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Moving Away From Convergence

By Leonard J. Reback

For the past several years, the Financial Accounting Standards Board (FASB), which promulgates US GAAP accounting standards, has been working to converge the accounting standards on a number of topics with those of the International Accounting Standards Board (IASB), which makes the accounting standards for many other countries. Among these convergence projects were two of particular importance to actuaries: insurance contracts and financial instruments. However, over the past year the boards have decided to go their separate ways on both of these projects.

INSURANCE CONTRACTS

In February, FASB decided to stop pursuing a converged insurance contracts model with IASB. This means that it is no longer developing the building blocks approach (BBA) for long-duration contracts and the premium allocation approach (PAA) that were discussed in the exposure draft issued last year. Although IASB is continuing to develop that model, and expects to issue a new insurance contracts standard in 2015, FASB decided to pursue "targeted improvements" to existing US GAAP.

FASB began by addressing short-duration contracts. For short-duration contracts, it decided that the existing valuation model under FAS 60 did not require any changes. However, the board did decide to add some required disclosures. One of the key additional disclosures is a claim development table showing up to 10 years of claim development. It also required disclosure of both the frequency and severity of claims. To the extent claim liabilities are discounted, the effect of discounting will need to be disclosed.

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CHAIRPERSON'S CORNER

By Tara Hansen

I am humbled to be joining the ranks of the esteemed gentlemen and one lady who have worn the green jacket before me! Many thanks go out to the section and section council for placing your faith in me for the next year.

This quarter, we have three section members whose terms have come to an end. I'd like to thank them for their generous donation of time and enthusiasm to the section. We will miss Henry Egesi, Craig Ryan and Bill Sayre as they "graduate" from the council. I'd also like to welcome our new section council members who joined us at the annual meeting in October—James Hawke, Leonard Mangini and Jason Kehrberg. Congratulations to you and welcome to the council!

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NEW RESEARCH AND WEBCASTS

Our section has been busy over the past few months assembling some very relevant research and continuing education webcasts for the section.

There has been lots of activity on the research front, and we are in the process of kicking off or shepherding quite a few great research projects that we know will be of interest to the section. Current projects include investigations into tail risk/correlation of risk, rising interest rates, and modeling financial results under multiple reporting bases. We are also considering research on nested stochastic modeling, captive insurance companies and capital financing, as well as a recently approved project to study the 2014 VBT mortality table's impact on statutory reserves.

Our webcast calendar is filling up as well with sessions on topics that include mergers and acquisitions (with a companion webcast on PGAAP), year-end financial reporting update and finance transformation.

As always, we would love to hear from section members about ideas for other research, webcasts, podcasts or any other mode of education/communication that would be useful. And even more than ideas, we love to hear from people volunteering to get involved!

A CHANGING OF THE GUARD

Lastly, I would like to take a moment to thank Lisa Markus who has served as editor of The Financial Reporter since June 2011. She has done an outstanding job of herding us cats and producing an outstanding newsletter quarter in and quarter out since that time. We'll miss you, Lisa, and wish you the best as you move on to new challenges. Michael Fruchter will be taking on the role as newsletter editor, having served for more years than I can remember as associate editor. We know that the section will make Michael's life easy with copious contributions of thought-provoking material as you have in the past! Thanks to both of you!

With that, I will close and say that I am excited at what the new year ahead of us brings and look forward to continuing to work with the other members and friends of the council in service to our section.

Here we go! ■

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And FASB also decided to require disclosure of any changes in judgments used in determining the claim liabilities, including the reasons and impact of the changes. FASB was planning to release a final standard on short-duration contracts disclosure in late 2014.

In August, FASB turned its attention to long-duration contracts. For long-duration contracts the board had decided that changes were needed to both measurement and disclosure. Potential measurement changes it planned to discuss over the course of the project include:

- Unlocking assumptions for FAS 60 and FAS 97 limited pay contracts

- Discount rates

- Retrospective deferred acquisition cost (DAC) unlocking

- Loss recognition

- Possible changes to SOP 03-1 liabilities.

Unlocking Assumptions for FAS 60 and FAS 97 Limited Pay Contracts

At the August meeting, FASB discussed several of these issues, and made several key decisions. It decided that **assumptions and discount rates for FAS 60 and FAS 97 limited pay contracts would need to be unlocked.** This apparently also may apply to the reserve basis for participating contracts under FAS 120. The effect of the assumption changes would be reported in net income. The effect of the change in discount rates would also be reported in net income, rather than in other comprehensive income (OCI). Assumption unlocking would be required once per year. A company would not have the option of unlocking more often. And in order to increase comparability between companies, the decision mandated that **unlocking would be required to be performed in the fourth quarter.** There would be no flexibility on the timing of unlocking. This portion of the decision apparently also applies to unlocking DAC assumptions for FAS 97 universal life and FAS 120 contracts, assuming DAC unlocking is not eliminated in later discussions.

As a result of the decision to unlock all assumptions, there were a number of follow-up decisions. Provisions for adverse deviation (PADs) were no longer deemed necessary, and thus **FASB decided to eliminate PADs.** Also, **loss recognition was deemed unnecessary and thus eliminated for affected contracts.**

The decisions do leave some open issues, which may be addressed at future meetings. For example, when unlocking assumptions, is the net premium ratio locked in, or is that unlocked as part of the assumption change? If the net premium ratio is unlocked, is it unlocked prospectively or retrospectively? Unlocking the net premium ratio could mitigate some or most of the net income volatility from updating assumptions, depending on how the net premium ratio is unlocked. Also, would amortization of deferred profit liabilities for FAS 97 limited pay contracts be affected? If unlocking is required to be done once a year, can actual experience still get updated more often? Under current US GAAP, the reserve basis for FAS 120 participating contracts is based on the non-forfeiture or dividend fund basis, which never changes. So if the reserve basis is meant to be unlocked, does this signal that FASB intends to revise the FAS 120 reserve basis? And if loss recognition testing is eliminated, does this also mean that "gains followed by losses" testing is eliminated?

Discount Rates

FASB also discussed discount rates at the August meeting but did not reach a decision. The options being considered include using an asset book yield, consistent with existing FAS 60. But FASB is also considering whether a current yield curve, consistent with market conditions as of the valuation date, should be used instead. A current yield curve would be consistent with the proposal in the 2013 exposure draft, and also with the likely IASB standard. However, a current yield curve might also be more complex to apply, and could generate extreme volatility in net income if FASB retains its decision to report the impact of discount rate changes in net income. On the other hand, if FASB revises its decision and permits discount rate changes

to be reported in OCI, a current yield curve could mean a more closely matched accounting basis for insurance contracts with available-for-sale assets. This would reduce the fluctuations in equity that currently occur in OCI due to changes in asset fair values. The accounting match would be even closer if the net premium ratio is not unlocked for changes in discount rates.

Next Steps

FASB has a number of further issues to discuss on long-duration insurance contracts, so it unlikely that it will be able to release an exposure draft of its positions until the second half of 2015. And then there will likely be re-deliberations to discuss comments submitted in response to its proposals. So we probably won't have a final standard on long-duration contracts until late 2016, if not later.

FINANCIAL INSTRUMENTS

FASB and IASB are also moving separately on their financial instruments standard. IASB released a final update to its financial instruments standard, IFRS 9, in July. The updated IFRS 9 covers classification and measurement, impairment and hedging. FASB has been nearing a final update to its financial instruments guidance as well.

On classification and measurement, it does not appear that too many changes will be made. Derivatives will continue to be reported at fair value, with all changes in fair value reported in net income (FV-NI). Embedded derivatives will continue to be bifurcated and reported at FV-NI. A fair value option will continue to be available for financial instruments that would otherwise be reported at amortized cost or at fair value with changes in value reported in OCI (FV-OCI). Originated loans will continue to be reported at amortized cost. For debt securities, the old FAS 115 categories will be retained, i.e.,

• Trading—reported at FV-NI

• Available for sale—reported at FV-OCI

• Held to maturity—reported at amortized cost.

There are a few important revisions, however. Equity investments will no longer be eligible to be classified as available-for-sale. Rather, most equity securities will be required to be reported at FV-NI. Also, for liabilities that apply the fair value option, the impact of "own credit" will be reported in OCI rather than in net income. There are also some changes to disclosure requirements.

On credit impairment, FASB has made significant modifications to the recognition of impairment on financial assets held at amortized cost. These assets will be subject to an allowance equal to the present value of all expected credit losses over the remaining life of the instrument, but limited by the fair value of any collateral. For assets reported at FV-OCI, the changes to the impairment model were more limited. Companies will no longer be required to consider how long the fair value has been less than amortized cost (i.e., whether the impairment is "temporary"), or any changes after the reporting date. Also, the board decided to permit previously recognized impairments to be reversed.

Although FASB seems close to final standards on classification and measurement and on impairment, a final standard revising hedge accounting seems to be far off. ◼

Probability-Weighted Reserves without Employing Stochastic Scenarios

By Ed Robbins

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This article briefly discusses the progress the Annuity Reserve Working Group (ARWG) has made toward a "modeled reserve" as part of the development of VM22 (Reserving for Non-Variable Annuities), and it goes on to suggest certain potential refinements to the scenario generation process, with application to modeling in general.

The ARWG "modeled reserve" was discussed at length at the 2014 Valuation Actuary Symposium and is briefly described below. The potential refinements fall into three types:

1. A more sophisticated approach to the correlation between various assumptions
2. A set of resulting scenarios together with their probability weights
3. An approach to generation of continuous distributions that fit well with the group of probability-weighted scenarios.

I. BACKGROUND

The general historical approach in actuarial practice for projection of financial scenarios based on probability distributions has been through stochastic scenarios, under which a random number has been generated between 0 and 1, and played against a cumulative distribution [F(x)] for the variable (risk factor), to obtain the value of the variable (risk factor) for a given stochastic run. The cumulative distribution function has historically been based on a probability density function (pdf), such as the following:

* Normal

* Lognormal

* Other skewed (such as gamma).

In the process of developing the modeled reserve under VM22, the ARWG has developed an approach that has made significant enhancements to the following two general historical approaches to modeling reserves, required assets, or similar values:

General Historical Approach	ARWG Approach
Stochastic generation to obtain the probability-weighted scenarios	Proceeding directly to the underlying distribution to obtain the probability-weighted scenarios.
Varying only one risk factor (such as the interest rate path).	Vary as many as four or five risk factors

In the field testing process for the modeled reserve approach, the ARWG has been able to cut the number of scenarios down substantially from those that would be required for a robust set of stochastic scenarios, to a 17-scenario set as follows: if, for example, four risk factors are involved:

* Scenario 1: Hold all risk factors at their central estimates.

* Scenarios 2 through 17: For each risk factor, four "shock values" (1 and 3 standard deviations (σ) on each side of its central estimate), while holding the other three risk factors at their central estimates.[1]

To generate a margin for adverse deviation, this approach currently contemplates a "cost of capital" calculation. This would be accomplished by aggregating the risk factors to generate a capital requirement at the 3σ level and generating an approximation to the consequent cost of capital.

There has been mention at the ARWG of a possible "reality test" of the above approach. That test would be to run the necessary number of non-stochastic but probability-weighted scenarios to accommodate each of the five points for each of the four risk factors. Thus there would be 625 sets of combined values (i.e., 5 x 5 x 5 x 5), resulting in 625 scenarios. Each such scenario would have its "weighting," consisting of the probability of the value of each of the four risk factors, multiplied together to generate a compound probability, or weighting, for that scenario.

As an example, take four risk factors each with its probability of occurrence:

R Factor No.	Probability
1	0.025
2	0.08
3	0.050
4	0.12

The compound probability is 0.025 x 0.08 x 0.050 x 0.12, or 0.0012 percent. If each risk factor contains five possible values, each with its probability weighting, that would result in 625 possible compound probabilities.

II. GENERAL DESCRIPTION OF POTENTIAL REFINEMENTS

The purpose of this paper is to start from the above 625-scenario concept and describe an enhanced approach to the ARWG scenario generation methodology that contains the following approaches:

- To use the pdf directly in generating the distribution of scenarios, similarly to the ARWG approach, and to accommodate variables that might be subject to a skewed distribution (such as lognormal or gamma)

- To encompass multiple risk factors, again similarly to the ARWG approach

- To relate the risk factors to each other in some reasonable fashion, referred to below as a "Dependency Chain," wherein the variables are ordered, so that the mean of a "Level t" variable becomes a simple function of the value of all of the variables of Levels 1 through t-1.[2]

There would appear to be no need to generate all 625 scenarios each time for reserve or required asset generation, if one is only interested in the adverse tail of the distribution. Once the first 625-scenario test has been made, it should be relatively straightforward to understand which combinations of risk factors will result in "successful scenarios," so that subsequently the actuary should be able to ignore scenario generation for those scenarios, and thus bring the necessary number of scenarios down to, say, 200.

The advantages of this approach over traditional stochastic scenario generation, if it can be made practical, would include:

- Increased speed of data generation from the stochastic scenario approach

- A more logical relationship between the assumptions

- A potentially more robust "area under the extreme values of the tail" (especially if the set of scenario results is converted into a continuous distribution)

- A more refined approach to generation of prudent margins in the reserve.

Moreover, this general approach is not susceptible to the purely statistical deviation generated by random number generation, as this approach would follow the underlying probability distributions directly and precisely.

III. DEPENDENCY CHAIN TO RELATE THE ASSUMPTIONS (RISK FACTORS)

It is unduly simplistic to assume that the sum of the variances of the risk factors equals the variance of the sum. That is only true if the risk factors are independent of each other. The ARWG has made some adjustments for correlated variables, but it would appear that the Dependency Chain concept may work better.

Illustratively, let's take a traditional deferred annuity portfolio.
The Dependency Chain concept would make the mean value (and possibly the standard deviation) of a "Level

t" risk factor dependent in some simple form on some or all of the values of the risk factors in Levels 1 through "t-1". An example for a traditional deferred annuity is below:

Thus Level 1 includes the yield curve and its pdf (to determine the probabilities shown below), and Level

S	Level (s)	Possible Risk Factor(s)[3]
1	Yield curve, unemployment rate, inflation rate, contract terms	
2	Competitor credited rate for contract type	
3	Company credited rate	
4	Lapse rate scale	

2 is the industry (or competitor) interest crediting rate. Let the five points for Level 1[4] be:

- Level 1 Central Estimate minus 3σ, with probability 0.02

- Level 1 Central Estimate minus 1σ, with probability 0.20

- Level 1 Central Estimate, with probability 0.55

- Level 1 Central Estimate plus 1σ, with probability 0.22

- Level 1 Central Estimate plus 3σ, with probability 0.01

The Level 2 risk factors will then have a base pdf and five mean values, one for each of the five Level 1 points above. Perhaps the Level 2 mean values equal the Level 1 three-year swap rate less 0.015 for each of the five given Level 1 points.[5] With that, we can now derive the five Level 2 points for each of the five Level 1 points (i.e., 25 points in all).

To obtain the probability distribution (weightings) of a given five-point set, we know the pdf, the mean, and the standard deviation of that small discrete set, and we should be able to solve for the parameters of the underlying pdf that generate the same mean and standard deviation. The next step is to assign weightings to the

five points of each of the five Level 2 sets, such that the discrete probability distribution of the five points has the same mean and standard deviation as the underlying distribution. See Exhibit 1 for a further explanation of this process and two alternative approaches.

Continue on through risk factors of Level 3 and Level 4, with the same Dependency Chain linkage concept. Following this logic, we will have 125 data sets at Level 3 and 625 data sets at Level 4.

IV. ASSIGNMENT OF COMPOUND PROBABILITIES OF ASSUMPTION (RISK FACTOR) COMBINATIONS

If for a moment we assume that we will be running all 625 possible combinations (each consisting of one of five points within one of four risk factors), the definition of a given set of risk factors to run a scenario will consist of the following:

- Level 1 value and Level 1 probability (weighting)

- Level 2 value and Level 2 probability (weighting)

- Level 3 value and Level 3 probability (weighting)

- Level 4 value and Level 4 probability (weighting).

From this set we can define the probability (weighting) of each of the 625 scenarios as the product of the four risk factor weightings (i.e., the resulting "compound probability").

V. GENERATION OF FINANCIAL PROJECTIONS (SCENARIOS) GIVEN THE COMPOUND PROBABILITIES

Given each of those 625 sets of assumptions, along with their respective compound probabilities, the 625 corresponding scenarios can now be run.

As can be seen above, each of the 625 scenario generations will thus derive from a unique set of Level 1, Level 2, Level 3, and Level 4 assumptions (risk factors). Those scenario results can now be ordered by size, along with their respective "compound probabili-

ties" of occurrence, in order to generate a reserve with the desired confidence levels.

Exhibit 2 is an illustration of this type of ordering and compound weighting. Exhibit 2 also illustrates the calculation of both the 70 percent confidence level and the CTE(70) amount.

If the scenarios are reasonably normally distributed, then the standard deviation is a reasonably easy approach to generate confidence levels. On the contrary, for a skewed distribution the standard deviation is not a particularly valid measure of the confidence level. In this latter case, one can approach this issue in one of two ways:

- Compile the "sumproduct" of the scenario values, as in Exhibit 2, column (4), i.e., each such scenario value multiplied by its respective compound probability of occurrence (weighting) and sum the weighted scenario values up to the confidence level being sought, as depicted in column (3).[6]

- Fit those 625 resulting values to a continuous skewed pdf and thus derive another appropriate measure of the confidence level. See Section VI below.

VI. FITTING THE DISTRIBUTION OF SCENARIO VALUES TO A CONTINUOUS DISTRIBUTION

Various techniques exist for fitting a set of discrete points to a continuous distribution. We understand that mathematicians generally consider accuracy to the first four moments to be sufficient replication. If, for example, accuracy to four moments is desired, and where the pdf formula contains at least two parameters,[7] a weighted average of two pdfs can be used to obtain the scenario distributions mentioned above, each such pdf being given a 50 percent weighting, thus resulting in four parameters. With calculation of the first four moments of the pragmatic distribution of scenarios and, for example, using the first four moments of a continuous distribution with four parameters, one can set up four equations with four unknowns. Thus by the Method of Moments, a continuous pdf can be developed whose first four moments are equal to the corresponding first four moments of the pragmatic probability distribution of the scenarios.

Fitting to a continuous distribution whose first four moments are equal to the first four moments of the pragmatic distribution can provide other valuable information, such as insight into extreme "tail values" and interpolated values.

SOME DISCLAIMERS

The derivation of the underlying pdfs of the assumptions (risk factors) was not covered in this work. Extensive work was done by the ARWG in this regard. (This is especially true of variables such as interest rate paths and equity paths.) Rather, this article covers the process once those pdfs are concluded upon.

Second, it appears that the gamma pdf is somewhat difficult to apply to the above "five-point" distribution. That is, it is difficult to match the mean and variance of the theoretical continuous gamma pdf with the mean and variance of the five-point model for compound probability generation. (This does not appear to be a problem for the normal pdf.) That said, however, the gamma pdf appears to be a relatively appropriate approach to take when fitting the pragmatic financial scenario value results to a continuous distribution. The reasons why this is so are:

1. The successive moments of the gamma pdf are simple in form, thus easy to calculate. See Exhibit 3.
2. The minimum value of a gamma pdf is zero, and it is skewed and asymptotic to the right. Thus it has the general form of a required asset model.
3. Scenario results for reserves and required assets are generally not normally distributed, and a skewed pdf such as the gamma pdf is a better fit than the normal pdf.

Thus a conclusion was reached to recommend the normal and/or lognormal pdfs for generating the various assumptions while leaning toward the gamma pdf for generating a continuous distribution of final scenario values.

Third, whether to use a conditional tail expectation

(CTE) approach versus a cost-of-capital approach to establish the margin has been subject to much discussion. This methodology can accommodate either approach.

Exhibit 1

Alternative Approaches to Generation of a Five-Point Distribution that, with Its Weightings, Generates the Mean and Standard Deviation of the Underlying Probability Density Function (pdf)

ALTERNATIVE 1

Step 1: Assign the five points as $\mu - 3\sigma$, $\mu - \sigma$, μ, $\mu + \sigma$, $\mu + 3\sigma$. Given the underlying pdf, find the pdf value that is represented by each point.

Step 2: The sum of those pdf values will only coincidentally be equal to 1. Normalize those values by dividing each of the five values by the sum. That derives the five weightings. For example, if the sum of those pdf values comes out to 0.86, then divide each of the five values by 0.86, to obtain a sum of the weightings equal to 1.

Step 3: See if the discrete probability distribution represented by those Step 2 values and weightings results in the same μ and σ as the underlying pdf. μ should be very close, while σ may not be. Stretch out or bring in the shock values until the σ of the discrete distribution replicates the σ of the underlying distribution.

ALTERNATIVE 2

Take the underlying pdf and establish the five points desired, such as:

- X_1, Central Estimate minus 3σ
- X_2, Central Estimate minus 1σ
- X_3, Central Estimate
- X_4, Central Estimate plus 1σ
- X_5, Central Estimate plus 3σ

Beginning with X_1, find the interval (a to b) in the pdf for which X_1, is the expected value. That is, find points a and b such that:

$$X_1 \ = \ \int_a^b x \cdot pdf(x)dx \ / \int_a^b pdf(x)dx,$$

and a is the low point of the pdf.
Proceed through X_2 through X_5, finding intervals "b to c," "c to d," "d to e," and "e to f," respectively (where f is the high point of the pdf). The five respective weightings will then be:

For X_1, $\int_a^b pdf(x)dx.$

…

For X_5, $\int_e^f pdf(x)dx.$

Those five weightings will theoretically sum to 1.000. Moreover, the "sumproduct" of the five points and their weightings will produce the expected value (first moment) of X over the entire distribution.

Two practical issues deserve mention. First, it may provide better control to begin with X_3 (the central estimate) and solving for the related points c and d, moving next to points X_2 and X_4, and finally to X_1 and X_5.

Second, the sum of the weightings may not be exactly 1.00, due to approximate integration techniques and to cutting off asymptotic tails; the solution would be to divide each weighting by that initial sum of the weightings to move that sum to 1.00.

Exhibit 2
Illustrative Scenario Framework

Scenario No. (t) *	(1) Scenario Value	(2) Compound Probability	(3) $(3)_{t-1}+(2)_t$	(4) $(1)*(2)$
1				
2				
3				
4				
etc…				
.	.	.	.	.
.	.	.	.	.
.	.	.	.	.
520		0.700		
.	.	.	.	.
.	.	.	.	.
.	.	.	.	.
624				
625		1.000		
Total		1.000		

* Ascending order.

If we sum up Column 4 from Scenario 520 to Scenario 625, and divide by 0.3, that would be the CTE(70) amount.

By the same token, this structure enables one to develop the confidence level desired, in order to develop a margin based on the cost of capital.

Exhibit 3
Gamma Probability Density Function (pdf)

pdf(t) = $e^{-(\lambda t)}*(\lambda^\alpha)*(t^{\alpha-1})/\Gamma(\alpha)$, where, for positive integral values of α, $\Gamma(\alpha)= (\alpha-1)!$ Parameters are thus α and λ.

The nth moment, $E(t^n)$, is conveniently calculable as $(\alpha+n-1)^{(n)}/(\lambda^n)$.
  [Note: $t^{(n)} = (t)*(t-1)*(t-2)*…*(t-n+1)$.]

The gamma pdf is not directly integratable by typical means, but there exists a feature in EXCEL titled "GAMMADIST," which efficiently provides the pdf and cumulative distribution functions. ■

ENDNOTES

[1] This process is undergone in order to eventually obtain the aggregate reserve margin over a central estimate. Each of the five points for a risk factor would have its "weighting" or probability, the sum of the weightings of those five points equaling 1.000.

[2] Variables that are independent of other variables can be easily accommodated. They can simply be outside the Dependency Chain (or listed as "Level 1 risk factors").

[3] It is possible to have several risk factors at a particular level.

[4] It may be anticipated that the weightings of the five points should be "symmetric," e.g., that "Central Estimate plus 3 σ" would have the same weighting as "Central Estimate minus 3 σ" However, for skewed pdfs that may not yield that result when using the σ values to generate the points.

[5] Assuming that the actuary desires the standard deviation to also vary as a simple function of the values of the lower level risk factors, the Level 2 standard deviation (σ) for each of the five underlying Level 1 points might be the "base σ" for Level 2, multiplied by (Level 1 Value/Level 1 Central Estimate)^0.5.

[6] For example, for a 90 percent confidence level, you would want to take those weighted scenario values in column (4) that are reflected for those cases where Column (3) shows a value of 0.90. The sum of the column (4) values from Scenario 1 to that level gives you a confidence level of 0.90.

[7] Such as the normal and gamma pdfs. The normal pdf contains parameters μ and σ, while the gamma pdf contains parameters α and λ. Parameters α and β are the symbols used in the EXCEL feature "GAMMADIST" (see Exhibit 3).

New Year's Resolutions (Again)

By Henry Siegel

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So it's another new year and maybe this year we'll have a final International Financial Reporting Standard (IFRS) on insurance from the International Accounting Standards Board (IASB). It seems to me that I've said this before. Fortunately, this year I think the IASB will make that one of their resolutions. So what are mine?

First, I resolve not to think poorly of the board. I will remember that just because they make decisions that I don't agree with, that doesn't make it their fault. Sometimes they just get bad advice.

I resolve to communicate more clearly with the board and staff. I dealt with that in my article in last quarter's *Financial Reporter*. Better communication might help avoid the decisions referred to above.

I resolve to try to better understand products issued in other countries; particularly their participating contracts. This is especially important since it seems that every solution that we develop to get the accounting right for U.S. contracts causes either the British or Scandinavians to object. I'm not blaming them; their contracts just seem to be very different from ours. Every time I think I understand those products, however, I find out differently. The great variety of participating contracts in the world has caused serious delays in finishing the insurance standard. In fact, the board spent the entire past quarter having education sessions on the problem of how to handle discounting on participating contracts in the income statement without actually reaching any decision. Hopefully, they will next quarter.

I must resolve to now start thinking seriously about implementation issues. One of the joys of being semi-retired is not having to worry too much about practicalities. If the board does produce a standard, however, I need to begin to do so. This will be most apparent in work going on at the International Actuarial Association (IAA) to develop International Standards of Practice and International Actuarial Notes (IANs). It's going to be a huge challenge to produce an actuarial standard when no one has actually tried to do accounting using the insurance IFRS. The IAA has plans to produce more than 20 IANs on various aspects of the IFRS. Keeping up with all of them isn't going to be easy.

Finally, I resolve to think seriously about finding a practical method for simplifying the transition to the new IFRS. The staff has made a number of suggestions, some of which are non-starters while others don't help very much. There has to be an easier way.

As I mentioned above, the board spent most of its time worrying about participating contracts. They also made some good decisions and some dubious ones on other issues.

JULY IASB MEETINGS

The IASB met on July 22 to continue its discussions on insurance contracts. Before their decision-making session, the board held an education session on participating contracts. They discussed approaches for determining interest expense in P&L, the rate used to accrete interest and to calculate the present value of cash flows that offset the contractual service margin, and the restrictions on changes in accounting policy relating to the presentation of the effect of changes in discount rates. Of course,

no decisions were made in the education session.

IASB education session

OCI mechanics for participating contracts

The staff plan to ask the IASB to consider whether an entity should be permitted or required to present the effects of changes in discount rates in other comprehensive income (OCI) for an insurance contract with participating features. After discussion, "the IASB directed the staff to consider an approach whereby:

a. the discount rate for the presentation of interest expense in profit or loss should be reset for all the cash flows in the contract whenever there are changes in estimates of investment returns that result in changes in the amounts paid to policyholders (i.e., cash flows that vary with returns on underlying items). That approach would apply when the cash flows that vary with underlying items are a substantial proportion of the total benefits to the policyholder over the life of the contract. Resetting the discount rate for all cash flows would replace the proposal in the 2013 Exposure Draft Insurance Contracts (2013 ED) for the presentation of interest expense in profit or loss, which would require the entity to split the cash flows and apply applicable discount rates to those cash flows; and

b. the discount rate used for the presentation of interest expense in profit or loss should be determined using an approach similar to the effective interest method. This method would replace the 2013 proposal to lock in the yield curve.

The approach in (a) and (b) would be considered alongside the book yield approach. This approach could be applied to all contracts with participating features or, if there is a book yield approach, to contracts that do not meet the specified criteria to apply the book yield approach."[1]

The board's direction is a response to suggestions by the industry that the discount rate for presentation in profit and loss needs to follow the credited rate (or equivalent) in order to avoid earnings distortions. Despite this meeting, and the related meeting in September, however, the board has not settled this issue for participating contracts.

IASB decision-making session

Rate used to accrete interest and calculate the present value of cash flows that is offset against the contractual service margin for non-par contracts

"The IASB tentatively confirmed the proposal in the 2013 ED that, for contracts without participating features, an entity should use the locked-in rate at inception of the contract for accreting interest and for determining the change in the present value of expected cash flows that offsets the contractual service margin."

This is the parallel issue to the board discussion on participating contracts as described above.

Changes in accounting policy

"The IASB tentatively decided that an entity should apply the requirements in IAS 8 Accounting Policies, Changes in Accounting Estimates and Errors to changes in accounting policy relating to the presentation of the effect of changes in discount rates."

SEPTEMBER IASB MEETINGS

Having taken August off as is their custom, the IASB met again in September. Before their formal decision-making session, the IASB held another education session to discuss participating contracts. In particular, they discussed how/whether to use OCI to absorb the effects of changes in discount rates. They reviewed the book yield and effective yield approaches that have been proposed by the industry and other parties. No decision was made at this meeting, of course.

IASB decision-making session

Premium-allocation approach: revenue recognition pattern

Having listened to industry and actuarial objections to their previous decision that revenue had to be recognized on the basis of the passage of time, the IASB clarified that "when an entity applies the premium-allocation approach to account for an insurance contract, it should recognize insurance contract revenue in profit or loss:

> on the basis of the passage of time; but

> if the expected pattern of release of risk differs significantly from the passage of time, then on the basis of expected timing of incurred claims and benefits."

This is particularly important for policies that don't have uniform claim patterns over time such as stop-loss coverages.

Determination of interest expense in the premium-allocation approach (Agenda Paper 2F)

Again responding to interested party complaint, "the IASB tentatively decided that when an entity applies the premium-allocation approach to contracts for which the entity:

• discounts the liability for incurred claims; and

• chooses to present the effect of changes in discount rates in OCI;

the interest expense in profit or loss for the liability for incurred claims should be determined using the discount rate that is locked in at the date the liability for incurred claims is recognized."

This decision is better than the previous requirement of using the rate from when the contract was issued but still doesn't deal with those liabilities where the actual claim or policy is unknown. The primary example of this is, of course, for the Incurred But Not Reported (IBNR) liability where neither is known by the very nature of the liability. The board is therefore likely to need to address this issue again.

The board hopes to complete their discussion of participating contract issues during the upcoming quarter. I hope by the time you read this they have. They then will take the early part of 2015 to deal with transition and probably presentation and disclosures. Perhaps the final standard will then come out before the end of the year.

Then comes the hard part; actually implementing the standard. This is when it will become all the clearer that

Insurance Accounting is too important to be left to the accountants! ◼

ENDNOTES

[1] All quotes in this article, unless otherwise indicated, are from the IASB Update for the associated meeting.

Health Insurer Financial Reporting Post-ACA: What Is the Current Thinking?

This article first appeared in the October 2014 issue of Health Watch. It is reprinted here with permission.

By Nancy Hubler

Our pricing actuary colleagues recently completed their second round of rate filings for individual and small group policies subject to the full implementation of the Affordable Care Act (ACA). In 2014 valuation actuaries will have their turn. Valuation actuaries have had to deal with medical loss ratio (MLR) accruals for the past couple of years, but in 2014 several other aspects of the ACA are driving the need for valuation actuaries to consider establishing additional payables or receivables during 2014 or at year-end.

In June 2013, the American Academy of Actuaries Health Practice Financial Reporting Committee issued a white paper called "Financial Reporting Implications Under the Affordable Care Act." This paper discussed the impact of the 3Rs (risk adjustment, reinsurance and risk corridors) on insurers' financial statements. As each of these programs includes a retrospective settlement process, financial statements may need to include estimates of amounts payable or receivable. Even in the case where an actuary concludes that the amounts related to any of these programs are not material, how the actuary arrived at that conclusion will need to be documented.

The health insurance providers (HIP) fee and cost-sharing reductions (CSRs) and their potential impacts on insurer financial statements were also discussed in the white paper.

The Society of Actuaries Health Section Council and Financial Reporting Section Council jointly developed a survey to gauge how actuaries are progressing with respect to these new potential assets or liabilities. The survey was sent to the members of the Health Section and the Financial Reporting Section. Fifty responses were received. The majority (over 80 percent) of respondents indicated that they worked for a health insurance company or a health subsidiary of a diversified parent. Almost half (48 percent) of the respondents indicated that their company covered over 1 million lives.

RISK ADJUSTMENT—INDIVIDUAL

The risk adjustment program is designed to financially protect issuers that enroll a higher-risk (less-healthy) population than the statewide average. Under this program, money is transferred from issuers with low-risk enrollees to issuers with higher-risk enrollees in order to equalize the differences in cost related to differences in risk. The transfer payments in the program take place at the state level and apply to ACA-compliant plans in the individual markets, inside and outside of exchanges.

Fifty-seven percent of respondents plan to accrue for risk adjustment settlement amounts during the calendar year. Of those who plan to accrue during the year, 41 percent plan to spread the estimate evenly throughout the year while 64 percent said they would not try to account for seasonality throughout the year.

When asked how they plan to develop estimates for the settlement amounts several respondents indicated they would be using statewide risk adjustment studies, some of which are being performed by consulting firms. Others indicated they would be doing some modeling of their own or using original pricing estimates.

The majority (55 percent) indicated "other," when asked if they anticipated setting up a receivable or payable amount at year-end for individual risk adjustment. This is likely a byproduct of the lack of information available with respect to the market average risk score at the time the survey was sent out; however, 29 percent anticipate setting up a receivable.

Respondents were then asked to rate their ability to develop the estimate from a low of "I have no idea/early stage discussion" to "We have a well-thought-out, detailed implementation plan." No one rated themselves as having no idea, while 36 percent answered "N/A." Not surprisingly, only 3 percent said they have a well-thought-out plan. The remaining 61 percent of

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Under this program, money is transferred from issuers with low-risk enrollees to issuers with higher-risk enrollees. …

respondents were spread fairly evenly among the other available response levels.

We then asked respondents if the states in which they do business intend to gather data during the year to help with the estimation of market average risk scores and which states were planning to do so. Only 22 percent (eight respondents) indicated that states were planning to provide information. California, Massachusetts, New York (although this is really for pricing purposes), Utah and Florida were the states mentioned.

RISK ADJUSTMENT—SMALL GROUP

Similar to the individual risk adjustment program, the small group risk adjustment program is designed to financially protect issuers that enroll a higher-risk (less-healthy) population than the statewide average. Under this program, money is transferred from issuers with low-risk enrollees to issuers with higher-risk enrollees in order to equalize the differences in cost related to differences in risk. The transfer payments in the program take place at the state level and apply to ACA-compliant plans in the small group markets, inside and outside of exchanges.

Forty-seven percent of respondents plan to accrue for risk adjustment settlement amounts during the calendar year. Of those who plan to accrue during the year, 47 percent plan to spread the estimate evenly throughout the year while 82 percent said they would not try to account for seasonality throughout the year.

Similar to the responses for individual risk adjustment, several respondents indicated they would be using statewide risk adjustment studies, some of which are being performed by consulting firms. Others indicated they would be doing some modeling of their own.

The majority (56 percent) indicated "other," when asked if they anticipated setting up a receivable or payable amount at year-end for small group risk adjustment. Twenty-six percent anticipate setting up a receivable, while 18 percent anticipate setting up a payable. The high level of uncertainty is not surprising considering the lack of information available with respect to the market average risk score at the time the survey was sent out.

Respondents were then asked to rate their ability to develop the estimate from a low of "I have no idea/early stage discussion" to "We have a well-thought-out, detailed implementation plan," As for individual, no one rated themselves as having no idea while 37 percent answered "N/A." Five percent said they have a well-thought-out plan. The remaining 58 percent of respondents were spread fairly evenly among the other available response levels, leaning a little more toward the uncertain end of the scale.

TRANSITIONAL REINSURANCE

The transitional reinsurance program is a temporary program that will only be in operation for 2014 to 2016. Individual, small group, large group and self-funded or third-party-administered (TPA) plans will all be required to pay into the reinsurance program; however, only ACA-compliant individual plans (on and off the exchange) will receive reinsurance payments.

The reinsurance contributions, collected from insured customers, will be based on premium paid in 2014. Many customers renew throughout the year; therefore, some of their annual premium would be paid in 2013 and some would be paid in 2014. Respondents were asked if they included an amount for the transitional reinsurance contribution in their 2013 premium rates that carried over into 2014, and 64 percent indicated that they did.

When asked if they plan to accrue for reinsurance settlement amounts during the year, 77 percent indicated that they would make an accrual. Of those who plan to accrue throughout the year, 34 percent plan to spread the accrual out evenly throughout the year and 41 percent plan to account for seasonality in their accrual.

When asked if they will apply a valuation allowance against the full reinsurance estimate to account for the possibility that there may not be enough money in the program to fund the entire liability, 45 percent indicated they would not, 34 percent indicated they would, and 21 percent responded "other." Some respondents elaborated. The decision may depend on market information or what is developing in the company's own experience, and some plan to discuss this option with their outside auditors.

Respondents were also asked if their accrual would be offset by an estimate of an amount for claims to be denied. A large majority (82 percent) said they would not include an offset for claims to be denied.

When asked to explain how they will handle unpaid claim reserves for large claims at the end of the calendar year, some respondents indicated that they will run a separate lag analysis for large claims or that standard large claim reserving methods will be used. Some plan to look at specific claims where possible. One respondent noted that we have until March 31, 2015 to pay claims run-out for services with discharge dates in 2014, and they plan to work to reduce open claims as much as possible. One indicated they will likely use a seriatim calculation applying truncated completion factors. Finally, one respondent said they will estimate the reinsurance receivable using accumulated claims as of year-end and an estimation of completion for them, and then compare that to an estimated percentage of total claims that are expected to be reimbursed.

RISK CORRIDOR

The risk corridor program is a temporary program that will only be in operation for 2014 through 2016 and applies only to Qualified Health Plans (QHPs) for individual and small group business. Large group, grandfathered, extended policies, and self-funded or TPA plans will not participate in the risk corridor program. The goal of risk corridors is to temporarily dampen gains and losses, due to mispricing of plans by having insurers pay to or receive funding from the federal government. The program compares "allowable costs" (claims costs) with target amounts that are determined from premiums less allowable administrative (non-medical) costs.

Survey respondents were asked if they plan to accrue for risk corridor settlement amounts during the calendar year. Forty-eight percent said they would not and 52 percent said they would. Of those who said they would, 59 percent said they would spread the estimate evenly throughout the year.

Methodologies to be used include:

* Forecast results relative to target amount.

* According to federal formula.

* Based on claims and estimates for reserves, reinsurance, risk adjustment and CSR.

* Sensitivity analysis shows stability in loss position that government will reimburse X percent of losses. This will be used until closer to year-end, when all components can be estimated for a detailed calculation. The X percent factor will also be changed when year-to-date (YTD) financial results change enough to warrant it.

When asked to rate their ability to develop appropriate estimates, 17 percent said they have no idea or are in early stage discussions and, at the other extreme, only 5 percent feel they have a detailed implementation plan in place. Twenty-two percent did not give a rating. The rest tended to rate themselves toward the lower end of the capability range.

Fifty-three percent of respondents indicated they will have individual off-exchange products that qualify for risk corridor provisions. When asked how many such plans they will have, responses ranged from "small number" to 48, and included the following comments:

* "All of our plans are QHPs."

* "Almost all of our plans are substantially similar on- and off-exchange."

* "Where we offer plans on-exchange, we offer those same plans off-exchange."

Of those who are offering individual off-exchange products that qualify for risk corridor provisions only 35 percent indicated they were required to do so.

Thirty-three percent of respondents indicated they will have small group off-exchange products that qualify for risk corridor provisions. Fifty-eight percent of those offering such products indicated that they are required to do so.

HIP FEE

This fee is imposed on certain insurers providing health insurance coverage, including commercial coverage as well as Medicare Advantage, Medicare Part D and Medicaid. The fee applies beginning in 2014, but only if the covered insurers' aggregate net premiums written in the preceding calendar year exceed $25 million. Self-insured groups, government entities, some non-profit organizations and voluntary employee beneficiary associations (VEBAs) are not subject to this fee.

Two-thirds of respondents indicated that they included an estimate of the HIP fee in their 2013 rates that carry over into 2014. Comments that respondents shared include:

- "All health insurer fees were billed beginning 1/1/14, regardless of renewal date."

- "Our rate filings reflected this."

- "Since it is based on 2013 premiums it should be called a 2013 tax rather than a 2014 tax ... this has created lots of accounting and rating issues."

CSR PAYMENTS

For individual members whose income is below 250 percent of the federal poverty level (FPL), there exist variants of silver products available through the exchanges for which the federal government will subsidize a portion of the member cost-sharing amounts. The government will pay insurers an estimated monthly amount to cover this portion. There exist two different methods for estimating the amount, as defined in the Federal Register.

Under the "standard methodology," QHP issuers calculate the cost sharing for each claim twice—once using the cost-sharing structure that would have been in place if the individual were not eligible for CSR, and again using the reduced cost-sharing structure in the applicable plan variation for which the individual is eligible.

Under the "simplified methodology," QHP issuers calculate the value of the CSRs provided by using a formula based on certain summary cost-sharing parameters of the standard plan, applied to the total allowed costs for each policy. Note that these survey questions were asked before the final rules were issued, which materially altered the "simplified method" for some issuers, so responses may be different now that the methodology is more clearly defined.

When the survey was done the percentage of respondents who planned to use the standard methodology and the percentage that planned to use the simplified methodology were split about 50/50.

Sixty-four percent of respondents plan to collect advance payment credits. When asked how they plan to set up a payable for potential overpayments, several indicated they had not made a determination yet or did not believe there would be an overpayment. One respondent shared this formula: deferred liability account = advanced payment less estimated CSR. Another indicated that they will compare a vendor's estimate from re-pricing to payments monthly.

Finally, we asked for any additional feedback respondents wanted to share and received the following comments:

- Promulgation of standards or safe harbors would be helpful, as would wide dissemination of data on emerging experience, risk scores, reinsurance claims, etc.

- Answers to many of the questions may be different if my view is to answer for 2014 financials vs. say 2015 financials. 2015 will have more clarity.

I want to thank all the actuaries who took the time to fill out this survey. There are still a lot of unanswered questions and no clear guidance on many of the issues addressed in this survey. Hopefully, by sharing your current thinking, we will come closer to consistent methodology for many of these items. ■

IAA Report

By James B. Milholland

Complex models and supranational relations were recurring themes in the meetings and in hallway discussions during the conference of the International Actuarial Association (IAA) in London this past September. The IAA's pipeline of activities that relate to financial reporting is very full. These topics are the subjects of this report.

RECURRING THEME—COMPLEX MODELS AND CURRENT ESTIMATES

Complex models are nothing new to actuaries, but they are becoming ever more prominent. In addition to budgeting and capital planning, they are key to a growing number of compliance efforts. European companies will soon use them for Solvency II. They are key as well to ORSA,[1] IFRS and BCR, all of which are in various stages of development. The models have different objectives, but they have much in common. They all involve projections of estimated future cash flows. When referring to the estimated cash flows or to the value of the estimated cash flows, the term "current estimates" is often used, sometimes as a term of art and at other times simply as a descriptive term.

There are several ISAPs in development that involve current estimates—one on the new IFRS for insurance, one on BCR, and two on ERM. There are also several IANs being written on ERM and IFRS topics, which also involve current estimates. Several committees and task forces responsible for ISAPs or IANs are addressing current estimates. The ASC is taking steps to ensure that guidance is consistent. As we know, "consistent" does not mean "the same." For IFRS, projected cash flows are meant to be expected values, that is, unbiased and with no margin for adverse deviation from estimates. The discount rate for IFRS will follow the principles described in the emerging standard. BCR seems to be headed toward a basis similar to IFRS for the projected cash flows, but with a more prescribed basis for the discount rate. There were discussion and debate in meetings and in hallway discussions about the possibility of having a standard on current estimates to avoid the need to monitor the standard writing for consistency. The ASC has, for now at least, opted in favor of addressing current estimates according to specific requirements in the various ISAPs, believing that this approach is more useful to actuaries in practice.

ISAP 1 contains guidance that is useful when working with complex models. It addresses data quality and assumption setting. It does not refer to complex modeling specifically, and it does not speak to model development, validation or control. The ASC has begun discussions about whether there should be a standard specifically on complex modeling.

RECURRING THEME— SUPRANATIONAL RELATIONS

As an organization of member associations, which are themselves national or regional, the IAA finds that it has much in common with other organizations that have a global or supranational orientation. The IAA had memoranda of understanding (MOUs) with five such organizations; namely, the IASB, the IAIS, the OECD, the ISSA and the IOPS. An MOU creates a commitment for proactive involvement between the two parties.

The relationships with the IASB and the IAIS are of special interest to financial reporting actuaries. The IAA provides regular input to the IASB on accounting topics (not just insurance—more about which later). A representative from the IAA (currently Michelin Dionne of Canada) is on the IFRS Advisory Council, the formal advisory body to the IASB and to the trustees of the IFRS Foundation.

Ian Mackintosh, vice chair of the IASB, was a guest speaker at the IAA meeting. He asserted that the existence of multiple standards increases the cost of capital, but he acknowledged the difficulty of achieving a single set of global standards. Among other difficulties, he singled out the fact that the United States is no longer collaborating on many standards, notably, for example, the insurance standard.

The IAA has observer status with the IAIS, which allows it to closely follow the activities of the IAIS. In keeping with the objectives of the MOU, the IAA is more than a casual observer. For example, the IAA is developing an ISAP on current estimates (the one mentioned above) in support of the IAIS work on capital standards. The work of the IAIS in turn is in response to a request from the Financial Stability Board and the G20 to develop the capital standards. The significance

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For now the major activity of the IAC is writing IANs to assist practitioners when applying IFRS.

is that the standards that originate from the IAIS may become required, for affected insurers, whereas the guidance from the IAIS is normally not binding on local regulators or on insurers. Under the principle of subsidiarity, the ISAP of the IAA will not be binding on actuaries, but it will be a model for member associations to consider. Its presence may make it a de facto point of reference for actuaries, notwithstanding its lack of authority.

ACTUARIAL PIPELINE

The IAC has a number of ongoing activities. It continues to monitor the development of the IFRS on insurance. The subject of greatest interest relates to participating contracts. Having discarded the notion of mirroring, the IASB is seeking a single model to fit all contracts, and is struggling to find one. The problems with a single model derive from the multiplicity of participating features and the differing investment strategies. Some actuaries favor the so-called European model (see the position of the DAV as reported in *The Financial Reporter*, June 2014), but the IAC has not embraced the European model and has decided for now not to comment formally beyond what it has already said in its response letter to the exposure draft (ED) (see *The Financial Reporter*, March 2014).

For now the major activity of the IAC is writing IANs to assist practitioners when applying IFRS. The new standard will require modification of the existing IANs on IFRS 4 and the development of a number of new ones. This activity is expected to take place over the next couple of years. The IAC intends for the IANs to be in place as insurers are implementing the new standard. The presumed effective date of the IFRS is 2018, but guidance is needed well in advance of that date. Enough is known about the new standard to allow the IAC to work on many of the IANs. Others will have to wait until the IASB makes final decisions.

IFRS-related work is not limited to the insurance standard. The IASB plans to issue in 2015 an ED on potentially significant revisions to its Conceptual Framework (CF). The CF sets out the concepts that underlie the preparation and presentation of financial statements. It is not a standard, but it provides foundations for the IASB to use when developing standards. The IASB uses the CF to keep the standards grounded in a common set of concepts. One of the proposals of the IASB is to require itself to make clear when it adopts a standard that does not conform to the CF. The interest of actuaries in the CF relates mainly to measurement. Accountants seem to prefer individual contracts and best estimates as the accounting basis. Actuaries generally prefer grouping of contracts and the use of expected values. The earlier discussion paper was encouraging to actuaries (see *The Financial Reporter*, April 2009). It will be interesting to see what the IASB puts into the ED. The IAA is certain to submit a comment letter.

The IASB also has boldly announced that it is starting a research project to look at why discount rates are not conceptually consistent across different IFRS standards (insurance vs. pensions, for example). This project is obviously of interest to actuaries and the IAA will get involved as appropriate.

The IAC has involvement with other supranational bodies. William Hines is on the advisory group to the IAASB. The IAA has provided input in the past on topics such as auditing accounting estimates and the use of experts (such as actuaries).

The IAC, together with the PEB, has discussions with the IVSC. Insurance contracts are not in the scope of the IVSC's mandate, but actuarial input to the IVSC is nonetheless relevant.

The IAC has started following the activities of the IIRC. The IIRC defines an integrated report as "... a concise communication about how an organization's strategy, governance, performance and prospects, in the context of its external environment, lead to the creation of value in the short, medium and long term." In other words, an integrated report is more than financial statements. The IIRC is working to develop a framework for integrated reporting. The IAA will naturally want to understand the implications to insurers.

Still in the pipeline is the monograph on the adjustment for risk. The monograph is held up by the delay in the finalization of the insurance standard. If the IASB's current timetable for the standard is met, the monograph may be publicly exposed, and perhaps even published, in 2015.

NEXT MEETING

The IAA meets again in April 2015. By then there will be progress to report on all the activities mentioned here.

ACRONYM KEY

ASC - Actuarial Standards Committee of the IAA

BCR - Basic Capital Requirement

DAV - German Actuarial Association

ERM - Enterprise Risk Management

IAASB - International Auditing and Assurance Standards Board

IAC - Insurance Accounting Committee of the IAA

IAIS - International Association of Insurance Supervisors

IAN - International Actuarial Note

IASB - International Accounting Standards Board

ICS - Insurance Capital Standard

IFRS - International Financial Reporting Standard

IIRC - International Integrated Reporting Council

IOPS - International Organisation of Pension Supervisors

ISAP - International Standard of Actuarial Practice

ISSA - International Social Security Association

IVSC - International Valuation Standards Council

OECD - Organisation for Economic Co-ordination and Development

ORSA - Own Risk and Solvency Assessment

PEB - Pension and Employee Benefits Committee of the IAA ■

Update on Regulatory Developments

By Francis de Regnaucourt

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OVERVIEW

This is a quarterly update on developments at the National Association of Insurance Commissioners (NAIC), the International Association of Insurance Supervisors (IAIS), as well as other groups who may get involved in group supervision, with emphasis on those that may be important to members of the Financial Reporting Section.

The Life Actuarial Task Force (LATF) met at the NAIC Summer Meeting in August. At that meeting, Commissioner Julie McPeak (TN) recommended that the earliest date for principle-based reserving (PBR) implementation should be changed to Jan. 1, 2017, based on progress to date and the amount of work necessary to implement the PBR framework, but no final action was taken. We report below on a few other items that may be of interest to members of the section.

The Capital Adequacy Task Force (CATF) also met and heard a proposal for new risk-based capital (RBC) C-1 charges for corporate bonds.

On the international side, the IAIS issued two sets of principles to be used in the development of Insurance Capital Standards (ICS) for Internationally Active Insurance Groups (IAIG) and Higher Loss Absorption (HLA) requirements for Globally Systemically Important Insurers[1] (G-SII). In time, these will replace the current Basic Capital Requirements (BCR) formula.

LATF MEETING AT THE NAIC SUMMER MEETING, LOUISVILLE, KY., AUG. 14 AND 15, 2014

We report here only the highlights of the meeting; complete details are in the minutes produced by the NAIC and available on its website. There was also forward progress on many ongoing projects, but without notable landmarks; we do not report on those.

New Valuation Mortality Table

Mary Bahna-Nolan (American Academy of Actuaries (AAA) Life Experience Subcommittee) reported that the proposed 2014 VBT mortality table was proceeding more slowly than planned. Basic rates have been released, but the relative risk tables are still being worked on. The table is unlikely to be complete for 2014. There was discussion of the NAIC providing more support to the subcommittee so that the substantial volume of work needed to develop a new valuation mortality table would not be entirely borne by AAA volunteers.

VM-22 Working Group—Kansas Field Tests

Mark Birdsall (VM-22 Working Group) reported on the Kansas field tests. The group noted a practical need to limit the number of scenarios and is devising a representative scenario methodology with five key risk drivers (21 scenarios,[2] with weights to represent their relative probabilities). This work is not finished, but shows serious potential.

The working group had many practical observations based on (a) how valuable the benefits were compared to the price charged for them, (b) differences in experience based on tax qualified/non-qualified status, (c) the size of the business, (d) subsidies inherent in joint-life annuity options, and (e) in-the-moneyness of the guarantees. They asked LATF for guidance on whether or not these factors should be recognized in the reserve calculation.

Finally, they noted areas where VM-22 has not addressed basic issues, such as the valuation interest rate for very large contracts sold on one day (such as large longevity risk transfer transactions).

Small Company Exemption from PBR

Regulators remain generally favorable to a small company exemption, but think that $300 million of premium (the current American Council of Life Insurers (ACLI) proposal for a company to qualify) is too high. ACLI countered that lower levels may lead to PBR not getting the minimum support needed to become effective.[3] The chair asked ACLI to craft a compromise position with an exemption level of $50 million or $100 million, possibly with a sunset clause of about five years.

FRAMEWORK FOR CAPTIVE REINSURERS FOR XXX/AXXX BUSINESS

At its summer meeting, the NAIC adopted in principle the XXX/AXXX Reinsurance Framework recommended in the June 2014 report written by Rector & Associates. There are many details to be worked out, but the immediate steps are three:

1. Develop an XXX/AXXX Reinsurance Supplement to be filed by insurers starting with the 2014 annual statements. The current proposal would require schedules setting out the following information for each transaction:

   a. Assuming insurer

   b. Reserves ceded

   c. Reserve credit taken by the ceding insurer

   d. Summary of assets for the assuming insurer

   e. Securities and collateral

   f. Affiliate or parental guarantees.

2. Develop a *Financial Analysis Handbook* section on review of XXX/AXXX transactions to be used starting with the 2014 year-end.

3. Develop the actuarial method for PBR, including (a) a definition for the level of primary security (a concept similar to economic reserves, which are backed by admitted assets, whereas statutory reserves over that level may be backed by alternative assets, such as letters of credit meeting certain standards), (b) incorporation of changes in mortality tables developed by the AAA, and (c) a clear statement about whether the net premium reserve (NPR) is kept as a floor (possibly in a modified form) or eliminated.

As a result, LATF is developing two new actuarial guidelines:

1. AG47, to require the Appointed Actuary to qualify his/her opinion on XXX/AXXX reserves subject to a financing transaction unless the transaction complies with the framework. This has met with resistance from the AAA, who points out that the purpose of the qualified opinion is to certify reserves, not deal with regulatory issues that are not directly reserve-related.

2. AG48, to provide guidance to actuaries on calculating the Level of Primary Security.

INDEXED UNIVERSAL LIFE (IUL) ILLUSTRATION REGULATION

At the Summer Meeting, LATF heard a proposal from ACLI on regulations for IUL policy illustrations. The task force also heard a request from a group representing four companies (the G4)—New York Life, MetLife, Northwestern Mutual Life and OneAmerica—that LATF defer exposing the ACLI proposal until they could submit an alternative proposal. The G4 believe that the ACLI proposal did not go far enough in remediating problems with IUL proposals, and they wanted LATF to expose both proposals at the same time. The chair agreed.

At a phone call on Sept. 18, the G4's proposal, together with ACLI's amended proposal, were discussed. ACLI's amendments from its previous proposal were to:

- Require an alternative illustration with values mid-way between the guaranteed and illustrated values, as an example of what could happen if illustrated returns were not achieved.

- Cap the return illustrated in any one year at 10 percent.[4]

- Require an alternative illustration with the cap coming down to minimum levels evenly over four years.

- Add instructions on what to do if 25 years of historical returns are not available.[5]

ACLI stated that its new proposal was approved by a super-majority of member companies and by the ACLI board. It expressed reservations on the analysis underlying the G4's "risk-neutral" approach (see below).

Bobby Samuelson (MetLife) stated that his company did not sell IUL, not because it finds fault with the IUL product, but because it did not want to operate in a market where it found serious fault with the way IUL products were illustrated. He gave five examples of ways in which IUL illustrations can be misleading:

- IUL is not VUL. The investment earnings credited to the policyholder are the general account return (possibly less a spread), converted into an equity option strategy. Illustrations that look back 25 years are based on general account returns that average roughly 8 percent, compared to the current 4 percent. Whatever means is used to convert those returns into the equity option strategy return, the starting point overstates (by a factor of two) what can be expected in the immediate future.

The factors that were exposed appear generally a bit higher than the previous, but they are more granular. …

- The assumption that an equity option strategy returns more than investing in the equity market directly is viewed by many as flawed. (Ed. Note: This is the point that ACLI is disputing). He cited research showing that buying calls does not add value over time. CalPERS' recent announcement that it was getting out of hedge funds (because they don't add value) was also given as an example. Historical research from the 1990s (when options were seriously underpriced and markets rose sharply) has turned out to not be sustainable.

- Some illustrations are calculated using leverage, which produces better returns on mean equity returns, but can seriously reduce performance in years when equity returns were negative. An example was mentioned where if the actual earnings had been zero in only one year, the policy would have lapsed.

- The illustrations don't show the customer the opportunity cost of not investing directly in the equity market (essentially the comparison between VUL and IUL). That makes for an incomplete comparison.

- The structure can be easily gamed. For example, a company could construct an index by looking at historical data and choosing the asset strategy that performed the best over the 25-year look-back period.

Both proposals were exposed for comment.

PROPOSAL TO REVISE CORPORATE BOND C-1 CAPITAL CHARGES FOR RISK BASED CAPITAL (RBC)

The NAIC has been overhauling its C-1 capital factors for RBC.

At the summer meeting, the AAA, working with Moody's Analytics, proposed a new set of charges for bonds. The factors that were exposed appear generally a bit higher than the previous, but they are more granular and should result in a sharper distinction between portfolios with different rating distributions (even if all bonds are investment grade).

In 2013, the AAA, also working with Moody's Analytics, had proposed a new set of charges for commercial mortgages. Those factors were materially lower than the previous factors. In addition, they made provision for common items such as mezzanine financing, which had heretofore been relegated to the dreaded "all other" category with the maximum charge of 30 percent.

At the 2014 Valuation Actuary Symposium, Colin Devine (Jefferies LLP), an equity analyst, commented that the first version of RBC had forced many life insurers out of the real estate market by increasing the capital costs on real estate investments. He added that the new C-1 factors greatly reduce the capital costs, and should allow life insurers to return to real estate, a natural investment class because of their long liabilities.

IAIS INSURANCE CAPITAL STANDARD PRINCIPLES FOR IAIG AND G-SII

The IAIS is due to release the specifics of the BCR formula by the end of 2014. This is the first step in developing group-wide global ICS. The second step is developing HLA capacity requirements for G-SII, scheduled for 2015, and then group-wide risk-based ICS, in 2016. The risk-based ICS are expected to replace the BCR, whose factor-based approach was described in the September issue.

The failure of a G-SII could result in significant costs to the financial system and to the overall economy. The HLA is designed to make the G-SII "internalize" some of those potential costs. Put another way, the higher capital held by the G-SII serves as a cushion to absorb losses that would have been absorbed externally, up to the level of the HLA requirement. Reports from observers at the International Actuarial Association[6] meeting in London are that the HLA could increase capital requirements by about 20 percent.

The IAIS comments that "the HLA should be set at a level that offsets any advantage that may be expected to arise from the G-SII designation. Through internalizing external costs, HLA may lead to a reduction in systemic activities as they become more expensive and therefore less attractive." Your author interprets this as follows:

The higher capital requirements for G-SII create both a reputational advantage and a higher cost of capital (which ultimately leads to higher premiums or charges to the customer).

As a first step, in September 2014, the IAIS released the principles to be applied in developing ICS and HLA requirements. They are summarized below; the full set of principles can be found on the IAIS website, iaisweb.org.[7]

ICS Principles

1. ICS are consolidated, group-wide standards for capital adequacy. The definition of capital required and capital resource reflect the risks of the entity regardless of its location. They incorporate (a) consistent valuation principles for assets and liabilities, (b) a definition of capital resources, and (c) a measure of risk-based requirements.
2. ICS have two objectives: policyholder protection and enhanced financial stability.
3. ICS are the foundation of HLA for G-SIIs. Until ICS are defined, the BCR is the foundation.
4. ICS reflect all material risks of the IAIG. ComFrame will address non-quantifiable risks.
5. ICS are designed for comparability of outcomes across jurisdictions, to enhance understanding and confidence, to create a level playing field, and to minimize capital arbitrage.
6. ICS are designed to promote sound risk management.
7. ICS promote prudent behavior and minimize procyclical behavior (e.g., high sales of high-risk products in economically good times).
8. ICS are designed to be granular enough to reflect risks, but simple enough to be practical.
9. ICS produce transparent results.
10. The ICS capital requirements are calibrated to a level deemed appropriate by the IAIS.

HLA Principles

1. Outcomes should be comparable across jurisdictions. For example, different HLA requirements are allowed to reflect different reserve standards in different jurisdictions.

2. HLA requirements should address the specific risks that caused the entity to be designated a G-SII. They need not be limited to those risks.

3. HLA should cause some "internalization" of the risks they pose to the financial system. IAIS recognizes that internalization may make G-SII more expensive and less attractive.

4. HLA requirements should work, and remain valid, across a variety of economic conditions, including stressed conditions.

5. HLA requirements are based on a "going concern" assumption.

6. HLA requirements must be met by high-quality capital.

7. HLA requirements are designed to be granular enough to reflect risks, but simple enough to be practical, and communicable to external parties.

8. HLA requirements should be consistent over the range of insurance and non-insurance entities they will cover over time.

9. HLA requirements should be as transparent as possible.

10. HLA requirements will be refined with experience developed in field testing. ■

ENDNOTES

[1] As of early October 2014, nine companies are designated G-SII by the Financial Stability Board of the G-20: Allianz SE, American International Group, Inc., Assicurazioni Generali S.p.A., Aviva plc, Axa S.A., MetLife, Inc., Ping An Insurance (Group) Company of China, Ltd., Prudential Financial, Inc. and Prudential plc.

[2] Base scenario, plus four alternative scenarios (+1, -1, +3, and -3 standard deviations) for each of the five key risk drivers.

[3] PBR can only become effective if it is approved by 42 of the 55 NAIC jurisdictions and if it is approved by states that account for 75 percent of premiums written.

[4] By comparison, variable universal life (VUL) policies may illustrate up to 12 percent in any one year.

[5] This modification was in response to an AAA comment, not related to the G4's views.

[6] Courtesy of Tom Herget.

[7] The ICS principles are at *http://www.iaisweb.org/db/content/1/23178.pdf*, and the HLA principles are at *http://www.iaisweb.org/db/content/1/23179.pdf*.

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