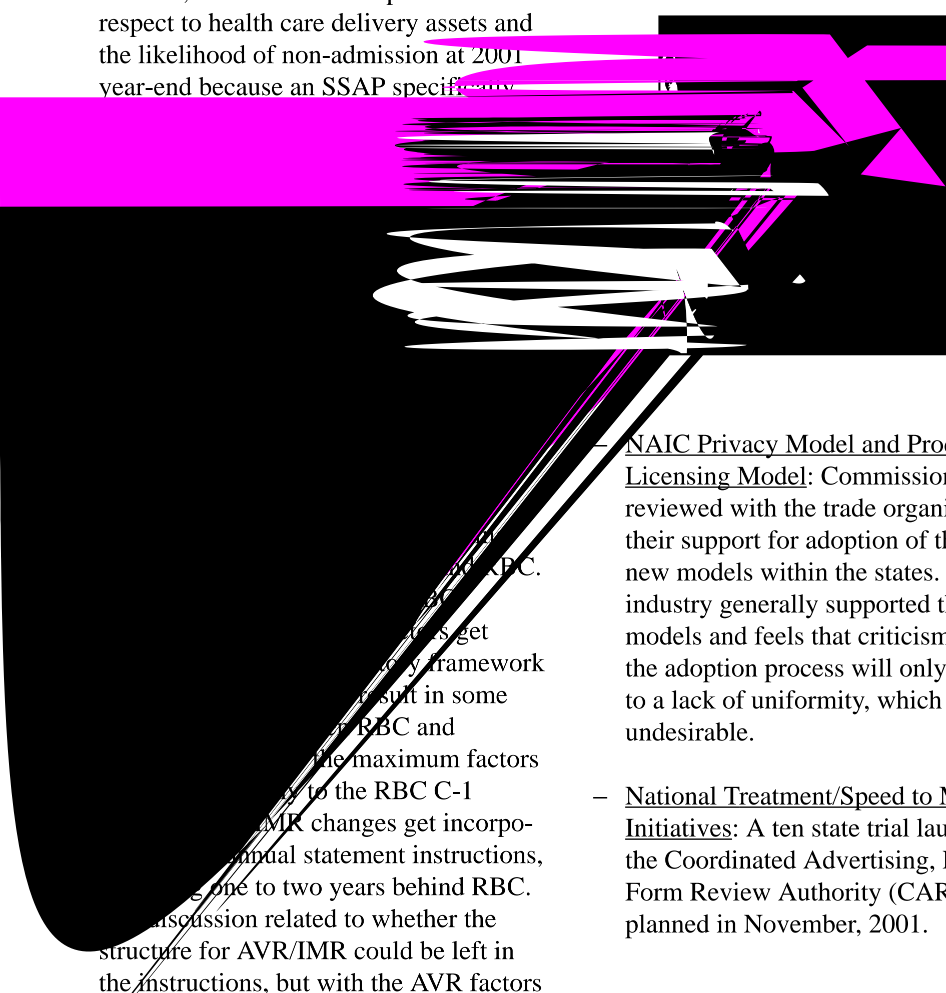
– Disability Income Structure Recommendation: The Life RBC Working Group also adopted a structural change to Disability Income C-2 factors without approving new factors. The proposal would group individual coverages into Non-Can, Guaranteed Renewable, Accident Only, and All Other while group and credit cover

ages would be broken down into LTD/STD and Periodic Premium/ Single Premium, respectively.

2) Health Organization RBC Working Group: Many of the topics discussed at the Health Organization RBC Working Group meeting overlap with Life RBC. The Health Organization RBC Working Group was less inclined to adopt some of the structural changes that Life RBC had adopted, due mainly to a feeling that C-1 factors and common stock covariance have less effect on health companies than life companies. They therefore preferred waiting to review the final work product that comes out of the Life RBC work before making any decisions on these issues themselves.

Health Organization RBC did adopt the changes to the Disability Income C-2 structure that was adopted by the Life RBC Working Group.

Next, a discussion took place with respect to health care delivery assets and the likelihood of non-admission at 2001 year-end because an SSAP specifi...



...RBC.
...s get
...ry framework
...sult in some
...RBC and
...he maximum factors
...y to the RBC C-1
...MR changes get incorpo-
...nual statement instructions,
...g one to two years behind RBC.
...iscussion related to whether the structure for AVR/IMR could be left in the instructions, but with the AVR factors being maintained outside the annual statement instructions. Because of the C-1 factor changes resulting from codification, it is felt that AVR will build up slightly faster in 2001 and 2002, and then be released in 2003 when new maximums are incorporated into the annual statement instructions. The AVR/IMR working group will present this timing problem to the Blanks Task Force at its meeting.

The C-1 factors to be developed by the Academy (pre-tax) will be presented to the AVR/IMR and RBC Working Groups in March, 2001 to be finalized in June, 2001.

Reaction To GLB

1) NAIC/Industry Liaison Committee: This committee discussed several topics related to GLB Initiatives:

– NAIC Privacy Model and Producer Licensing Model: Commissioners reviewed with the trade organizations their support for adoption of these new models within the states. The life industry generally supported the models and feels that criticism during the adoption process will only lead to a lack of uniformity, which is undesirable.

– National Treatment/Speed to Market Initiatives: A ten state trial launch of the Coordinated Advertising, Rate and Form Review Authority (CARFRA) is planned in November, 2001.

2) Minimum Standards Review for Market Conduct Issues (D) Working Group of the Market Conduct Examination Oversight (D) Task Force: This working group reviewed the discussion draft of the NAIC GLB Market Conduct Working Group - Blue Print for Modernization. Issues include funding, limited available resources, and the monitoring process.

Other Matters

1) Blanks Task Force: The Blanks Task Force adopted changes to the Blanks Interrogatories and Schedules to require disclosure of material information related to risks originating in workers compensation carve-out coverages.

2) Reinsurance Task Force: The Reinsurance Task Force authorized the interested parties to draft an amendment to allow multiple beneficiary trust funds to be funded by letters of credit. The interested persons continue to pursue the ...

Discussion shifted to prior approval and disclosure issues related to material reinsurance transactions (Frankel Companies) and a review of legislation in Illinois, Virginia, and Maine. In Virginia, prior written approval is now required where the premium or the change in liabilities exceeds 50% of surplus. In Illinois, prior approval is required for any existing inforce life reinsurance transaction. The Reinsurance Task Force will study further the prior approval and/or disclosure requirement issues. Finally, the Reinsurance Task Force adopted changes to the Disclosure of Material Transactions Model Act to include disclosure of material ceded inforce.

* * *

The next NAIC meeting will be held in Nashville in March, 2001.

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

Universal Life, No-Lapse, and the Law vs. Free Markets

by David J. Hippen

Author's Note: This article does not necessarily represent the position of my current employer. Comments and differing opinions are welcome.

Disclosure requirements before 1975 were perhaps too minimal to assure the consumer could know the risk of not paying sufficient premiums. But modern regulations focused on illustrations and disclosure, combined with advanced marketing materials and the widespread availability of financial knowledge and advice, seem to obviate the need for such government restrictions as the minimum required benefits under the Standard Nonforfeiture Law (SNFL) . The 21st century may be the time to set the life insurance market free.

The U.S. life insurance industry seems to be at a crossroads with regard to nonforfeiture requirements. The proliferation of innovative, interest-sensitive, and flexible products is butting heads with tradition. Change seems essential to the modern market.

Background

When universal life was first popularized about 20 years ago, there was considerable controversy with regard to nonforfeiture compliance. Was it term plus a side fund? Whole life with flexible premiums? Or something entirely different? Ultimately, to meet the need for uniform regulation, the NAIC settled on the UL Model Regulation, which seemed the most reasonable and consistent interpretation of the Standard Nonforfeiture and Valuation Laws (which gave the UL Model its authority). Flexible premiums make a purely prospective model impossible; the death benefit guarantee is not predicated upon premium payments, but based upon accumulation or cash value being positive. Because the application of the Standard Nonforfeiture Law (SNFL) was unclear, the UL Model Regulation became necessary.

Although the UL Model provided relatively simple tests for cash values to meet minimum nonforfeiture requirements, it did not clearly interpret all aspects of the Standard Nonforfeiture Law. Among these were the smoothness test (originally designed to address perceived inequities in the cash values of deposit term contracts) and paid-up nonforfeiture benefits. It was unclear how or whether these applied to UL, so most states chose to ignore them, inferring that compliance with the UL Model was sufficient. Whether these are intentional omissions, oversights, or ambiguities does not obviate the need for compliance with those aspects of the law. Furthermore, when a regulation is unclear, the statute (in this case, Standard Nonforfeiture Law) prevails.

With regard to smoothness, due to this lack of regulatory enforcement, some insurers felt free to add guaranteed cash value bonus "spikes" and "cliff" surrender charges to their UL forms. Despite apparent inequities (i.e., from one policy year to the next), and their similarity to the problems of deposit term, few states chose to regulate them. Any reasonable enforcement of the smoothness test would prohibit such spikes and cliffs. However, even when removed from guarantees, insurers often feel free to create spikes and cliffs on a current or declared basis, so the restrictions are in form, not substance. Although there was some early NAIC discussion of regulating declared rates, this was quickly abandoned. In the absence of such regulation, enforcing smoothness requirements seems ineffectual.

UL Model references to paid-up nonforfeiture options seem vague and ambiguous. Many feel that UL's automatic continuation of insurance obviated the need for them. Although the continuation of insurance under UL is different from ETI in several ways, it was seen by many as an acceptable substitute for ETI. So, although the law did not change, ETI and RPU were dropped from most UL forms; some states even demanded their removal to avoid confusion between the nonforfeiture basis and the guaranteed accumulation basis (interest and COI's). Although this forced the forms into technical noncompliance, it is unlikely that the consumer lost anything significant. For most policies, switching to a paid-up nonforfeiture benefit on a guaranteed basis would be disadvantageous when compared with the typical continuation of insurance on a current basis. (In the rare cases where ETI is advantageous, a court could probably force it to be offered as a legally mandated benefit, despite its omission from the written contract.)

In terms of contract interest rates, the guaranteed credited or accumulation value rate usually equals the nonforfeiture interest rate. Tradition seems to be the primary reason. When universal life first became popular (prior to the UL Model Regulation), actuaries sought a way to comply with existing valuation and nonforfeiture requirements. The formulas commonly used to demonstrate compliance were greatly simplified if all the interest rates (valuation, nonforfeiture, and accumulation) were equal.

Despite this simplification, the standard demonstration of compliance usually consisted of 15 to 20 pages of complex actuarial formulas.

After several years of seeing such demonstrations from industry actuaries, many regulators inferred that the interest rates must be equal in order to comply. This is fallacious — lowering nonforfeiture rates produces higher minimum cash values, but lowering credited rates produces lower cash values for the same level premiums. Although this was actuarially counter-intuitive, some states would not approve filings if the interest rates were different. (This position effectively imposes rate regulation on life insurance, which is outside the authority of most states.)

Although many UL products use the same rates for the guaranteed credited and nonforfeiture interest rates, it seems entirely permissible for them to differ (at least in most states — New York, which promulgated an alternative to the UL Model, may be an exception). States which follow NAIC model laws do not regulate credited rates (guaranteed or current). The Standard Nonforfeiture Law says the nonforfeiture basis must be clearly stated; the basis used for RPU and ETI must match the nonforfeiture basis for the contract (but may differ from the guaranteed credited rate and COI's). Few UL contracts have RPU or ETI, so the guaranteed credited rate is usually the only rate in the contract.

Derivation of No-Lapse Provisions & Associated Reserving & Nonforfeiture Issues

In the early days, some UL would have minimum premiums required for one to five years. Because the period was so minimal, no cash values would have been required even if this was a fixed premium requirement. The requirement was principally designed to improve premium persistency. (Some additional reserves may be indicated, but these were sometimes ignored as being immaterial.)

Later, some illustrations were enhanced to improve disclosure. They stated that the policy would continue if a specific premium were paid. Some states even required this type of disclosure, e.g., "This policy will lapse in year xx without additional premium."

"No-lapse" provisions have been designed several ways, with more possibilities likely to be created. No-lapse provisions guarantee the death benefit even if the (primary) account value or cash value is zero (or negative). When the no-lapse premium is **fixed**, i.e., neither advance funding nor "catch-up" funding is allowed by the contract, the Standard Valuation and Nonforfeiture Laws appear to apply. If such a fixed feature is added to a variable contract (i.e., based upon a separate account), the no-lapse feature seems to be the primary death benefit guarantee; the value of the variable account is irrelevant as long as the fixed no-lapse premium is paid. Perhaps the laws and/or guidelines need to be revised to regulate such fixed guarantees. Establishing a separate account does not obviate the need for minimum reserves and cash values.

Cumulative no-lapse guarantees operate similarly to typical UL accumulation values. They are generally considered secondary guarantees, and are sometimes called "shadow accounts." They only have value when cash or accumulation values drop to zero (or below). Most of them guarantee death benefits as long as the sum of gross premiums paid to date is at least as great as the sum of no-lapse premiums. Some provisions allow "catch-up" premiums to be paid later. (In these cases, failure to pay the no-lapse premium has no effect if the cash value is greater than zero. Once the cash value becomes zero, the policyholder would have until the end of the grace period to "catch-up" with any no-lapse premiums not previously paid). This can be viewed as a secondary accumulation value. Gross premiums are added; at the end of each year, the no-lapse premium is subtracted. If the result is nonzero, the no-lapse guarantee is in effect. However, if the policy cash value is positive, the no-lapse account value is ignored, even if it is negative.

When a **cumulative** no-lapse guarantee is used, there is no fixed prospective premium requirement upon which to base minimum cash values and reserves. This is the same situation as in flexible premium UL, so it seems appropriate to base valuation and nonforfeiture requirements upon the UL Model. If the standard UL methods are used to calculate no-lapse reserves, it seems appropriate to hold the greater of the no-lapse reserve and that using the standard UL account value method. The no-lapse GMP seems to be the level no-lapse premium to the latest date of the no-lapse guarantee. As UL designs expand, guidelines may be needed for appropriate reserves.

However, the logical conclusion seems different for nonforfeiture. The cash value provided by UL contracts is not usually affected by no-lapse guarantees, although insurers could offer greater cash values along with no-lapse. If the basic cash values of a UL contract meet the minimum nonforfeiture requirements of the UL Model, those cash values comply with the Standard

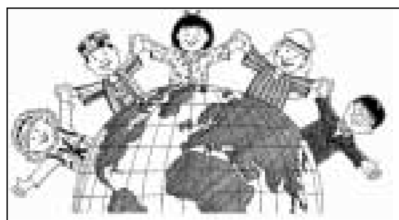
"No-lapse provisions guarantee the death benefit even if the account value or cash value is zero. When the no-lapse premium is fixed, the Standard Valuation and Nonforfeiture Laws appear to apply."

Universal Life, No-Lapse, and the Law vs. Free Markets
continued from page 15

Nonforfeiture Law. If the **cumulative** no-lapse guarantee does not reduce the cash values, the Nonforfeiture Law is still satisfied. So the application of UL Model nonforfeiture principles to a **cumulative** no-lapse guarantee seems to exempt such guarantees from additional cash value requirements. (Note that the payment of a level premium for a death benefit guarantee on a stand-alone basis would require minimum cash values, at least for certain issue ages, classes or for longer guarantee periods.)

Under UL Model nonforfeiture, it is theoretically possible to have zero cash value (e.g., through large level loads) despite level premiums to maturity. However, regulatory, market, and political pressures prevent insurers from marketing such products.

Although secondary guarantees generate an additional reserve need, it is possible to have level premiums with no cash value from the secondary guarantee, because the UL Model only tests the load on the primary accumulation value.



Converting a fixed premium product to flexible premium can eliminate minimum cash values. To some, it seems unreasonable that adding a flexible premium provision could circumvent standard equity requirements. (Addition of a separate account confers an even broader exemption.)

The question is, should we demand cash values on cumulative no-lapse, i.e., impose the UL Model test on surrender of the shadow account, or allow zero cash values? Is it unfair to require persisting policyholders to pay part of the reserve to terminating policyholders, thus increasing the cost of insurance? If zero cash values are permitted, will the viatical market take over, and is that a desirable alternative?

Illustration - No Lapse Reserves and Nonforfeiture Values

Consider, for example, a whole life product. Suppose the annual gross premium equals the net level premium using 90% of 1980 CSO with interest at 5%. The basis of the fixed premium is not subject to regulation — indeed, it is generally not disclosed. Now suppose the nonforfeiture basis is 1980 CSO @ 5.75%. This generates a set of minimum cash values. (Note that the minimum cash values do not equal gross or net premiums accumulated at 5%.)

Now suppose this is changed to fixed premium UL, with guaranteed interest on the accumulation value set at 6% for the first 10 years, then 3%, with 1980 CSO for COI's. Because this accumulation value basis is independent of the nonforfeiture basis, guaranteed accumulation value will not equal the minimum nonforfeiture cash value. Assume the policy offers the greater of accumulation value and minimum cash values on the nonforfeiture basis. This is clearly in compliance with the law, despite differences among all the policy interest rates.

Suppose this fixed premium UL is further amended to add a flexible premium provision. The fixed premium is no longer required (although it could be used as a "suggested" planned premium). Further assume that no front-end or level loads are imposed, but a surrender charge is levied.

Under the UL Model, this contract complies with nonforfeiture law as long as the surrender charge does not exceed the unamortized nonforfeiture expense allowance. The minimum cash value table can be omitted. However, if the "suggested" planned premium (which was the fixed premium) is paid, the design of the UL Model should operate to keep cash values up.

Now the company wants to add a cumulative no-lapse guarantee. If the sum of gross premiums received is as much as the sum of no-lapse premiums to date, the contract is guaranteed not to lapse. Assume the no-lapse premium is set equal to the "suggested" planned premium. At that premium level, the contract value cannot drop to zero anyway. In effect, the no-lapse guarantee adds nothing to the contract (except perhaps "consumer comfort" or better marketing "spin"). Likewise, it should create no additional reserve requirement, and no additional requirement of minimum cash values.

Suppose the company later decides to be a bit riskier. It cuts the no-lapse premium by 20%. Because the no-lapse premium is flexible, it operates similar to the primary UL account value. The cash value guarantees of the contract have not been diminished, so they are still in nonforfeiture compliance, i.e., because the surrender charge does not exceed the limits in the UL Model Regulation.

However, the reserve need clearly increases, because the death benefit is guaranteed to maturity for a smaller premium (the reduced no-lapse premium). Whether the additional reserve is compelled by Regulation XXX, the UL Model, or Standard Valuation Law is subject to discussion. Some would claim that GMP now equals the no-lapse premium. Others would say that because the no-lapse premium does not *endow* the product at maturity (it just carries the death benefit to maturity), GMP has not changed.

Some claim that the guideline annual premium drops to the no-lapse premium; others say that guideline calculations are unaffected, because endowment is not guaranteed when no-lapse premium is paid. (Another argument against the guideline premium becoming the no-lapse premium is the possible difference in treatment under Section 7702 from

"If the industry did not fear the social, political, and regulatory repercussions, it could also be an efficient, effective, and equitable source of viatical settlements. In fact, if a company buys back its own policies, it would eliminate many of the risks of current viatical transactions."

two otherwise identical policies, where the only difference is the level of the no-lapse premium.). Enhanced regulations or actuarial guidelines may be needed for no-lapse reserves.

Consumer and Market Perspectives

Considering current-basis COI's and declared interest rates, in most cases it is unlikely that payment of the no-lapse premiums would result in low cash values anyway. This may make the enforcement of guaranteed minimum value requirements superfluous. Ultimately, the consumer must be served if the industry, its stockholders, and even its regulators (witness "speed to market") are to survive. But what does the consumer want?

Some clearly want the lowest price possible. The power of cost-conscious consumer demand has created the hot term market. Those who want long-term guarantees have to face what may seem unreasonably higher rates, designed at least in part to avoid cash value requirements.

There are still many consumers who want minimum cash values to hedge their risk of not being able to pay the premiums. Traditional and low-accumulation UL can satisfy many of their needs. But here again, the consumer is forced to buy UL, not whole life, to get the lowest level premium possible. To meet the need, some UL develops extremely low cash values on a low-premium basis. Yet, despite UL's flexibility, some insurers have resorted to considerable ingenuity (some call it gimmickry) to create products which meet the needs of the current marketplace.

Some fear that the loosening (or abolition) of minimum nonforfeiture requirements not only would result in inequities, but would undesirably expand the market for viatical dealers. Although it seems unfortunate that some marketers abuse viaticals to take unfair advantage of the ill and uninformed, this does not justify restricting the rights of competent contract owners to sell their property, i.e., their insurance contracts.

Clearly, such arrangements often do more to relieve welfare burdens, preserve dignity, and alleviate suffering than any other remedy. Furthermore, the rapid expansion of the viatical market, despite opposition from some regulators, indicates that viaticals are filling a void, meeting a real consumer need.

Within the industry, the proliferation of policies allowing acceleration of benefits satisfies some of the need. More freedom to accelerate, e.g., for chronic or critical illness or disability, would expand this.

If the industry did not fear the social, political, and regulatory repercussions, it could also be an efficient, effective, and equitable source of viatical settlements. In fact, if a company buys back its own policies, i.e., when it determines that their present values exceed cash values, it would eliminate many of the risks of current viatical transactions (e.g., selling to someone who stands to gain by the insured's early demise). In buying its own contract, the insurer could simply cancel the contract, release the reserve, and post the gain — a win-win "deal."

Many are concerned about maintaining a "level playing field." Moving a product out of the general account, i.e., creating a variable product out of a non-variable one, is already an available option that exempts policies from many state valuation and nonforfeiture requirements. Out-of-state groups are created to enable marketing in "difficult" states. Insurers (and even some state regulators) "bend" the rules or "push the envelope." These, plus the proliferation of reinsurance and international insurance arrangements oblivious to (or to circumvent) U.S. regulation, have made and will continue to make the "playing field" increasingly non-level.

Moreover, it seems that the consumer (and the insurer) ought to have the choice.

Consumer awareness, coupled with enhanced disclosures, and compounded by continuing market pressures, imply that the need for the fixed minimums required by SNFL may be obsolete. Indeed, the 21st century may be the time to set the market free.

* * *

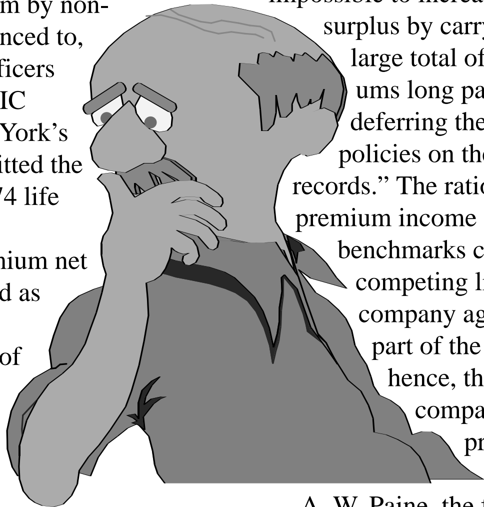
***David J. Hippen, FSA, MAAA, is an actuary at the Florida Insurance Department in Tallahassee, FL. He can be reached at* hippend@doi.state.fl.us.**

To Admit Or Not To Admit — Is That The Question?

by Kenneth W. Faig, Jr.

A learned historical treatise could probably be written about the accounting practices relating to the booking of due and uncollected premium for individual life and health insurance contracts in the United States.

In his 1937 RAIA paper, "The Convention Statement of Life Insurance Companies," Clinton Shepherd traced the history which led to New York's definition of non-admitted assets in 1871. The reporting forms specified for life and P&C companies in New York prior to 1860 did not provide for uncollected premiums as an asset; nevertheless, many companies established such assets and some of them even stated income without deduction of the prior year's uncollected premium asset. One of the most abused items in early balance sheets was the asset labeled "premiums in the hands of agents and in course of collection." In 1869, the total assets of the companies doing business in New York was reported at $229,000,000, of which $77,000,000, or 34%, was "premium notes and due and deferred premiums." In 1871, New York addressed this problem by non-admitting "cash advanced to, or in the hands of, officers and agents." The NAIC concurred with New York's actions and non-admitted the same assets in its 1874 life convention blank. Uncollected life premium net of loading was carried as a non-ledger asset.



The development of premium accrual accounting for individual life insurance undoubtedly has a strong relationship to the history of the grace period provision in these policies. In the absence of a grace period provision, a policy would terminate (or convert to a nonforfeiture option) immediately upon non-payment of any premium falling due. In time, a minimum 30-day grace period became a required policy provision in all jurisdictions. Many companies allowed policies with outstanding unpaid premiums to remain on their books for a longer period through the operation of "automatic" or "easy" reinstatement policies for policies with premium arrearage in the 30-90 day range. For individual life insurance, due and deferred net premium has traditionally been posted as an asset rather than a contra-liability to annual net premium-basis mean reserves. Cost of collection in excess of loading, formerly required as an additional liability, will disappear from the convention blank in 2001 under codified statutory accounting.

At the time Shepherd wrote in 1937, the life convention blank deducted under non-admitted assets "premium notes, policy loans, and other policy assets in excess of the net value and of other policy liabilities on individual policies." Shepherd explains the historical development of this provision by "the desire of the supervising authorities to make it impossible to increase the company's surplus by carrying in its assets a large total of uncollected premiums long past due merely by deferring the termination of such policies on the company's records." The ratio of expenses to premium income was one of the benchmarks commonly used by competing life insurance company agents during the latter part of the nineteenth century; hence, the motivation of company officers to state premium income as liberally as possible.

A. W. Paine, the first insurance commissioner in Maine and the first chairman of the NAIC's blanks committee, addressed the nature of the uncollected premium asset at the first meeting of the NAIC (then the National Convention of Insurance Commissioners) in 1871:

> For convenience, the credit [for due and deferred premium net of loading] is to be made on the credit side of the account, among the items of assets. It is not in any sense an "asset" or to be regarded as such in any other light than to reduce the apparent liability of the company as charged on the opposite side of the account.

From early on, insurance supervisory officials realized that uncollected life premiums did not represent a legal debt of the policyowner to the insurance company and were justified only as a contra-liability to the reserves based upon the assumption that such premiums had been collected. Shepherd quotes from the New York Superintendent's report of 1891 to demonstrate the intensity of the early focus on admitted premium:

> Mr. Paterson [a department examiner] ... listed every policy on which an uncollected or deferred premium or premium note was claimed as an asset, and where it was found that any such was in excess of the reserve on the policy, such excess was rejected as an asset. This was one of the slowest and most laborious portions of the examination.

By way of contrast, nineteenth century fire and casualty insurers solved the uncollected premium problem neatly by deducting from uncollected premiums all those more than ninety days past due. Shepherd (p. 162) explains this difference in historical practice between life and P&C carriers as follows:

> Premium income on casualty and fire lines today is reported on a written or due basis; other items are reported on a paid basis, just as in the life statement. The explanation of this difference in treatment lies perhaps in the fact that fire and casualty premiums past due often represent bona fide obligation on the part of the policyholder; whereas unpaid life premiums do not, and are, therefore, only "offset" assets, as has been pointed out.

While even today mandatory insurance coverage is generally restricted to certain P&C lines (e.g., automobile liability), the legal obligation to carry property or life insurance in connection with borrowing has a long history. Nevertheless, it is rare for premium to constitute a legal debt of the policyowner to the insurer.

Individual A&H insurance, whether written in P&C or life companies, from early on tended to follow the P&C paradigm with respect to uncollected premium. Individual accident and health insurance was traditionally reserved on an unearned premium basis. For contracts requiring additional reserves, these reserves usually were computed on a mid-terminal basis; so the full year's net premium was not inherent in the additional reserve. Managing agents responsible for premium collection and other administrative functions were more common in the individual A&H insurance business than in the individual life insurance business, with the exception of industrial or debit business.

Thus, the perennial question of the admissibility of uncollected premiums and premiums in the hands of agents loomed larger in the A&H business than it did in the life insurance business. It is not surprising that it received a more restrictive solution (the 90-day/one modal premium criterion) in the A&H business than it did in the life insurance business.

The 1967 annual statement instructions as reproduced in Joseph C. Noback's *Life Insurance Accounting* (Appendix A) contain the following instructions for A&H premiums due and unpaid in Exhibit 14:

> In column (3) [non-admitted assets] due and unpaid premiums effective prior to October 1, and, on other than group, any premiums in excess of one periodic premium due and unpaid in the case of premiums payable more frequently than quarterly.

This was interpreted under the familiar dictum that for individual health insurance, not more than one modal premium not more than 90 days in arrears as of the valuation date could be admitted. One may find this rule restated in the IASA *Life Insurance Accounting* textbook (1994 edition, p. 5-8) and other references.

One ought to take note of a nuance which occurs in the final pre-codification edition of the NAIC Accounting Practices and Procedures Manual for Life and Accident and Health Insurance Companies (Chapter 18, pp. 3-4):

On accident and health policies, other than group, with premiums payable more frequently than quarterly, *all* due and unpaid premiums are not admitted if more than one period premium is overdue. Group premiums more than 90 days overdue also are disallowed as an admitted asset.

The wording of the 1967 instruction leaves the impression that a premium arrearage may be allocated between admitted and non-admitted due premium. By way of contrast, the final pre-codification APPM appears to take a different position in requiring that the entire premium arrearage be classified as admitted or non-admitted. This requirement raises a problem when, as is usually the case, the most recent due premium has an associated unearned premium liability. There is no provision to non-admit an unearned premium liability established in respect of a non-admitted due premium.

Shepherd (1886-1950) was a forward-looking thinker, whose views were formed by his careful historical studies. (His 1939 RAIA paper, "The Legal Reserve System in the United States," provides for valuation and nonforfeiture the same rich developmental perspective that his 1937 RAIA paper provided for financial reporting.) In his 1937 paper, Shepherd opined on uncollected premium (p. 139):

> The problem is less complicated and serious in the fire and casualty lines and is satisfactorily dealt with by deducting from uncollected premiums all those more than ninety days past due. It might have been an improvement if a similar rule had been applied to life premiums to arrive at the non-admitted portion.

We will see that the framers of statutory codification have in essence opted for the admissibility of life insurance due premium the suggestion which Shepherd first made in his 1937 paper.

What is the impact of codification's SSAP No. 6 on "Uncollected Premium Balances, Bills Receivable, and Amounts Due From Agents and Brokers?" First of all, the SSAP specifically excludes uncollected and deferred premiums for life considerations, which are covered under paragraph 12 of SSAP No. 51 on Life Insurance. Paragraph 9(a) of SSAP No. 6 defines the criterion for non-admission of due and uncollected A&H premium:

> Uncollected Premium — To the extent that there is no related unearned premium, any uncollected premium balances which are over ninety days due shall be non-admitted. If any installment premium is over ninety days due, the amount over ninety days due *plus all future installments that have been recorded on the policy* shall be non-admitted.

The equivalent language for life insurance from Paragraph 12 ("Uncollected Premium Balances") of SSAP No. 51 is:

To Admit or Not to Admit — Is That the Question?
continued from page 19

> Gross premiums that are due and unpaid as of the reporting date, net of loading, shall be classified as uncollected premiums. Uncollected premium balances which are less than 90 days past due meet the definition of an asset, as defined in *SSAP No. 4 - Assets and Non-admitted Assets,* and are admitted assets to the extent they conform to the requirements of this section.

One may note that the requirements for admission of uncollected A&H premiums remain more stringent under codified statutory practice than the equivalent requirements for admission of uncollected life premiums. Under SSAP No. 6, one must look at the due date of the earliest unpaid modal premium. If it is over 90 days in arrears as of the valuation date, all unpaid modal premiums must be non-admitted. There appears to be a saving provision if the most recent unpaid modal premium has a corresponding unearned premium liability as of the valuation date. Suppose that an annual mode policy with a modal premium of $100 is paid to 07-01-2000 for a 12-31-2000 valuation and that a $50 gross unearned premium liability is posted for this policy.

The first sentence of Paragraph 9(a) of SSAP No. 6 would appear to "save" the admission of the due and uncollected premium of $100 even though it is over ninety days in arrears as of the valuation date. But it must be observed that the first and second sentences of Paragraph 9(a) appear to be in conflict on this subject.

For life insurance, note that Paragraph 12 of SSAP No. 51 says that gross premiums, net of loading, which are less than 90 days in arrears as of the valuation date, may be admitted. It does not specifically state that premiums 90 days or more in arrears should be non-admitted although one might draw that inference from the phraseology. Some commentators might argue that premiums 90 days or more in arrears need to be classified on a facts and circumstances basis with due regard to the definition of assets in SSAP No. 4. The question can also be raised as to whether SSAP No. 6 and SSAP No. 51 differ intentionally on the admissibility of a modal due premium exactly 90 days in arrears.

Before the reader decides that the classification of due premium assets is an obscure and perhaps unimportant part of codified statutory practice (which may or may not be adopted by his or her company's domiciliary state), it is worth noting that in the NAIC's 2001 compendium of annual statement instructions, the instruction for line 17 ("Accident and Health Premiums Due and Unpaid") in the asset section of the balance sheet contains the phrase "Refer to SSAP No. 6." If your domiciliary state adopts these annual statement instructions, SSAP No. 6 will govern not only your reconciliation to codified statutory practice as regards the status of A&H due premium assets, but also your domiciliary state annual statement.

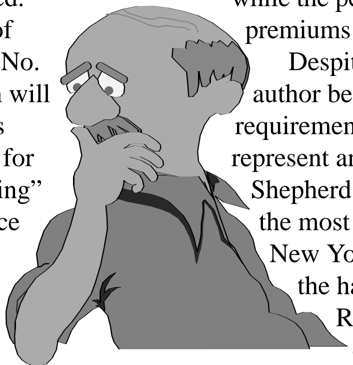
Essentially, the admission or non-admission of A&H due premiums in both the domiciliary state annual statement balance sheet and the codified statutory balance sheet will be determined by the language of SSAP No. 6.

It would appear that the "safest" rule would be to non-admit all due and uncollected A&H premiums on a policy if the earliest unpaid modal premium is more than 90 days in arrears. However, since there is no corresponding provision for "non-admitting" an unearned premium liability, it appears that an uncollected premium with an associated unearned premium liability may nevertheless be admitted. Because of the inconsistency of the first and second sentences of Paragraph 9(a) of SSAP No. 6, there is some ground for arguing that an allocation of the total premium arrearage between admitted and non-admitted can still be undertaken where admissibility of the most recent unpaid modal premium is "saved" by the "unearned premium" clause of 9(a).

> *"It would appear that the 'safest' rule would be to non-admit all due and uncollected A&H premiums on a policy if the earliest unpaid modal premium is more than 90 days in arrears."*

Other questions can certainly arise. In some companies, certain policies may be billed "off-modeaversary." Thus, an annual mode policy issued January 1 may nevertheless be billed July 1 to July 1. Under one convention, unpaid premiums on such policies are restored to "normal" billing mode at the earliest possible date. Thus, a January 1-dated annual mode policy with $100 annual premium paid to July 1, 2000 as of December 31, 2000 would have a due and uncollected pro-rata premium of $50 and a gross unearned premium of $0 as of the valuation date. A second convention would allow this policy a due and uncollected premium of $100 and a gross unearned premium of $50 as of the valuation date. Under the second convention, it might be argued that the due and uncollected premium, despite being 180 days in arrears as of the valuation date, is admitted because of the "unearned premium" clause of Paragraph 9(a).

For financial statements dated January 1, 2001 and later, both life and health valuation actuaries should review the practices of their companies with regard to admitting/non-admitting due premium on the asset side of the balance sheet. The concept of non-admitting life insurance due premium will be new to most insurers. They will need to make a judgment as to whether the language of Paragraph 12 of SSAP No. 51 specifically requires premium 90 days or more in arrears be non-admitted. Similarly, the language of Paragraph 9(a) of SSAP No. 6 for A&H due premium will suggest some differences from historical practices for A&H insurers. The "saving" clause of the first sentence of Paragraph 9(a) will need to be reconciled with the "all or nothing" clause of the second sentence.



One simple solution to the Paragraph 9(a) conundrum would be to follow the rule of the second sentence but to allow a contra-liability for any unearned premium liability held in respect of a non-admitted due premium. Another approach would be to admit only exactly as much due premium as corresponds to the premium liability; thus, if $50 unearned premium liability was held in respect of a $100 due premium otherwise non-admissible, $50 of the due premium would be admitted and $50 would be non-admitted. The requirement that the collectibility (and therefore admissibility) of an entire premium arrearage be judged by the earliest arrearage certainly makes common sense. If one allocates a premium arrearage between non-admitted and admitted components, the puzzling result is that the ultimate modal due premium is admitted while the penultimate and earlier due premiums are non-admitted.

Despite the potential confusion, the author believes that codification's requirements for admitting due premium represent an advance in practice such as Shepherd envisioned in 1937, perhaps the most significant advance since New York non-admitted premiums in the hands of agents in 1871. Rational solutions for the disputed points are available.

Regulatory guidance will probably follow based on emerging company practice and comment. The result of the process should be greater uniformity in insurance company financial statements relating to the balance sheet and income statement treatment of business kept on the books for administrative reasons for some period following the contractual termination date.

Some commentators may maintain that no recent abuse of normative administrative practices relating to the maintenance of inforce files justifies codification's admitted premium changes. Other commentators may maintain that norms for the administrative practices themselves, rather than norms for admitted due premiums, would address any potential abuse more directly. The author responds that codification's admitted premium requirements build, in a continuous manner, upon historical financial reporting practices. Without limiting administrative practices themselves, codification's admitted premium requirements impose a practical limitation upon the financial leverage obtainable through abuse of normative administrative practices. They should make for a fairer, safer future for life and A&H businesses — a goal shared by all competitors, consumers, and industry regulators.

***Kenneth W. Faig, Jr., FSA, MAAA, is manager of actuarial services at PolySystems, Inc. in Chicago. He can be reached at* kfaig@polysystems.com.**

Notice To All New York Actuaries

Volunteers are needed to help with the planning of the Annual Meeting of the Actuarial Society of New York (ASNY). Work is already underway and Mel Feinberg (FSA, New York Life) is currently chairing the Annual Meeting Committee.

Volunteers are needed to either participate on the Committee or to assist in suggesting topics and speakers for the program.

So, if you are interested and you live in the New York area, call Mel at 212-576-6454 to lend your services. They will be greatly appreciated!

Survey of Section Members Provides Input on Newsletter — Method of Distribution Tops List of Comments

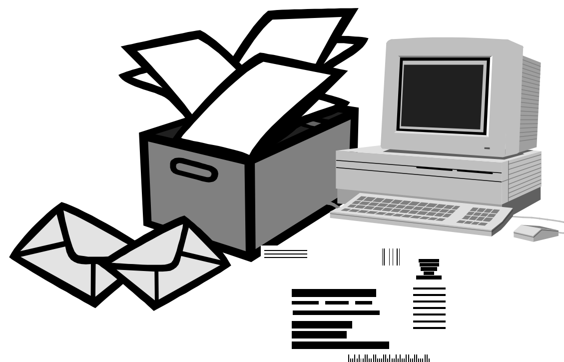
by Thomas Nace

Background

At the Annual Meeting in Chicago last year, the Section sponsored a session titled, *Financial Reporting Section Hot Breakfast*. One of the topics on the agenda included a discussion of the Section newsletter, *The Financial Reporter*. In particular, one issue presented by Mike McLaughlin on my behalf, was the whole issue of timeliness of the newsletter. For those of you who were unable to attend the session, let me provide an overview.

Currently, the time starting with the day when articles are submitted to the editor to be published in a given issue, until the day when that newsletter is actually received in a member's in-bucket, can run up to three months. While this may sound like an inordinate amount of time, understanding the process may help clarify the reason.

When articles are received by the editor, they are first reviewed by the editor for accuracy, understandability, and grammar. Subsequently, the articles are reviewed by a group of independent volunteers who have agreed to review articles as they are submitted and before being published. Comments received back from the reviews are then fed back to the author to either accept or to contest. Once all articles have been reviewed and revised as needed, they are submitted to the Society office to produce an initial layout of the entire issue. This layout is then reviewed by the editor and changes are reflected as needed. Upon final sign-off on the layout, the entire layout is then sent to the printer to be set up for print. All copies are printed and then the issue of mailing must be addressed. Up until recently, the mode of operation has been to mail the newsletter on a bulk mail basis. This is cheaper than first class mail, but the downside is that the time that it takes for bulk mail can be as much as 4-6 weeks. Note that the mailing time can make up one-third to one-half of the three months elapsed time mentioned above.



One of the issues raised was whether the Section members would prefer to have the newsletter mailed first class, thereby dramatically shortening the overall time frame for delivery. The cost to the Section would be around $4,000 - $5,000 per issue. While the Section currently has the funds to handle this increased cost, there is the potential that somewhere down the road a slight increase in dues might be warranted in order to continue first class delivery.

While using first class was discussed as a possibility for alleviating a big chunk of the process time at the Annual Meeting session, other alternatives were presented. For example, should electronic delivery be used, either instead of the hard copy delivery or in addition to the hard copy delivery? Electronic delivery, while not specifically defined, includes several variations. The newsletter could be included as an attachment to a group e-mail that would be sent to all members.

Or, a notice could be sent to all members that the newsletter was now available on the Society Web site, and the member would need to go to the site and download a copy to his/her PC. Or the newsletter could just be posted to the Web site with no e-mail notification that it was there, similar to the way other updates to the Web site are currently handled.

In addition to the issue involving the delivery of the newsletter, another topic on the agenda at the Annual Meeting session was a general question as to the subject matter included in the newsletter.

The Survey

Following the agenda item discussion at the aforementioned meeting, a survey form was handed out to all attendees. The form solicited input on a variety of topics of interest to the members of the Financial Reporting Section. Two questions related to the newsletter:

1) "Comment on Content. Should the emphasis be greater on current events or in-depth analysis of technical topics?"

2) "Comment on Delivery Mechanism: Should we continue to send hard copy by mail? Would you prefer first class mail (which is faster) although at a greater cost? Should distribution be electronic only? Should we use the Web site only?"

The response to the above questions was overwhelming. We received 73 response forms back from the attendees, more than expected. The results of the survey forms have been reviewed and tabulated. The responses to those questions dealing with the newsletter are summarized on the next page.

Survey Says...

The first question dealt with newsletter content. Of the 73 forms received back, 50 of the forms contained responses to this question. The breakdown of the responses is shown in Table 1 on the next page.

Table 1 - Coments on Newsletter Content		
Response	Number of Responses	% of Total Responses
Need a Mix of Current Events/Technical In-Depth Analysis	17	34%
Current Mix is OK	6	12%
Would Like More Current Event Articles	13	26%
Would Like More Technical In-Depth Analysis Articles	10	20%
Would Like Educational/Training-type Articles	1	2%
Other Responses	3	6%
Total	**50**	**100%**

If you concede that the current newsletter content is a balanced mixture of current events and technical topics, then the first two responses in the above table indicate that 46% of the responses feel that a balance of both types of articles is desirable.

Of the remaining responses, the most common opinion expressed was that there should be a mixture of topics, but with more emphasis on current events (26%). A slightly less number (20%) felt that there should be a combination of topics, but with more of an emphasis on articles dealing with technical in-depth analysis.

Reviewing some of the actual comments can provide great insight into how to structure the newsletter articles going forward. In the category of those favoring more current articles, one person suggested that "the newsletter should focus on current events with a notice of a link to technical articles." Along a somewhat similar vein, one responder wrote, "the newsletter should focus on current events. Longer, in-depth analysis of technical articles is better handled through a special issue publication, perhaps as a special edition newsletter or Web site article." A third supporter of current event articles felt that "in-depth subjects can be covered in seminars."

The opposing view (i.e., those favoring more in-depth analysis articles) had its valid arguments as well. "In depth technical articles have been of more use," wrote one member, while another argued that "the newsletter may be the only forum available for in-depth analysis of technical topics, so emphasis should be on this." Other comments included general suggestions to improve the overall benefit that the newsletter articles provide to the readers. One comment stated that the "articles are good, but they need clearer examples." A supporter of more technical articles felt that the "articles should be more from a practical standpoint — something you can apply."

Finally, one person suggested that the focus of articles should be more educational and/or training. They write, "The teaching session/article on CARVM/GL 33 was great! More articles like that would be good."

All of the above are points well taken and will be considered going forward. The second question in the survey dealt with delivery of the newsletter. This issue received many more comments than the earlier question. Of the 73 forms received back, 64 contained responses to the issue of delivery. Of the 64 responders, some opted for more than one approach to the method of delivery. Adding these in as separate votes brought the total number of responses to 72.

The number of people who wanted a scenario that included receiving the newsletter in hard copy form was 41 out of 72, or 57%. On the other hand, the number of responders who wanted some version of electronic delivery was 52 out of 72, or 72%. It appears that a delivery system that included both hard copy and electronic delivery would be most appealing to the vast majority of members. Only 20 out of 72 (28%) desired hard copy only, while only 31 out of 72 (43%) desired electronic delivery only.

For those who indicated that hard copy was desirable, 24 of these responses expressed an opinion as to whether the mailing should be first class or bulk mail. A majority of these (58%) preferred first class mail, while the remaining 42% favored using bulk mail.

People in favor of hard copy argue that "hard copy is needed because of (the) length (of the newsletter) — easier to review." Others preferred hard copy, "particularly if access to the Internet is limited."

Arguments for electronic delivery state that "e-mail is better since (i) you can distribute to interested parties, (ii) it is faster and (iii) it is cheaper." Another defense of the electronic delivery is that "You can always print out a copy for your files if you want."

Others suggested ways to address the needs of both camps. For instance, one person wrote, "Send e-mail that newsletter is on Web site, let members have the option, for $5/year, to receive first class hard copy." Others suggested a similar option without the additional cost for hard copy.

One suggestion involving the electronic route was to "add the newsletter to the Web, plus a newsletter history and an index to all articles." Suggestions like these will be forwarded to Deborra Poorman, who is assuming a newly created position associated with the Council related to Web Site Communications for the Section.

Summary

What is most gratifying is the interest that the members place in the newsletter and the importance that they give it. The suggestions received were insightful and productive and, for sure, will be seriously reviewed for possible adoption in the months ahead. While feedback suggests that the newsletter is very much valued, we hope that we can tweak the production of the newsletter to make it even better in the future. This is all possible because of the attention and opinions expressed by the members.

For any members who were not able to attend the Annual Meeting session and would like to express an opinion on any of the above topics, feel free to e-mail the Editor at the e-mail address indicated in this newsletter.

***Tom Nace, FSA, MAA, is vice president with PolySystems Inc., Pennsauken, N.J. He can be reached at* tnace@polysystems.com.**

A Summary of the UVS Project

by Dave Sandberg

Editor's Note: This is a report on the use of Section funds. In addition to those funds, this project was also supported by funds from the Society of Actuaries and the American Academy of Actuaries. But most importantly, the project was supported by extensive time donated by Roger Smith, Victor Kwong, Brian Richards, Doug Eckley, Tom Grondin, Tim Hill, Mark Tenney, Luke Girard, Doug Doll, Donna Novak, and Eric Fasano, as well as the author of this article.

Introduction

Last fall, the Financial Reporting Council agreed to provide some funding for a joint Academy/SOA applied research modeling project. The project was based on principles developed by the Valuation Task Force of the American Academy of Actuaries for the assessment of capital adequacy. The project also allowed for the demonstration of a possible "fair value" accounting methodology and the results were presented at a seminar in Philadelphia on November 8th. The Section funding contributed to the project's participants being able to build a database of cashflows usable for further theoretical and applied development of these topics by the SOA or other interested parties.

The modeling project utilized actuarial techniques and theory to apply a ruin theory approach to determining capital adequacy. It used current technology and models to investigate how actuarial science can provide a forward-looking analysis of a company's ability to support the risk that it has assumed.

The project developed line-of-business and total company financial information (including statutory and GAAP) for a fictitious insurance company and projected cashflows from three points in time through three balance sheets and two income statements. This allowed a comparison of current accounting practices to the proposed alternatives. While the project used U.S. accounting comparisons, its focus on the projection and evaluation of future cash flows will also allow the inclusion of non-U.S. insurance products as well (if so desired at a later time.) Due to the emerging national and international developments concerning these concepts, the project looked at both required capital and fair value due to their common prospective orientation to risks on the balance sheet.

Modeling Framework

There were three main segments — a "worldview" model of economic assumptions, independent insurance product line-of-business models, and a "total company" model that pulled together the financial information for the insurer.

The line of business models utilized information from the world view model, as well as specific assumptions needed for the particular line of business. For example, the mortality for the universal life product model was a multiple of the mortality selected by the world view mortality model.

The output from the line of business models served as input to the total company model.

World View

The "world view" represented a set of assumptions and parameters common to multiple lines-of-business. They included the following:

- **Corporate Bond Yields** – modeled as constant spreads to Treasury rates
- **Default** – modeled the variations in the default provision by duration from the start of the projection to reflect that default patterns vary since the bond or security was last rated. The chance of a security rated AAA yesterday defaulting in the next several years is effectively zero. As time passes, chance for default increases.
- **Inflation** – modeled as the 90-day Treasury rate less 300 basis points.
- **Prepayment Speeds** – used a typical function driven by interest rates.
- **Expected Mortality** – based improvement assumptions on the 20th century U.S. census tables with an average annual improvement rate of 0.3%.
- **Mortality Risk Due to Uncertainty About the True Improvement Rate** – Three mortality sets were used, with the best and worst being one-half standard deviation from the average. These improvement rates were not varied by projection year. This assumption estimates the risk of setting a mortality assumption, but then missing the mark in the sense that the world moves in a different direction. It does not address the problem of variability of a smaller company's experienced mortality rate around the true mean. The term life product line-of-business model conducted sensitivity tests on the effect of the variability.
- **Mortality Catastrophe Risk** – Based on data from the 1918 influenza pandemic, a one time 38% increase in mortality for one year was applied to 26% of the 30-year projection sets.
- A set of 1000 "realistic" interest rate scenarios for capital adequacy requirements
- A set of 1000 risk-neutral interest rate scenarios for fair value calculations
- The interest rate scenarios were generated as of 12/31/89, 12/31/92 and 12/31/95 and were all constrained to be arbitrage free.

Lines of Business Modeled

Five life product lines were modeled — 10-year term, Universal Life, Single Premium Deferred Annuity, Income Pay and a Variable Annuity with Guaranteed Living Benefits.

Fair Value Modeling Platform

One of the goals of the project was to provide a platform to experiment with various methodologies for calculation of fair value of liabilities. The modeling platform was used to determine the effect of these methodologies on a company's financial statements and the sensitivity to various techniques and assumptions.

All of the fair value calculations were centralized in the module that brought line-of-business data into a company wide perspective. This allowed alternative approaches to determining fair value without needing to rerun the line-of-business models.

Access Database for Total Company

To facilitate a total company analysis, and to provide a platform for calculation of fair values under different criteria, an Access database was defined and populated. The database has quarterly projection results (quarterly instead of monthly to reduce file size — the monthly cash flows are summed within the quarter). The data fields were as follows:

- Scenario Number
- Calendar Year
- Month
- Premiums
- Death Claims
- Annuity Payouts
- Health Claims
- Surrenders and Withdrawals
- Claim Expenses
- Premium Tax
- All Other Expenses
- Transfers to Separate Account
- Earned Interest (net of investment expense)
- Payments of Principal
- Decrease in Cash Account Balance
- Default Charges
- Investment Income
- FIT
- Asset Book Value
- Asset Market Value
- Statutory Reserves
- Tax Reserves
- Asset Tax Basis
- Commissions

The cash flows for premiums, death claims, annuity payouts, health claims, surrenders and withdrawals, claim expenses, premium taxes, other expenses and transfers to separate account are intended to cover all liability cash flows. In these models, there are no maturities, no policy loans, no policyholder dividends, no reinsurance or other liability cash flows.

Total Company View

Since the Access database had a consistent format for all the lines of business, it was used for the total company calculations. For required capital calculations, the results by line were combined scenario by scenario and a new ranking of scenarios performed. This allowed for covariance of risks among the lines to be measured. For fair value, the present value calculations for each line were assumed to be additive when addressing the total company values.

The following issues were simplified in the total company results and were deemed to have not materially affected the results:

Federal Income Tax – The line of business models assumed immediate credit for any negative taxes. On a total company basis, it would be possible to utilize tax carry-forwards and carry-backs (although these may not have been entirely appropriate for an inforce-only projection).

Overhead Expenses – Overhead expenses were allocated to maintenance expenses included in the line of business unit expense factors. Acquisition expense overhead was included in the new business assumptions. A total company model could have included overhead on a more “fixed amount” basis but was not done here.

Free Surplus – A total company model could include additional surplus not allocated to the lines. Although this would affect cash flows and tax carry-forwards/ carry-backs, it would not be expected to have a direct impact on calculated required capital or fair value of liabilities.

Seminar Results/Concepts

The seminar demonstrated the application of a ruin theory approach and a fair value methodology using current technology and techniques. Items of interest included:

- The effect of the “discount for diversification,” (i.e., the reduction in surplus required for the combination of lines of business).
- Differences in capital requirements using a ruin theory approach as compared to current capital requirements.
- How convergence of results was affected by the number of scenarios used.
- Sensitivity of financial results to changes in core assumptions, such as mortality and lapses.
- Comparisons of fair value results to current GAAP reporting.
- Effect of using realistic vs. risk-free rates on fair values as well as a demonstration of the use of Market Value of Margins in the liability cashflows.
- 50-60 people in attendance, including one P&C actuary, two individuals from the Federal Reserve Board and one individual from the Pension Benefit Guaranty Corporation (PBGC).
- A good review of the uses and differences of arbitrage-free, risk-neutral and realistic interest rates.
- Illustration of the lack of current formulaic RBC responsiveness to changing risks.
- The use of the Conditional Tail Expectation (CTE) concept developed by Harry Panjer and the CIA for assessing segregated fund capital adequacy.

Work Still Remaining

- Finalize documentation of data and key conclusions of seminar.
- One way to reduce the number of projections needed is to model each risk independently and build a correlation matrix to determine the impact of diversification. This requires more research in how to estimate the magnitude of those correlations.
- Cementing the relationship of capital levels to fair value discount rates.
- Business risk classifications and segmenting of risks into quantifiable, subjective and high impact/low frequency categories.
- Since the seminar focused on one aspect of UVS — capital for inforce business — it did not illustrate a Viability Report, nor a High Impact Low Frequency Report.
- Continue discussions with NAIC. Concepts are relevant to:
  - Life Health Actuarial Task Force (LHATF)
  - Life RBC Working Group
  - Liquidity Working Group
  - E Committee
- Trade-off of relevant vs. accurate. Is it better to be precisely wrong or approximately right?
- Establishing a basis for comparing required capital for Life, Health, P&C and Banking?
- Use of Feedback Loop to compare actual to expected results and its impact on required capital.

Treasurer's Report

FINANCIAL REPORTING SECTION
SOCIETY OF ACTUARIES
FINANCIAL STATEMENT - INCOME STATEMENT
PERIOD ENDING DECEMBER 31, 2000

FUND BALANCE AS OF JANUARY 1, 2000---------------------------$243,661

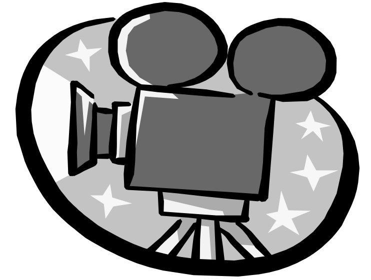
	SEPT. YTD	DECEMBER	DEC. YTD
INCOME:			
Dues	$ 35,880.00	$ 60.00	$ 35,940.00
Seminars	72,018.00	46,276.00	118,294.00
GAAP Textbook Sales	935.00	79,430.00	80,365.00
Newsletter	200.00	106.00	306.00
Monograph	996.00	-	996.00
Annual Meeting	-	110.00	110.00
Interest	5,767.00	2,400.00	8,167.00
	$ 115,796.00	$ 128,382.00	$ 244,178.00
EXPENSES:			
Travel	$ 31,105.00	$ 370.00	$ 31,475.00
Honorarium	6,500.00	-	6,500.00
Printing	9,764.00	3,018.00	12,782.00
Postage & Mailing	6,306.00	7,880.00	14,186.00
GAAP Textbook Expenses	578.00	6,498.00	7,076.00
Special Supplies	723.00	595.00	1,318.00
Functions	1,468.00	1,585.00	3,053.00
Conference Call	-	109.00	109.00
Seminars	-	-	-
Research Projects	4,818.00	11,000.00	15,818.00
Administrative Charge	14,796.00		14,796.00
	$ 76,058.00	$ 31,055.00	$ 107,113.00
NET INCOME YTD			$ 137,065.00
FUND BALANCE	$ 283,399.00		$ 380,726.00

<u>Notes to Financial Statement:</u>

Travel: Common Section expenses (Section chairs' mtgs., etc.)
Printing: Newsletter - 12/00 + Section election materials
Postage & Mailing: Newsletters - 3/00, 9/00, GAAP, Section election materials + misc.
GAAP Book Expenses: Sales through 12/00
Special Supplies: GAAP expenses
Functions: Section breakfast - Chicago - 10/00
Conference Calls: 9/26, 10/4
Research: Funding of UVS Project

This Section has made the following financial commitments:
Distribution of expense monograph - up to $20,000
1995 Specialty Guides - $5,000 (to date - paid $2,020)
GAAP Textbook - $97,000 - completed
UVS Project - up to $25,000 - completed

Spring Meeting Preview

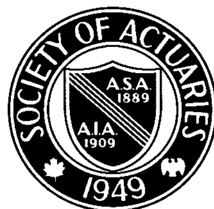


The Spring Meeting of the Society of Actuaries will be held in Toronto on June 20-22. Members will receive materials regarding agenda and registration information very shortly. Below is the current list of financial reporting sessions scheduled for the Spring Meeting. Note that this schedule is preliminary. Consult the meeting materials for final dates and times.

Session	No.	Type	Date/Time
Uses of Reinsurance in Risk and Capital Management	5	PD	June 20, 10:30
GAAPs Around the World	17	PD	June 20, 2:00
Accounting for Policyholder Dividends	23	WS	June 20, 2:00
Who Let the Info Out? • Financial Statement Disclosures: • Practices and Requirements	31	PD	June 20, 4:00
To Cash Flow Test or Not to Cash Flow Test	35	PD	June 20, 4:00
Regulation XXX: Comparing Techniques And Experiences	51	WS	June 21, 8:30
Regulation XXX: A Comprehensive Overview	56	PD	June 21, 10:00
What Does Charlotte's Section Web Say To You?	64	WS	June 21, 10:00
Liquidity Standards — The Regulatory Aspects	72	PD	June 21, 1:30
FAS 133	73	PD	June 21, 1:30
Accounting for Business Combinations	90	TS	June 21, 3:30
DAC Amortization for Variable Products	92	WS	June 21, 3:30
Recognition of Sales Inducement and Policy Exchange Credits Under GAAP	100	PD	June 22, 8:30
Fair Value Reporting Workshop	107	WS	June 22, 8:30
Unified Valuation System Project	112	PD	June 22, 10:30
Reporting Requirements for Class Action Settlements	119	WS	June 22, 10:30

VOLUNTEERS WANTED

Review *Record* manuscripts from SOA meetings (that have already been edited for grammar, style, and format) for actuarial content and accuracy. Work with SOA staff and moderators to help us get the Record sessions onto the SOA Web site faster. Contact Rich Cruise at *rcruise@LincolnDirectLife.com* or 402-421-5677.



475 N. Martingale Road, Suite #800
Schaumburg, IL 60173
Phone: 847-706-3500
Fax: 847-706-3599
Web site: *www.soa.org*