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Right-Sizing: A PBA Implementation Guide

By Tim Cardinal and Steve Stockman

Down-Sizing and Right-Sizing a Super-Sized PBA Menu

A principle-based approach (PBA) for determining reserves is coming your way. The Valuation Manual (VM) VM-20 describes requirements for PBA reserves for life products but does not set forth resources, changes in processes, and workflows needed by insurers to implement VM requirements. The Financial Reporting Section of the Society of Actuaries, joined by the Smaller Insurance Company Section, engaged Actuarial Compass, a consulting firm, to develop *PBA Implementation Guide* for life products, based on the VM passed by the National Association of Insurance Commissioners (NAIC) in December 2012.

This article calls to attention the more modest needs of smaller companies contained in the guide. The guide offers companies/actuaries some "play-by-play" tactics for developing a "champion" implementation strategy for PBA. The guide outlines a series of steps to translate VM-20 requirements and company business requirements into a road map (i.e., an implementation plan). The guide contains templates and six case studies vetted through a series of interviews with a diverse group of 15 insurers including five small companies that will help companies formulate a successful PBA strategy to help you get to the "end zone."

A road map indicates a company's goals, starting points and ways to achieve the goals. PBA implementation is in essence performing a gap analysis and bridging the gaps. Determine where you are (current framework), where you want to be (future PBA framework) and why (requirements), what (initiatives), how and when to get there (road map). It sounds simple, yet could be overwhelming. The work and resource requirements are potentially of super-sized proportions.

Case Studies

The six case studies each contain three parts: a company profile, a road map, and supporting initiatives. The company profile outlines requirements and considerations for that company, and the road map outlines the PBA initiatives the company will undertake. Project scale reflects the magnitude and complexity of the implementation, and the case studies range from minimalist to enormous.

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This newsletter is free to section members. Current issues are available on the SOA website (www.soa.org). To join the section, SOA members and non-members can locate a membership form on Smaller Insurance Company Section Web page.

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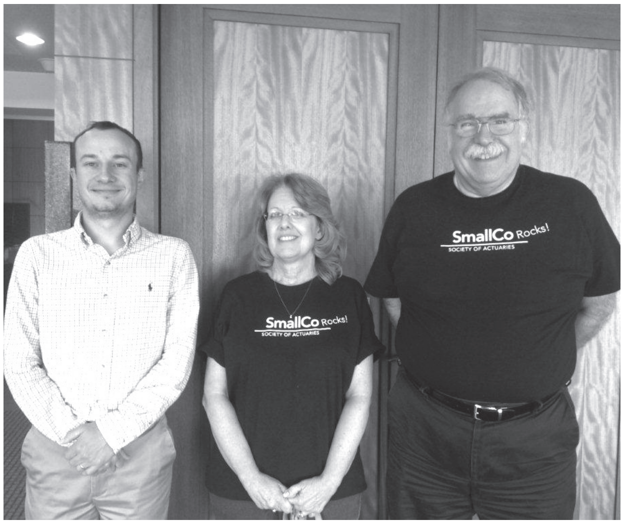
Chairperson's Corner

SmallCo Rocks!

By Don Walker

If you've attended an SOA event in the last year where the Smaller Insurance Company Section (SmallCo) has a presence, you've probably seen them—the black T-shirts with "SmallCo Rocks" on the front and the "Actuarial Cheer" on the back. They've been worn with pride by your section leadership to advertise a gathering of very active volunteers—the Smaller Insurance Company Section Council and its Friends.

We are also a good-looking group, as you can see in the photo of Brad Shepherd, secretary-treasurer; Pam Hutchins, vice-chairperson; and Don Walker, chairperson.



This group has put together a multi-faceted program to help actuaries at small companies, wherever they may be found.

First and foremost, our mission is education. And education right now means principle-based reserves (PBR). Our PBR team is committed to gathering news and information about this important topic and posting it on our section Web page under "PBR Corner." Our goal is to provide the information in an even-handed manner; we want to educate, not advocate. Check it out and give us your feedback!

You may have heard about a "PBA Implementation Guide." We co-sponsored it, along with the Financial Reporting Section, and one of our incoming section council members, Tim Cardinal, is a co-author. Tim provided our cover article summary of the guide. Here is a link to the entire guide: http://www.soa.org/Research/Research-Projects/Life-Insurance/research-2013-pba-implementation-guide.aspx. Take a look!

We also sponsor dialogue with key regulators via our meeting sessions and our webinars.

One of our goals for 2014 is to move beyond principle-based *reserves* and examine the impact of a principle-based *approach* (PBA) on product development. We've formed a new team to work with the Product Development Section to prepare a webinar on how PBA will impact product development at small companies. We hope to deliver that in August.

But we are about more than just PBR/PBA. We have an excellent working relationship with the Financial Reporting

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Section; we jointly sponsor multiple webinars, meeting sessions and research projects. We are looking into additional opportunities to partner with other sections.

All of this has been possible because of the hard work and dedication of your section council. Let me share with you their names and give them the credit they so richly deserve.

First and foremost—**Mark Rowley**, our outgoing section chair. Mark has been an inspiring leader. He claims that he didn't know much about being a leader going in, but he has been an incredibly quick study. I am fortunate that Mark is on the council for another year; he is co-editing this newsletter and is working on our International team.

Pam Hutchins is our incoming vice-chair and has been a key resource on both our PBR team and our Research team.

Brad Shepherd is our incoming Secretary/Treasurer, replacing outgoing council member **Bob Guth**, who continues as a Friend on the Low Interest Rate team and keeps us informed about the implementation of the Affordable Care Act. Brad is a member of our PBA Product team. He also represents us on the Life & Annuity Symposium planning committee, along with Friend **Phil Ferrari**.

Council member **Grant Hemphill** is our primary editor of *Small Talk*; serving with Mark and outgoing council member **Rob Hirschenko**.

Council member **Narayan Shankar** is on the PBR team and is a leader on the PBA Product team. He is also one of our annual meeting planning committee representatives.

Outgoing council member **Erik Gravelle** represented us on the 2013 Health Meeting planning committee.

Incoming council member **Tim Cardinal** (of *PBA Implementation Guide* fame) is another of our annual meeting planning committee representatives and is the chair of the PBR team.

Incoming council member **Ryan Stowe** has been serving on our Low Interest Rate team. Ryan is also going to be one of our ValAct representatives in 2014.

Incoming council member **Mark Whitford** is another member of our Low Interest Rate team. He'll be on our PBA Product team in 2014.

Friend **Dan Durow** works with the SOA staff on our Web page.

Friend **Ben Marshall** is working with Mark Rowley on our International team, leading our outreach efforts in Canada and elsewhere.

And we have many more active Friends!

Jim Thompson (PBR team, leader of the Low Interest Rate team)

Bill Sayre (Low Interest Rate team, Research team, liaison to Financial Reporting Section)

Terry Long (Low Interest Rate team, PBR team)

Jerry Enoch (PBR team, liaison to FR section)

Shane Leib (PBR team)

Norm Hill (LATF/PBA reports)

Alice Fontaine (LATF/PBA reports)

Mike Kaster (Liaison to Marketing and Distribution Section)

Karen Rudolph (Research team)

And one more set of recognitions for the SOA staff members, who help us in so many ways:

Meg Weber (staff partner)

Jill Leprich (outgoing section specialist)

Christy Cook (incoming lead section specialist).

(We are sorry to see Jill go, but we are excited to have Christy.)

These are the people who make SmallCo ROCK! I'm humbled to be a leader for this team.

I hope that you as a section member are pleased with what we've been able to accomplish. But think of how much MORE we could do with a few more volunteers! There is room for YOU on this team. If you are interested, my email address is *dwalker@fbinsmi.com.* I'd love to hear from you.

I look forward to a very productive 2014.

Donald M. Walker, ASA, MAAA, is director, Life Actuarial Department at Farm Bureau Life of Michigan in Lansing, Mich. He can be reached at *dwalker@fbinsmi.com.*

Case Study #1 is a small company selling conservative term and whole life with an actuarial staff of two credentialed actuaries, one student and one actuarial technician. Company #1 does not report on a GAAP basis; statutory earnings are not a component of incentive compensation; the business close schedule is 25 business days; business planning is twice per year; and cash flow testing/asset adequacy testing is done once per year. Its implementation plan and road map reflect a low-cost, business-as-usual approach using, to the fullest extent possible, its existing processes—from inputs, models and output analytics—with as little modification as possible.

So just what does that really mean? It means Company #1 will utilize the exclusion options to avoid having to calculate stochastic and deterministic reserves. It will pass the stochastic exclusion test using the certification option. This will rely heavily on current cash flow testing models with some additional sensitivity runs and additional documentation. It will need to modify the current CRVM calculations to support the net premium reserve (NPR) calculations, and modify reserve analytics and roll-forwards. The deterministic exclusion test uses a modified NPR and is straightforward.

The critical factor underlying the PBA implementation is that the reserves reported in the financials are determined using a similar formulaic approach as the current CRVM approach. Hence the analyses, interpretations, explanations, business closes and business forecasts are nearly identical to the current processes.

> VM-20 requirements reflect product risk profiles (including supporting assets). Robust risk profiles have super-sized requirements; benign risk profiles have down-sized requirements.

Case Study #2 adds complexity and magnitude across many factors affecting project scope. Company #2 also sells universal life with specified premium secondary guarantees (ULSG). ULSG will require deterministic reserves and possibly require stochastic reserves. This requirement impacts everything from a) setting margins and assumptions, to b) models, number of model runs and run times, to c) output data storage and analytics, to d) additional governance and controls needed throughout—from inputs, models and outputs. The deterministic and/or stochastic calculations obviously impact reported statutory reserves. The impact on business forecasts and the need to explain earning variances from forecast are minimal because Company #2 is managed on a GAAP basis. Provided risk-based capital (RBC) meets levels required by rating agencies, management does not incorporate statutory metrics into decision making.

Case Study #3 is similar to #2 except #3 is managed on a statutory basis and statutory earnings are a component of management compensation. The degree to which statutory-based metrics are incorporated in management decision making results in the significant difference between what and how much PBA implementation effort and resources are required by #3 vs. #2.

Case Study #4 is in between #1 and #2 except that Company #4 has decided it needs to upgrade model systems. The additional system conversion is more than the proverbial straw that broke the camel's back—the conversion and the all-in costs become the critical pathway to a successful implementation. Case Studies #5 and #6 are geared toward large companies. While they may contain insights that could be useful to small companies, the requirements and planning are all super-sized.

Guide Overview

In addition to the case studies, the implementation guide contains an executive overview, a scoping guide, and a road map guide. The scoping guide outlines a precursory gap analysis including steps to identify business requirements and financial reporting requirements, to form a view of your future PBA framework and a template to evaluate the current framework vs. PBA framework. The road map guide steers users to ask more substantive questions, explore alternatives, and evaluate and implement competencies, capabilities, activities and processes that could collectively be called practices. A VM requirement overview, implications and PBA implementation considerations are provided for categories organized as assumption setting, inputs, model platforms, outputs, technology and systems, and actuarial organization. The road map guide concludes with potential initiatives (i.e., action items) to implement PBA. Flow charts visually capture VM-20 requirements such as exclusion tests, deterministic and stochastic reserves, and prescribed assumptions to aid users in forming a view of their future PBA framework. The guide also contains lessons shared by the participants and provides literature resources on numerous issues pertinent to a PBA framework.

Executive Guidance

Three frequently asked questions are:
"Where should we start?"

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"What are others doing?" and
"What do we need to do and what don't we need to do?"

First, start by using the guide to develop a plan and plan now. The benefits of doing so and the downsides of not doing so are numerous. Constructing your road map (plan) now does not necessarily mean the map is frontloaded with large expenditures of time, effort and money. Numerous companies are concerned with having enough resources or the cost of procuring additional resources to implement and operate in a PBA paradigm. Spreading out the implementation work allows management more choices. Constructing a map now permits some of the transition from the current framework to the future PBA framework to occur incrementally in manageable sub-steps and to be coordinated with other actuarial or company projects as a marginal increase in resources.

The second and third frequently asked questions consider project scope and focus. Project magnitude and complexity are related to several dimensions including business strategy, usage in decision-making products and features, business requirements (e.g., financial close schedule), staff size, management philosophy (conservative/aggressive), policy count, existing framework, recent and ongoing activities, organizational structure and asset/company size.

We anecdotally observe that most small companies are managed on a statutory basis and do not report on a GAAP basis. Significant factors impacting project scope and which VM requirements are applicable will be product features and risk profiles. The guide contains a "product decision tree" to assist with these determinations. Perhaps the most significant factor affecting project scope is the degree to which statutory financial intelligence is incorporated into business decision making. The guide makes a sharp distinction between the usage of the words "information" and "intelligence." For example, the PBA financial statement reserve is information and the explanations of PBA earning variances are intelligence. The degree of resources invested in activities should reflect the degree to which they support business strategy and drive value creation. Information is costly, intelligence more so. The magnitude and complexity in implementing PBA reflects if, why and how decision makers accept, interpret and implement PBA intelligence.

A Potpourri of Considerations

The guide explores practices in a PBA future framework in four areas:

1. Capability: Can and how
2. Automation
3. Centralization
4. Robust vs. flexible.

Key decisions throughout the implementation will reflect choices in these four interrelated areas critical to operating a PBA framework. Addressing gaps and deficiencies will be integral components of any road map. The considerations are to what extent, when and how a company should implement capabilities, full automation, a centralized input database, model or output database, and fully or partially flexible and robust infrastructures. Two questions are: "Is more always better?" and "Is most/all always best?" Our opinion is "sometimes" and "no."

Practices should be aligned with company strategy. The right-sized capabilities, activities and processes including actuarial practices are not identical across all strategies. The competencies and leading practices to support a niche market strategy and a broad market differentiation strategy have similarities but have important distinctions. Practices are also significantly impacted by requirements. Simple products excluded from stochastic and deterministic reserves do not require the same controls, governance, modeling, analytical and data capabilities as products that do. The guide provides a narrative and visual overview of VM-20 requirements. The adage "Measure twice, cut once" can be recast as, "Form requirements twice, implement once."

Many frameworks and processes exist to meet current requirements. PBA will push these processes and frameworks to their limits due to a significant increase in volume such as more scenarios, more sensitivities, and more model runs to quantify assumptions and margins. A simple question to ask is, "If your cash flow testing had to meet the same timeline as current statutory reporting and other demands such as governance, audits, accuracy, granularity and explanations to management—what would break?" What if cash flow testing were run dozens of times? What would it take to make it work? The current framework may be sufficient if a process is run one time but insufficient in a PBA framework if the process will be run many times. Thus it is important to not only ask can it be done, but how. The how can be measured in terms of cost and resources.

From setting margins and assumptions, to myriad choices in modeling, to asset allocation methods, reasonable alternatives should be considered. The word "reasonable" appears 15 times in VM-20; for example, "shall use a reasonable approach." A PBA framework has many components and processes that will evolve over many years, not many months. Time will be required to figure things out such as VM-20 interpretations, processes, validations, analytics, implications and relationships. The more a company utilizes statutory-based intelligence in its decision-making process, the more time will be required to figure things out to balance trade-offs and choices throughout the PBA framework.

Your Move. PBA Strategy

A direct corollary to the "where to start" question is when to start. Implementing VM when it is first effective, at the end of the transition period, or somewhere in between, and taking into account requirements, resource availability and budget, will dictate the timing of implementation activities. PBA plus VM is more than VM-20 and entails data, documentation and governance requirements. Bridging gaps leverages internal core competencies. An internal-only view does not provide a complete perspective necessary to formulate a PBA strategy and decide your moves. When to develop capabilities or when to sequence PBA implementation activities must also reflect anticipated competitor actions such as launching new products. How and when will you respond? Will you be a first mover? How will your distribution channel react? These are questions senior management should ponder today. Internal strategic discussions between management, marketing, operations and accounting are critical to formulate your PBA strategy. Besides product development another item to incorporate into your PBA strategy is the impact on capital and risk management strategies, including actions by both direct writers and reinsurers.

Moving Target

Another frequently asked question is, "Why begin now? VM-20 will be changed and has numerous proposals under discussion." We remain steadfast in our advice—construct your road map now. Your business requirements and PBA strategy should be high level and flexible to have much the same look now as in a few years. The conclusions, sequencing and details of the implementation activities may change considerably, but your strategy on why and when to adopt, launch products, reflect PBA in business plans and incorporate VM-20 into managing the business will not. Your road map will be comprised of many foundational improvements to your current work activities that will have immediate benefits with or without VM-20. Other changes such as a delay in VM-20's effective date will stretch out your timeline of when you begin, work on, and complete implementation activities, but your strategy should be able to adapt to changes in details.

Right-size

Will one shoe (guide) fit all sizes? Wherever a company may be on the spectrum of today or tomorrow's demands, challenges, resources and capabilities, there are common elements in implementing and operating a PBA framework. Potential considerations and questions to ask are similar, but which considerations are important or even applicable, and the answers to the questions, will be unique. Thus, the frameworks, practices and maps will be unique as well.

The guide will lead companies down divergent paths. By rearranging templates, redefining categories, renaming labels, modifying considerations, reducing and adding detail, adjusting timelines, resources and sequencing, the tools and templates are transformed into something useful to the only company that matters—yours.

References

Cardinal, Tim, and Steve Stockman. 2013. *PBA Implementation Guide. PBA Implementation Guide Case Studies & Templates.* Society of Actuaries.

As of the publication date these are accessible at: *http://www.soa.org/Research/Research-Projects/Life-Insurance/research-2013-pba-implementation-guide.aspx.*

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2014 SmallCo Webinars

By Mark Rowley

One of the things we are most proud of in the Smaller Insurance Company Section is our webinars. We have been fortunate to have recruited many high-quality speakers. We plan to continue this tradition in 2014, and have expanded our slate from four to five webinars. We hope that these webinars are helpful to you in that you are educated, and that they help you receive useful continuing education. We also enjoy collaborating with other sections in doing webinars, as you can see noted below.

1. Qualification Considerations for Small Company Actuaries—A Professionalism Webinar—March 19, 2014
2. Regulatory Issues for Small Companies—Co-Sponsored with the Financial Reporting Section —June 11, 2014
3. Product Issues for Small Companies—Aug. 13, 2014
4. PBR Development Impacting Small Companies—Co-Sponsored with the Financial Reporting Section—Oct. 15, 2014
5. Financial Reporting Issues and Considerations for Year-End 2014—Co-Sponsored with the Financial Reporting Section—Dec. 9, 2014

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On the Research Front

SOA AND LIMRA RELEASE NEW STUDY ON VARIABLE ANNUITIES!

The SOA and LIMRA are proud to release a brand new study of variable annuity guaranteed benefit options. Researchers examined more than 3.4 million contracts with a guaranteed lifetime withdrawal benefit, guaranteed minimum withdrawal benefit, guaranteed minimum accumulation benefit or guaranteed minimum income benefit option. The analysis is based on 2011 experience and looks at how policyholders use these guaranteed options and exhibit other behaviors involving step-ups, cash flow and persistency. See the report for the findings in this important new study.

Experience Studies—Big Data for Small Companies?

By Al Klein

What is "big data"? This term has become quite prominent over the last couple of years. I did an Internet search to get the answer. The first website I clicked offered a free report titled "Big Data in Big Companies." I took a pass.

Wikipedia must have the answer. "Big data is the term for a collection of data sets so large and complex that it becomes difficult to process using on-hand database management tools or traditional data processing applications." That's a mouthful and not a definition I like either. It sounds like even big companies can't deal with "big data."

SAS Institute, Inc. had a definition I liked: "For most organizations, big data is the reality of doing business. It's the proliferation of structured and unstructured data that floods your organization on a daily basis—and if managed well, it can deliver powerful insights." I like both the beginning, that it is "the reality of doing business," and the end, that "if managed well, it can deliver powerful insights." This to me is what big data is all about and, with these pieces, something that is for small companies as well as big ones. In this article, I am going to explain how you can use experience studies as part of "big data" to help give you "powerful insights" and "manage well" your pricing, profitability and risk, all keys to successfully running and managing your business. This can be done, even with your more limited data, and I will explain how as "it is the reality of doing business." First, I am going to spend time discussing experience studies and some of the issues we find in completing ours. I will conclude with some of the steps you should take beyond the experience study analysis that will provide you with the "big data" boost, without resorting to consumer data that many have come to associate with "big data."

Much of what I am going to say regarding the development of experience studies many of you have heard before, but hopefully it will be a helpful reminder with the upcoming principle-based reserves (PBR) requirements. I plan to explain some of the key elements and considerations in conducting experience studies and how to avoid some of the obstacles you face or will face.

Why Are Experience Studies Important?

Let's start our discussion on experience studies with why a company should do them. There are a number of reasons:

- First, the data needed for PBR is the same as that needed for experience studies, so you will need to do something in this regard if you haven't already. The Smaller Insurance Company Section has done a nice job of preparing you for PBR so I won't spend more time on this subject, but rather focus on experience studies themselves. A link to this information can be found at *www.soa.org/Professional-Interests/Smaller-Insurance-Company/pbr-corner.aspx.* Two other sources of information for you are the slides from a presentation on what you should know about PBR and the March 2013 issue of *Small Talk* has an article on preparing for PBR.

- While we can price products with what we believe to be reasonable assumptions, unless we look at the results through experience studies, we really don't know how well we did. And it is important to know how well we are doing from an experience standpoint because our business must be managed to certain profitability levels for our stakeholders.

- With financial statements, we may learn that changes are needed, but without experience studies, we won't know where to make the changes that are needed.

- With experience studies, we can more quickly make necessary changes before a problem gets out of hand.

How to Conduct an Experience Study

Now let's move on to how to do an experience study. My focus in this article will be on mortality studies. Lapse stud-

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ies would be done similarly, but I will point out where there are some differences.

Cleaning the Data

In real estate, you have heard it is all about location, location, location. With experience studies, the first three steps are most important.

1. Clean the data.

2. Clean the data.

3. Clean the data.

Without good data, nothing else matters. I am not talking about credible data here because, as a small company, at least some of your data is likely not to be credible. I will discuss credibility later. What I am referring to here is that you need to make sure the data that will go into the study is accurate and reasonable.

I am responsible for most of the experience studies Milliman conducts, and I can tell you that over half of the time conducting the study is spent working with each contributing company on cleaning their data. And we generally go back and forth with a company at least three times to resolve all of the data issues. I like to look at our work with companies on cleaning the data as an extra benefit of participating in our studies—that is, the companies can fix the errors we find on their systems, helping with the accuracy of their own internal experience studies. We find the errors through a series of programs that look for potential anomalies in the data.

> … over half of the time conducting the study is spent working with each contributing company on cleaning their data.

There are a number of things that we look at in this process:

- Check for valid dates.
  - The date coming from your system should be a valid date.
  - The date of birth should not be after the issue date.
  - The termination date should not be before the issue date.
  - These are all basic items, but often not checked. The problem with ignoring these or other errors is that you do not know how the system will react to bad data. It could use it incorrectly and distort the true results without you even knowing it. With the smaller amount of data small companies have, only one or two errors could be enough to seriously distort the results.
  - Does a whole block of business all have the same issue date or termination date? Is that because it is a default value? If so, can the correct date be determined?
- Check for valid face amounts.
  - If your maximum face amount is $2,000,000 and there is a $15,000,000 policy in the data, is this valid? It may (through an exception) or may not be. Since this one large policy is likely to skew your results, it is important to make sure you verify that it is valid or correct it, if not. In our studies, we focus on every policy $5,000,000 or higher and work with companies to make sure every one of them is correct as we do not want to distort the results of our studies.
- Do some reasonability checks of the data before you begin the study. There are many areas where a problem could occur. The following are three examples.
  - If you know that sales have been increasing by a large amount, let's say for the last five years, and at a rate that exceeds the lapse rate, then you should see an increase in business by both issue year and study year for at least each of the last five years.
  - If you issue an even distribution of female and male business and you see data that shows 75 percent of the issues were males, a problem likely exists in the data (or maybe the not-taken rate for females is extremely high, which would be worthwhile to investigate). As you can see from this example, you may find issues that go beyond experience studies that need further investigation and action.
  - If you primarily issue to the 35- to 55-year-old market, and 25 percent of your issues are at 70, there is likely a problem.

These are just a few examples of the items to look out for. The point of this is to alert you to an activity that should be done rather than to provide you with an exhaustive list of items to review and investigate. Investigation of these issues is not fun and often time-consuming, but it needs to be done in order to have the data to do a study. If you just cannot resolve an issue, my recommendation would be to delete that record from the study, but hopefully you will not have to be deleting too many records. You will need to judge how much time to invest in the investigation of a record or group of records. The answer to this will likely be driven by the level of investigation needed to resolve the issue, how much time you have to devote to it, and when the study is due. In some instances, it makes sense to do the investigation after the study and include the corrected data in the next study. Make sure you document this, especially if it is a whole block of data you are excluding from the study.

One other issue related to the data is the effort being required of companies to search for deaths on some of the older blocks of business in order to pay the beneficiary the death claim, even though the death has not been reported. My understanding is that the findings from this research vary significantly from company to company. One challenge that everyone must face is that the best source for checking for potential claims is the Social Security Death Master File; however, a couple of years ago certain states stopped reporting deaths, making this research more difficult and impossible to fully complete. What does this have to do with experience studies? You may want to recognize that there might be some underreporting of deaths at the older ages and later durations of your business. My suggestion would be to do the experience study as you normally would and then possibly make some adjustment at the end, or at the very least, comment on this issue in your report/documentation.

Completing the Study

Now that you have completed the first three steps and have clean data, it is time to complete the study. Most mortality studies are calculated on an actual-to-expected (A/E) basis. To calculate the A/E ratio, we need to determine the actual and expected exposure.

"Actual" represents the claims. Claims can be by amount or policy count. I say claims because you may have an insured who has three policies with you. When that individual dies, you have three claims, but only one death. Most companies study claims because it is generally time-consuming to determine how many deaths are in the records.

"Expected" can be your pricing assumption, a standard industry table, or something else (e.g., cash flow testing assumptions, a percentage of a standard industry table that better reflects your experience, etc.). Using the pricing assumption allows you to determine how your experience did relative to how it was priced. Using a standard industry table allows you to compare your results to others in the industry. You would do this by comparing the percentage(s) of the standard industry table that you came in at relative to the industry results from an industry experience study. The choice depends on the study, and many companies use more than one basis to look at results.

In a mortality study, exposure is typically determined assuming a full year of exposure in the year of death and a partial year of exposure for any other decrement (e.g., new issue during the year, lapse, surrender, conversion, move to non-forfeiture option, etc.). For a lapse study, we would assume a full year of lapse exposure in the year of lapse and treat death as another decrement. When the decrement is one that is not specifically being studied, an exact calculation of the exposure is used. This follows a Balducci assumption, which is typically used in experience studies. A description of the Balducci assumption is beyond the scope of this article. A good source for a description of the Balducci approach and exposure calculations is *Mortality Table Construction*[1] by Robert W. Batten.

Before I provide a few examples to help you better understand the exposure calculation, there is one other item that needs to be discussed: whether the study should be done on a calendar-year or policy-year basis. The Society of Actuaries (SOA) does its mortality studies on a policy-year basis; however, with PBR there is a move to completing mortality studies on a calendar-year basis. We use a calendar-year basis. Lapse studies are typically done on a policy-year basis.

The following are a few examples to help you better understand the nuances of exposure calculations. The examples assume the mortality study is done on a calendar-year basis and the lapse study is done on a policy-year basis. Lapse exposure for a particular year is determined by the exposure up to the anniversary ending in that year. Let's also assume we want to know the exposure for 2013 and 2013 is the last year of the study.

1. Policy issued April 1, 2005 and still in force December 31, 2013:

    a. Mortality exposure in 2013 would be three months for duration 8 and nine months for duration 9.

    b. Lapse exposure would be 12 months for duration 8 (from policy anniversary April 1, 2012 to policy anniversary April 1, 2013).

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2. Policy issued April 1, 2005 and terminated by lapse March 1, 2013 (before the 2013 anniversary date):

    a. Mortality exposure in 2013 would be two months for duration 8.

    b. Lapse exposure would be 12 months for duration 8 due to the decrement being a lapse.

3. Policy issued April 1, 2005 and terminated due to death March 1, 2013 (before the 2013 anniversary date):

    a. Mortality exposure in 2013 would be three months for duration 8 due to the decrement being death and the other nine months of duration 8 exposure being counted in 2012.

    b. Lapse exposure would be 11 months for duration 8 (from policy anniversary April 1, 2012 to the termination by death March 1, 2013).

4. Policy issued April 1, 2005 and terminated by lapse May 1, 2013 (after the 2013 anniversary date):

    a. Mortality exposure in 2013 would be three months for duration 8 and one month for duration 9.

    b. Lapse exposure would be 12 months for duration 8 (from policy anniversary April 1, 2012 to policy anniversary April 1, 2013). The lapse is ignored because it is beyond the policy anniversary in 2013 and lapse exposure in 2013 only is counted until the policy anniversary in 2013.

5. Policy issued April 1, 2005 and terminated due to death May 1, 2013 (after the 2013 anniversary date):

    a. Mortality exposure in 2013 would be three months for duration 8 and 12 months for duration 9. This may appear to be an anomaly because there is more than 12 months of exposure in 2013, but it is just the outcome of the Balducci assumption, commonly used in actuarial practice.

    b. Lapse exposure would be 12 months for duration 8 (from policy anniversary April 1, 2012 to policy anniversary April 1, 2013). The death is ignored because it is beyond the policy anniversary in 2013 and because the study period ends December 31, 2013.

One important consideration is the observation period that should be studied. There is not one answer to this question. You will want the data studied to be current and relevant, but also to cover as much time as possible to provide a more robust database. Generally, five-year studies are good, although shorter or longer studies could also make sense for you. One important consideration is if and when any significant underwriting changes that impact mortality were made. You will likely want to look at the experience issued both before and after that change. Note that these changes often take place in the middle of a year, and it may or may not be feasible to break your study at the point of the change.

A consideration for when to pull the data to be studied is how long it typically takes for your claims to be reported. Claims that happen over the year-end holiday often take longer to report than claims other times during the year. So, if you decide to pull your data mid-January, for example, it is likely you will be missing some of the previous year's claims. We generally like to give companies at least three months after the calendar year before they report the most recent year-end data to us, but more typically six months to allow all or virtually all of the claims to have been reported and put into the system.

Another consideration for you to make is what to do with pending claims. Do you include them with paid claims when calculating "actuals"? The answer to this may be to simply include or exclude all pending claims. Or you could take a more sophisticated approach and determine the percentage of pending contestable claims that are typically resisted and make an adjustment to reflect this. Note that if you take this approach, you will need to stay on top of any company changes with respect to claims practices. Resisted claims should be excluded from the study. They should be treated as if the policy never existed. Otherwise, you will be including extra exposure that has no possibility of a corresponding claim and this would distort results.

Looking at the Results of the Study

Now that you are a master of getting the data in order, how to make the appropriate calculations, and have decided the years you are going to study, let's discuss how to look at the results of the study. I know small companies do not typically have as much data as larger companies, but that doesn't mean that you cannot study your own business and be able to draw some conclusions, including what actions may be needed. I find putting the output in an Excel pivot table to be most useful for analyzing results. Much of the data will need to be grouped to get meaningful results. Some examples include:

- Issue years: Group older business by decade; more recent years in smaller groups or individually.
- Issue ages: Create five or 10 age groupings, and the youngest and oldest ages are typically in a larger group (e.g., 0 to 29, 80+).

- Duration: Durations 1 and 2 could be grouped or shown individually, but should be separated from the other durations because they represent the contestable period. Then durations 3-5, 6-10, 11-15, etc. could be used up to the ultimate period, which would be shown as 16+ or 26+. Note that although the older issue ages often have a shorter select period, they are typically shown in the same format as the younger ages.

- Face amount bands: Group by points where the premium changes, where there are differences in underwriting, etc. You may also want other groupings to be able to study differences in experience.

I will typically start my studying of the mortality results by a single element whether the analysis is for a big or small company. I initially like to look at items such as:

- Study year
- Issue year
- Issue age
- Duration
- Gender
- Risk class
- Policy size
- Product

I look for problem areas within each of these broad groups first, and then I try to determine why there may have been a problem. So, for example, let's say females are showing poor experience and issue ages 45 to 59 are showing poor experience. I would try to dig deeper to find the reason. I will look at cause of death if it is available. If possible, I would review the specific claims involved, if the number of them is limited and the data is available. Let's say there were more diabetes claims than would be expected—I would then look at the underwriting and determine whether or not it is providing sufficient protection with respect to diabetes.

Although, as a small company, you have limited data, I think it is "big" enough to unlock the mysteries of your larger-than-expected claims. Is it too many claims or a few large claims? Through further digging, you should be able to determine the reason and take appropriate action. This further digging is where my definition of big data comes in, enabling you to gain the knowledge needed to take proper action.

Here are a couple of important points to consider in drawing your conclusions:

- If you are using an industry table as your expected and find that female experience has a higher A/E ratio than male experience, it doesn't necessarily mean that your female experience is worse than your male experience. This result may be due to the underlying table rather than your experience. If you see this in your results, check the industry experience that covers the same period you are looking at to see if your results are consistent with those of the industry. This same issue may happen with issue age and duration as well as gender.

- You will need to determine the credibility of your results. Two methods more commonly used and discussed in recent literature are the limited fluctuation method and the Bayesian or Bühlmann method. A description of these approaches and credibility theory in general is beyond the scope of this article. A good source for information on credibility theory is "Credibility Theory Practices" by Stuart Klugman et al. I recommend you study these approaches to determine which of these, or perhaps another method, is best for your circumstances. It should be noted that if the data is not credible, you will need to be careful about the conclusions you draw. However, if it is not credible, the results may still be indicative of good or poor mortality experience. You can sometimes make the results more credible by studying a broader group. For example, you may not have credible results if you look at gender by issue age, but may have credible results if you look at results by gender alone.

Both your reinsurers and consultants can help you with much of the items covered in this article. The SOA and Smaller Insurance Company Section also have resources to help. The experience studies Milliman does are for both small and large companies. One of the benefits of participating in our studies is that you receive a complete experience study based on the data you submit. We will be completing our second final expense study in 2014. If you have any questions on the article or our studies, please feel free to contact me.

Remember, "big data" is within your grasp. Take advantage of it as just described and you will be well on your way to "powerful insights" and a "well-managed" business. ●

ENDNOTE

[1] Batten, Robert W. 1978. *Mortality Table Construction.* New Jersey: Prentice-Hall, Inc.

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Mortgage-Backed Securities Can Be a Valuable Addition to U.S. Treasury Bond Portfolios at Small to Mid-Sized Insurance Companies

By Mark Whitford

Defining MBS

The U.S. agency mortgage-backed security (MBS) market is one of the largest and most liquid fixed income markets in the world. Within the United States, it is second only to the U.S. Treasury in size, with approximately $5.8 trillion outstanding (source: Securities Industry and Financial Markets Association). At that size, the market provides a high level of liquidity and depth. This is suggested by the very low transaction costs as highlighted by the tight bid/ask spread levels in MBS, which can be comparable to U.S. Treasury levels under normal market conditions.

The three main issuers of mortgage-backed securities are the Government National Mortgage Association (Ginnie Mae), Federal National Mortgage Association (Fannie Mae) and the Federal Home Loan Mortgage Corporation (Freddie Mac). Officially chartered as government-sponsored enterprises (GSEs), U.S. mortgage agencies Fannie Mae and Freddie Mac were established to facilitate U.S. home ownership by helping to broaden the mortgage lending landscape through the securitization process. Similarly, Ginnie Mae was established as a government-owned corporation within the Department of Housing and Urban Development to facilitate U.S. home ownership while focusing on low- to moderate-income households. Because Ginnie Mae is wholly owned by the U.S. government, the MBS it issues are the only ones to carry a full faith and credit guarantee by the U.S. government and are equal in seniority of payment with U.S. Treasuries.

These agencies seek to provide stability and affordability to the mortgage market by effectively collateralizing mortgage loans and selling them in the fixed income market. Over time, this segment of the market continued to grow and was a natural fit for some of the largest and most sophisticated investors looking for a better potential return than U.S. government bonds. Agency mortgages continue to comprise the most significant component of the U.S. MBS market and are the major source for U.S. residential mortgage funding.

The Potential Benefits of Adding MBS to a Portfolio

Many small to mid-sized insurance companies have significant U.S. Treasury portfolios. Historically, U.S. agency MBS have consistently provided a yield advantage over U.S. Treasuries. Although the amount of yield advantage changes over time, this advantage has persisted and provided fairly consistent excess returns over U.S. Treasuries.

I believe the data are even more compelling when comparing the return profiles of U.S. Treasuries to agency MBS, potentially creating a more efficient portfolio and enhanced risk/return profile.

Risks and the Value of Active Management

Since mortgage borrowers have the ability to prepay their mortgage loans, prepayment risk is generally a primary risk when investing in MBS versus U.S. Treasuries. This leads to an inverse relationship between implied U.S. Treasury volatility and excess returns in the MBS market.

U.S. agency mortgage analysis focuses on a variety of factors that determine how quickly the borrower is likely to prepay the obligation relative to anticipated future levels of interest rates and underlying home valuations. Hence, one of the important dynamics for insurance companies to understand when building an MBS portfolio is the complexity of modeling mortgage prepayment speeds and managing the portfolio around these assumptions. This is a complex process requiring dedicated quantitative research and experience effectively managing portfolios of MBS through market cycles. In addition, significant qualitative assessment is also needed to properly position portfolios as other factors can also impact prepayment speeds. Carefully weighing and incorporating a variety of potential issues, such as employment trends, political issues related to the housing market, the potential for additional unconventional monetary policy action, a continually changing landscape within the housing finance market, and

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the relative value dynamics within the market itself, may alter prepayment expectations and expected returns across the MBS opportunity set. Hence, I believe the portfolio allocation can be optimized and implemented using both prepayment model outputs as well as a host of qualitative factors. I believe that only by combining all of these inputs and factors can investors be successful in navigating today's mortgage market.

Going Forward in a Changing Market

More so than ever before, changes to the structure as well as the role of the government in the U.S. mortgage finance industry are being discussed. The major themes include lessening government support for GSEs while still maintaining a stable mortgage finance market. Most believe that an inevitable outcome is that both Fannie Mae and Freddie Mac will be downsized as their balance sheets are shrunk in an orderly fashion. Given the GSEs' large presence in the mortgage market, the current regulatory and political environment and the goal of maintaining reasonable levels of mortgage financing, I believe that the implementation of any major change will occur over a long period of time. However, in the longer term, I could see a move toward a market with more private involvement and less government participation. It is hard to envision an environment without some sort of government involvement, as the immediate impact could be an increase in mortgage financing costs. In the meantime, I expect the government will continue to have an active role in the market as it has a vested interest in supporting the overall U.S. housing market. I will be following any changes very closely, but in the interim, I continue to believe in the inherent value of this asset class. It offers potential benefits for investors who seek to broaden beyond traditional Treasury and agency debt without having to significantly sacrifice liquidity, yield and safety.

It is hard to envision an environment without some sort of government involvement, as the immediate impact could be an increase in mortgage financing costs.

Adding Significant Value to a U.S. Treasury Allocation

With yields I feel are attractive, liquidity and risk-adjusted returns, I believe U.S. agency MBS can be a valuable addition to insurance general account portfolios invested in U.S. Treasuries. Due to the complexity involved, I also believe that comprehensive research and asset-class expertise is critical in the management of these securities.

IMPORTANT NOTES

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Life Insurance Industry Unclaimed Property Issues and Reasons They Matter to Actuaries

By Elizabeth Tosaris

During the last three years, there has been a great deal of regulator time, company resources and press devoted to the issue of "unclaimed property" in the life insurance industry. The issue has revolved around the existence of unclaimed, but payable, life insurance proceeds where insureds are deceased, but no beneficiaries have filed death benefit claims under the policies. In these cases, life insurers are left with insurance policies recorded on their books as being in force and holding assets as reserves for these apparent unmatured policies. Because there might be a way for the life insurers to check their book of business to try to identify these kinds of policies, there have been a number of regulatory examinations and investigations of life insurance companies that led, in many cases, to settlements between life insurance companies on the one hand, and state revenue and insurance agencies on the other hand. The same facts have also been used as the basis for class action lawsuits against life insurance companies. This article provides a background on the unclaimed property issues, and then briefly discusses some of the impacts these issues will have on the work and responsibilities of life insurance actuaries.

Summary of the Issues

The Social Security Death Master File (the "Death Master File") is a database maintained by the federal government. The Death Master File documents approximately 95 percent of Americans who have died over the past 75 years. It includes dates of birth and death, Social Security numbers and even ZIP codes. The states claimed that the life insurance companies should have known about insured deaths shortly following the date of death because insurers have access to the Death Master File.

One of the functions of a state controller or treasurer is to receive funds or other property that escheat to the state when the owner does not come forward to claim those funds or property or when the holder of the funds cannot locate the proper owner. Examples of insurance payments potentially subject to the escheatment laws include death benefits, funds payable to policyholders reaching the limiting age, matured endowments, annuity payments and policyholder dividends. State controllers in a number of jurisdictions became concerned that life insurers were drawing down the cash value of life insurance policies to continue paying premiums, even when the insurers knew or should have known the insured had died. According to the controllers, the companies should have monitored the Death Master File to determine whether their insureds were still alive, and upon determining that the insured had died, should have either paid the beneficiaries or escheated the funds as required by state law. Departments of Insurance also became concerned that failure by life insurance companies to identify deceased insureds violated state insurance laws.

Regulators also discovered that, in some cases, insurers used the Death Master File to identify annuitants who became deceased in order to halt payments on those individuals' annuities, but did not cross-check whether the deceased also had a life insurance policy with the company that would also be rendered payable upon that same individual's death. Use of the Death Master File to monitor the insurer's duty to pay under annuity contracts but not to monitor the insurer's duty to make life insurance payments is referred to as an "asymmetrical" use of the Death Master File.

As a result of these concerns, both state controllers and Departments of Insurance have investigated a number of life insurers' practices with respect to identifying deceased insureds and paying beneficiaries or escheating funds to the state as required. The state agencies targeted some of the nation's largest life insurers in their investigation, and as of the end of 2013, life insurers representing over 50 percent of the total national market have conformed or agreed to reform their business practices to use the Death Master File to search for deceased insureds and to initiate the claims process where the Death Master File identifies that an insured has died.

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Life insurers have also faced civil suits revolving around these issues. These suits are based on the theory that life insurers are obliged to attempt to determine whether their insureds are deceased, and may not rely upon the beneficiaries to notify them of a claim. Even though the suits have met with only partial success, as a result of these suits and the regulatory actions, there have been many changes in life insurance companies' practices around these issues.

In particular, regulators have pushed for companies to search the Death Master File on an annual basis. In addition, the regulators proposed changes to state law to address life companies' perceived shortcomings: For example, Florida now requires insurers to perform due diligence on inactive accounts, which for a life insurer, would include a search of the Death Master File.[1] The states' investigations have also resulted in a number of settlements with life insurance companies, where the companies generally agree to implement policy and procedure changes to search the Death Master File for deceased insureds. If the companies find a match between the Death Master File and their insured, they agreed to initiate claims processes, including identifying beneficiaries and paying proceeds to them or to the states' unclaimed property offices if the beneficiaries could not be located.

Life insurers have also faced civil suits revolving around these issues.

What Does This Mean for the Actuarial Function of Life Insurance Companies?

Not all companies are subject to the settlements with the state regulators or are doing business in states where the laws have been changed in response to the unclaimed property issue. Nevertheless, the result of the suits, settlements and extensive press coverage, as well as the changes in law, has been to change the standards that life insurance companies generally follow in the handling and maintenance of their policies. Thus, the issues discussed above will likely impact all life companies. And, because of this new regulatory landscape, life insurance companies will now need to consider whether their life products are still rated appropriately.

Assuming no bars to coverage, life insurance companies have generally paid claims either when a claim was made or when the policy—if the benefits had not been exhausted through the payment of premiums—reached a sufficient age that the company procedure was to escheat the proceeds. While the number of beneficiaries likely to make a claim may not necessarily change, if companies institute a process for monitoring the Death Master File and follow the discovery of any death of an insured with affirmative efforts to locate the beneficiary or commence the escheatment period, the net result is that more claims will be paid more quickly. Correspondingly, the number of policies whose account values may be used to pay premiums may also fall. Both these facts will affect experience, and depending upon the company's historical practices, the impact on experience may be greater in some cases than in others. This change in experience will need to be addressed when developing rates.

As stated above, companies may now need to run regular searches of the Death Master File, and may also need to develop programs and systems to cross-check that information against the database of existing insureds. Companies may implement protocols to contact beneficiaries listed on a policy if it appears that the insured has become deceased. In addition, companies will need to develop processes to identify funds that need to be escheated and to provide those funds, along with the necessary reporting, to any one of the 51 U.S. jurisdictions and five territories. All of this extra process will carry a cost, which should be captured in the setting of rates.

In conclusion, each life insurance company and its actuaries will need to consider the impact on its cost of doing business and its loss experience and whether this impact needs to be accounted for in its rates.

ENDNOTE

[1] See Florida Department of Financial Services Oct. 4, 2013 declaratory statement issued in *In Re Petition for Declaratory Statement of Thrivent Financial for Lutherans,* Case # 137963-13-DS.

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Regulatory Update for 2013

By Norman E. Hill

This material is prepared as of Dec. 22, 2013. Since events in the industry remain volatile and dynamic, readers are strongly encouraged to read email blasts from the Society of Actuaries (SOA) and other industry publications up to the date of *Small Talk* publication.

1. SOA's role—It has been emphasized that the SOA's role is educational, rather than one of advocacy. Nonetheless, there can often be a fine line between education of actuaries on certain matters versus advocating a certain course of action on them. The following are examples.

   a. At the National Association of Insurance Commissioners (NAIC) Fall Meeting, a new Individual Disability Table for active life and claim reserves was presented. It contains considerably more breakdowns of benefit and elimination periods than the 1985 table. The Health Actuarial Task Force (HATF) adopted this table, but with a long six-month exposure. One regulatory actuary asked the presenter a question that generated some controversy: Since report conclusions recommend higher active life reserves in three states—California, New York and Florida (for example, 29 percent higher in California)—what is the basis for this recommendation? The presenter said the statistics call for this split, but the HATF actuary said he needed more to present to his legislator.

      This raises the question: Can an actuary prepare a qualitative report, based on surveys or interviews of contributing companies and other sources that address questions like the above? Issues could include: Existence of state disability programs—do these lead to higher income replacement during disability; are there legal differences in court decisions on disability definitions and claims practices; and are there cultural differences among states affecting attitudes toward disability?

   b. Arguably, there are similar issues regarding VM20 of the Valuation Manual (VM), dealing with principle-based reserves (PBR), now up for legislative adoption in 2014–2015. Questions that could involve discussion between, and education of, actuaries include:

      (1) Section 2D4 states that only stochastic and deterministic gross premium reserves qualify as PBR reserves. But if the actuary expends professional effort in computing CRVM reserves and uses his judgment to test their adequacy, is this work also the type to satisfy PBR?

      (2) For certain treatment under VM20, types of term and universal life with secondary guarantees (ULSG) require definition. Generally, this "term" is considered to mean very competitive term policies sold today. Could definition of such term involve premiums that generate two or more segments, as defined under Regulation XXX?

2. The NAIC approved a new section of the Model Law on Actuarial Memorandum and Reports, requiring that the report be submitted annually to the board of directors. Since this involves Model Law 822, it must go through the legislative approval process.

3. Comframe or Common Framework (of Regulation) does not generally affect small companies. It primarily affects Internationally Active Insurance Groups (IAIGs). However, developments in this area do involve questions of federal charter proposals, which imply they merit some monitoring.

4. Captive insurers—Generally, this does not affect small companies, although there could be an increase in usage here of captives or Special Purpose Vehicles (SPVs). Parents cede business to captives, expecting that reserves and/or investments can receive more liberal regulatory treatment.

Competitive term and ULSG reserves have led to the primary demand for PBR and reserve reductions. Also, these products seem to be the primary products ceded to captives.

An increasing number of states now have legislation authorizing captives. Several large writers of the above two products have stated that they believe captives will continue for new business, even after PBR becomes effective for new business. Some regulators believe that captives should be outlawed, once PBR is adopted nationwide. This led to an intense session at the Fall NAIC Meeting. The ACLI testified for captives and against any precluding legislation of this sort.

5. Status of Current Basis of Statutory Accounting—As written before, this accounting basis is codified, even though sometimes described as "GAAP except for." If current U.S. GAAP is ever replaced by currently proposed international GAAP (IFRS), this codification would continue. Some small companies report on both statutory and GAAP, while some use only statutory.

   Although some vague statements have been made about scrapping statutory accounting in place of some type of GAAP, no concrete proposals were made at the Fall NAIC Meeting. One regulator expressed disappointment at lack of progress of convergence of two IFRS versions, one by U.S. accounting authorities (FASB) and one by international authorities (IASB). He said that now he wasn't sure if such convergence would ever take place. At such time, the question of scrapping statutory accounting could rise again.

Some regulators believe that captives should be outlawed, once PBR is adopted nationwide.

6. Actuarial Guideline 38 (AG38) and ULSG—This is an NAIC-agreed-upon basis for gradually grading ULSG reserves calculated by some companies up to quasi-PBR over the period 2011 through 2013 (or later). At the Fall NAIC Meeting, the New York representative on the Life Actuarial Task Force (LATF) did not report on any observations of ULSG reserve games or under-reporting. Given recent controversy and assertions of such practice, this silence was surprising.

7. Affordable Care Act (ACA)—Much has been reported in the news and television about current problems with "Obamacare." One statement made about NAIC goals for 2014 was helping states that are attempting to implement health coverage exchanges under the Act.

8. Optional Federal Charter (OFC)—Recently, a key federal agency, the Federal Insurance Office (FIO), issued a report calling for some degree of increased federal involvement in insurance regulation. Federal designations of AIG, Prudential and Met as systemically significant make them subject to such supervision.

   It seems that NAIC executives have attempted to put a positive spin on these developments, since the FIO seems willing to work with and cooperate (somehow) with the NAIC.

9. PBR

   a. Non-variable annuities and long-term care (VM22 and VM25, respectively)—No firm proposals have ever been made for modifying current statutory reserves for these products. For VM22 annuities, a work group of the American Academy of Actuaries (AAA) has said again that they do not anticipate any radical departures from current statutory. They have indicated that they will propose liberalizations of CARVM, so that many low probability annuity benefit outcomes can have probability rates applied in reserving.

   b. Mandatory expense reporting—A key portion of VM is mandatory experience data reporting (VM50 and 51). Types of data reported would include mortality, involving activity to date, but also lapse (policyholder behavior) and expenses. New York, which has overseen LATF activity to date in this area, indicated again its interest in expense reporting. Reports would eventually go beyond current annual statements, so that acquisition, pricing overhead AND remaining overhead would be separated.

      This type of split could be troublesome for many small companies. Due in large part to size and lack of critical mass, small insurers are apt to have substantial amounts of non-pricing overhead. If the latter were required in reserve calculations, without grading or similar relief, small companies

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could have a considerable disadvantage in the industry with reserve magnitudes.

c. Industrial life exemption—Unexpectedly, the LATF chairman proposed a complete PBR reserve exemption for industrial insurance (to be defined). This proposal was adopted for exposure. As a result, industrial, preneed and credit life would be exempt from PBR reserves. Other traditional products, such as "vanilla" permanent, final expense, limited or guaranteed issue life and worksite life would not be exempt.

   Exemptions under mandatory experience reporting are more limited. Companies with under $50 million in ordinary life premiums are exempt. Also, small companies would often be exempt, under the NAIC goal in VM50 of limiting data collections to 80 percent of industry aggregate volume.

d. ACLI proposal for small company exemptions—The ACLI made its initial proposal to LATF, but sent its covering proposal letter to the parent organization, EX PBR Implementation Task Force (ITF). The letter stated that the small company portion of ACLI, the Forum 500, supported such exemption and would only support PBR if it were adopted.

   Exemption would depend on company premiums, risk-based capital (RBC) level, unqualified actuarial opinion on reserves, and minimal premium volume for ULSG. These thresholds were not specifically stated, but the goal was to exempt the 700 or so companies that comprise only 15 percent of industry volume.

   One LATF actuary stated his adamant opposition to the proposal, and several other LATF members stated opposition. However, rather than reject the proposal, LATF deferred a decision to its parent, the above ITF. When ITF met the next day, its entire time was taken up with discussions on captives. Therefore, it promised to take up the ACLI exemption proposal in a January 2014 conference call.

e. Net premium reserve (NPR) expansion—One LATF member expressed his intention to propose that NPR be developed as the floor reserve for traditional products, replacing current CRVM. If developed, new NPR factors would be subject to a cell-by-cell cash value test. Since, for most products, cash values eventually grade to CRVM statutory, the latter would become the reserve floor anyway.

f. Industry premiums by state and PBR legislative adoption—The new Standard Valuation Law (SVL) only becomes effective when states with 75 percent or more of aggregate 2008 life and health premiums have adopted it. The exact stipulation is premiums from both life and health insurers.

   The ACLI Fact Book shows 2008 premiums for all lines of business, but only from life insurers. In its Table 10.6, this total is about $739 billion. However, the NAIC-published threshold, that presumably includes health insurers, is significantly higher, a little over $1 trillion. Exact state percentages to achieve the 75 percent goal vary somewhat between the two tables

g. Legislative adoption status—For some time, the total number of jurisdictions adopting VM has remained at seven small states. Key states where PBR adoption will be considered start in 2014 and continue into 2015.

10. Contingent deferred annuities (CDAs)—This is another product hardly ever sold by small companies, but its popularity has been increasing. It is sold in conjunction with an investment product of some kind not sold by the insurer. When and if monthly income from the investment fund is exhausted, corresponding monthly income starts to be paid from the CDA. Some have questioned whether it is really an insurance or guaranty fund product.

    So far, the NAIC and LATF have not devised any reserving or RBC methodologies for CDAs.

Summary

Year after year, every update report stresses the high degree of uncertainty remaining on a host of issues, both for small companies and the entire life and health industry.

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SmallCo at the 2013 Valuation Actuary Symposium

By Roger Brown

The Smaller Insurance Company Section (SmallCo) was in the fast lane in Indianapolis at the 2013 Valuation Actuary Symposium (ValAct). We sponsored three sessions that covered a wide variety of topics.

Session 15—Regulator Discussion of PBA with Small Company Actuaries. This was the fourth highest rated session at ValAct. Jerry Enoch did a wonderful job moderating and framing the interactive presentation. We were fortunate enough to have two very well-respected regulators: Mark Birdsall from Kansas and Pete Weber from Ohio.

Mark and Pete spoke on a number of hot-button issues within the principle-based approach (PBA) and spent a lot of time explaining all of the things that regulators were trying to do to help make PBA more palatable for small company actuaries. I was particularly impressed and comforted with their obvious concern that PBA not be too onerous to be useful for smaller companies.

Session 30—Buzz Group. This session has become a tradition due to its past success. It lived up to its billing once again as the seventh highest rated session at ValAct. We divided into five full groups and had an expert moderator at each table. Pam Hutchins, Jim Thompson, Joeff Williams, Brad Shepherd and Mike Kaster were the group leaders and did a superb job.

Topics of interest to those in attendance included the low interest rate impact on investments, the low interest rate impact on asset adequacy testing, PBA, product pricing assumptions, and a potpourri of other topics like enterprise risk management (ERM), Own Risk and Solvency Assessment (ORSA) and GAAP issues. The dialogue and interaction were first rate—if you have never been to one of these sessions, make a point to do so in the future. You will not be disappointed and you most certainly will not fall asleep!

Session 77—Smaller Insurance Company Chief and Corporate Actuaries Forum. This was intended to be a more informal and interactive session and it lived up to and exceeded expectations. This tied for the second highest rated session at ValAct! It was definitely worth the modest cost for the unique opportunity to rub elbows with an elite group and enjoy a delicious meal.

We opened with a group discussion focusing on PBA. After that, we broke into four groups, led in an excellent fashion by Julie Hunsinger, Mike Kaster, Terry Long and Joeff Williams. We rotated only once as there were some great discussions going on. Topics of interest included low interest rates and asset adequacy, pricing in a low interest rate environment, investment strategy and economic capital/ORSA/ERM. We also encouraged and saw a lot of networking going on—something that every small company actuary needs!

All in all, SmallCo crossed the ValAct finish line in fine fashion in Indy. We were particularly pleased to have a regulator—Mark Birdsall from Kansas—attend both the Buzz Group and the forum. Needless to say, Mark's perspective at all three of our events added tremendous value to the discussions.

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SmallCo at the 2013 Annual Meeting

By Mark Rowley

At the SOA annual meeting (San Diego, Oct. 20–23, 2013), the Smaller Insurance Company Section (SmallCo) sponsored three sessions:

- Hot Breakfast
- What Small Company Actuaries Should Know About PBR
- Current Topics Impacting the Smaller Insurance Company (Buzz Group).

Tim Cardinal did an excellent job at the hot breakfast speaking about the *PBA Implementation Guide*. Norm Hill and Shane Leib spoke on a similar topic in the principle-based reserves (PBR) session, focusing on the VM20 exclusion tests. I received some very positive comments about the PBR presentations. Specifically, I was told that these were some of the best presentations about PBR they have ever heard. Among the many presentations about PBR the comment was that these presentations were more practical and made sense. The comments came from both small and larger company actuaries.

SmallCo's constituents in many cases are small company actuaries, but also anyone who wants to keep up on statutory financial reporting issues. At times we are the section that focuses the most on statutory financial reporting.

The Buzz Group session continues to be very popular, because it is extremely focused on discussing the topics that the participants want to talk about! Thanks to the facilitators, which included Bill Sayre, Phil Ferrari, Leon Langlitz, Don Walker, Norm Hill, Grant Hemphill and Terry Long, and the contributions of the participants, we had another successful session. A wide range of topics was discussed, including the usual topics of product development, cash flow testing, additional reserves for asset adequacy analysis, reinsurance and PBR. There was one new and somewhat unique topic that we found very interesting—pet insurance. After several questions and a joke or two, we found that the actuary was dealing with issues that were similar to those faced by actuaries in more traditional roles.

At the Hot Breakfast we also discussed our plans for SmallCo in 2014 and encouraged all in attendance to consider becoming involved. There are a lot of good things happening in SmallCo, which will be even better if you are involved. Please don't hesitate to contact me if you have questions about SmallCo. At the end of the breakfast the role of chairperson was passed from Mark Rowley to Don Walker as Don recited the SmallCo cheer:

e to the x dx dy

radical transcendental pi

secant cosine tangent sine

three point one four one five nine

two point seven one eight two eight

Actuaries! Actuaries! WE ARE GREAT!

YEAH, ACTUARIES!

(Thanks to former SOA President Dave Holland who inspired our cheer!)

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What Is the Professional Development Committee and What's in It for You?

By Beth Grice, Terry Long and Judy Powills

The Professional Development Committee's Top 10 Facts:

10. Otherwise known as the PDC, the Professional Development Committee is an SOA board of directors appointed committee.

9. The PDC was formed in 2009.

8. The PDC has overall responsibility for managing the development of the professional development (PD) curriculum (the content, method of delivery and resources provided to facilitate learning) reflecting the SOA's competency framework.

7. The PDC is charged with providing the highest quality learning experiences.

6. The PDC ensures that the PD program is focused on both current and forward-looking technical and non-technical content (state of the art).

5. The PDC ensures that the PD program makes use of instructional technologies to assure timeliness of, and broad access to (globally accessible), relevant and engaging programming.

4. The PDC fosters career-long learning.

3. The PDC is charged with ensuring that the SOA's PD program meets the needs of the profession and is aligned with the SOA strategic plan.

2. The PDC represents the SOA's constituencies including Canadian and international.

And No. 1 …

The PDC represents you and your PD needs!

Approximately 75 percent of content developed for, and delivered to, SOA members comes from you—the sections! The sections and volunteers play vital roles in the planning, development and delivery of the SOA PD program. 2014 looks to be an exciting year for section-sponsored PD offerings—section plans reflect an array of offerings targeted to member needs—meeting sessions, seminars, webcasts, podcasts and more. Congratulations to the sections!

If 75 percent of content comes from the sections, where does the rest of the SOA's PD programming come from? The SOA partners with other organizations, actuarial and non-actuarial. The SOA also enters into strategic alliances with other organizations. The PDC is responsible for considering these strategic alliances. For example, if an organization is interested in delivering a seminar, it is required to submit a strategic alliance form to the PDC. The PDC has the responsibility and authority to evaluate the proposals and make a decision as to the appropriateness of the relationship. The PDC also looks to SOA staff to set goals in support of the PDC's initiatives to develop and deliver quality curriculum to meet members' PD needs and support lifelong learning. Remember that the prequalification curriculum with new additions is available to the PD audience, too.

Learning technologies are rapidly changing. The PDC evaluates and makes recommendations for the adoption of new technologies to apply to PD programs—the best in webcasting, virtual sessions and podcasting. And, our e-Learning portfolio continues to expand, offering more for members' technical and non-technical knowledge and skill development.

In addition to overseeing the PD program for members, the PDC sets priorities on an annual basis to provide a comprehensive, progressive curriculum to meet upcoming needs. 2014 priorities include building/enhancing PD offerings for pension actuaries and actuaries internationally, offering more in the areas of business analytics and general insurance, conducting market research to better understand member needs and gaps, and letting you know about offerings and tools available. Did you know, for example, that you can purchase a group of business and communication skills e-courses from BizLibrary: http://www.soa.org/bizlibrary/? Do you know about Tools for Actuaries: http://toolsforactuaries.org/? Check it out to find tools relevant to your development including books, e-books and training opportunities.

The PDC is a resource for you. Current PDC members representing the sections are:

- Beth Grice (PDC chair)—Health and Long Term Care Insurance Sections and liaison to the Health Meeting: *bgrice@humana.com*
- Peter Hayes—Pension and Social Insurance Sections: *phayes@eckler.ca*
- Donald Krouse—Investment and Joint Risk Management Sections and liaison to the Investment Symposium and ERM Symposium: *dkrouse@aegonusa.com*
- Terry Long (PDC vice chair)—Product Development, Financial Reporting, Marketing & Distribution, Reinsurance, Smaller Insurance Company, and Taxation Sections and liaison to the Life & Annuity Symposium and Valuation Actuary Symposium: *tlong@lewisellis.com*
- Kevin Pledge—Actuary of the Future, Education & Research, Entrepreneurial Actuaries, Forecasting & Futurism, International, Management & Personal Development and Technology Sections and 2014 Annual Meeting Chairperson: *kevinpledge@gmail.com.*

The other PDC members are Jennie McGinnis (board partner), Lorne Schinbein (Education Executive Group curriculum chair), Genghui Wu (international constituency), Mike Boot (SOA managing director—Sections & Practice Advancement) and Judy Powills (SOA senior director of Curriculum and Content Development). PDC members are also assigned to board-appointed teams including the Issues Advisory Committee, the International Committee and the Transfer Knowledge Team.

The PDC wishes to thank the sections for their contributions. Feel free to call upon us as your sounding boards for your ideas about PD content and delivery!

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