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- 1 **Right-Sizing: A PBA Implementation Guide**  
By Tim Cardinal and Steve Stockman
- 3 **Chairperson's Corner SmallCo Rocks!**  
By Don Walker
- 8 **2014 SmallCo Webinars**  
By Mark Rowley
- 9 **Experience Studies—Big Data for Small Companies?**  
By Al Klein
- 15 **Mortgage-Backed Securities Can Be a Valuable Addition to U.S. Treasury Bond Portfolios at Small to Mid-Sized Insurance Companies**  
By Mark Whitford
- 17 **Life Insurance Industry Unclaimed Property Issues and Reasons They Matter to Actuaries**  
By Elizabeth Tosaris
- 20 **Regulatory Update for 2013**  
By Norman E. Hill
- 23 **SmallCo at the 2013 Valuation Actuary Symposium**  
By Roger Brown
- 24 **SmallCo at the 2013 Annual Meeting**  
By Mark Rowley
- 26 **What Is the Professional Development Committee and What's in It for You?**  
By Beth Grice, Terry Long and Judy Powells

## 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.

Continued on page 5

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?”

Continued on page 6

“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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