Governance of Principle-Based Reserves

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What is governance, and why is it important in the context of principle-based reserves (PBR)? Over the past few decades, the concept of corporate responsibility has gotten a lot of traction with consumers and regulators. These parties, along with the general public, want assurances that businesses are operating in a responsible manner. Governance is an important aspect of corporate responsibility—it is the system by which an organization is controlled, and the mechanism by which it is held accountable. The public has come to expect large corporations, including life insurance companies, to adhere to high standards of governance.

The NAIC Valuation Manual (VM) recognizes the importance of governance and devotes a large portion of its pages to this topic. The opening paragraph of VM-G states why governance is important. Under a principle-based approach, responsibility for selecting assumptions is no longer strictly the province of the regulators. Instead, it rests with individual companies. Governance is a system of oversight that seeks to establish that assumptions are chosen in a responsible manner, ensuring that the statutory financial statements of each company are sound, reliable, and comparable.

The concept of governance may seem nebulous, so let’s define it at a more granular level. It consists of four main elements:

1. Standards: The Valuation Manual and other authorities establish rules that define how actuaries are to approach the PBR process.
2. Oversight: The Valuation Manual defines roles for actuaries, their management and the company’s Board of Directors to oversee the PBR process.
3. Controls: Actuarial practitioners must take a thoughtful approach to establishing a system of controls to ensure that results of the PBR valuation are as intended.
4. Review: There is a range of possible interpretation for Valuation Manual guidance. This interpretation is initially provided by the Qualified Actuary (QA), who is designated by each company to take primary responsibility for the PBR valuation. But it’s important to get an independent review the Qualified Actuary's (QA's) interpretation to establish that it is reasonable.

Standards

Standards begin with the Valuation Manual itself. VM-20 and VM-21 establish PBR calculation methods and assumption guidelines for life insurance and variable annuities, respectively. There is a lot of prescription around many assumptions—for example, mortality. VM-31 then defines how the Qualified Actuary (QA) is to document results of the PBR work, following an approach that should be relatively uniform and comparable across companies. The NAIC Standard Valuation Law (SVL) has been amended with Section 12 that defines additional important standards for PBR:

"Prudent estimate assumptions should reflect unfavorable events that have a reasonable probability of occurring. They are not intended to reflect extreme events."

The Prudent Estimate standard is not necessarily the same as the "moderately adverse" standard required for Asset Adequacy Testing (AAT) under VM-30. At the same time, a company may be able to justify using the same assumptions for both AAT and PBR.

Section 12 of the SVL requires the PBR valuation to be consistent with corporate risk assessment processes. For example, if a company uses hedging or reinsurance to control risk, those risk management approaches should be reflected in the valuation.

PBR assumptions may come from prescription in the Valuation Manual or relevant sources. The preferred source is company experience, but if this lacks credibility the company may consider external experience that is relevant.

Standards - ASOPs

Looking beyond the Valuation Manual, PBR standards come from a wide range of Actuarial Standards of Practice (ASOP). Among the more important ones are:

- ASOP 23 – Data Quality: PBR requires asset and liability data to provide the basis for assumptions and as input to the PBR valuation.
- ASOP 41 – Communications: The VM-31 PBR report is intended to engage many different audiences in the PBR process, including the company's board, management, regulators, and auditors.
- ASOP 52 provides guidance that is specific to PBR, particularly VM-20.
- ASOP 56 – Modeling: PBR is a modeling-based process.

Standards - PBR

Some states have additional PBR valuation guidelines. New York State Insurance Regulation 213 imposes constraints to which the PBR valuation must conform for companies that do business in New York:

- VM-20 life reserves are floored at the greater of cash value and 70% of the reserve required under New York State Insurance Regulation 147 (analogous to NAIC Model 830, requiring a segmented valuation approach and deficiency reserves).
- VM-21 variable annuity reserves for pre-2020 contracts are floored at a modified version of the Actuarial Guideline 43 standard scenario. Each contract's reserve is floored at cash value, so contracts with projected surplus cannot offset shortfalls from deficient contracts.
- The VM-21 reserve on post-2019 contracts may not be less than the Option Value Floor (OVF). The OVF is calculated on a seriatim basis using arbitrage-free assumptions to value GMDBs, GMWBs and other guarantees.

Standards - PBR

Beyond these standards are best practices that can maximize the quality of VM-31 reports. For example, present information in the order listed in VM-31, clearly identifying each section with the label used in VM-31. Use tables, charts, and embedded spreadsheets to efficiently present information. Be sure to include all certifications:

- The Investment Officer, on consistency of investment strategy with PBR modeling.

- The Qualified Actuary (QA), on investment strategy—if modeling assumes a future hedging strategy.
- Senior management, on effectiveness of internal controls.
- The Qualified Actuary (QA), on VM-20 Stochastic Reserve exclusions (attests that there are no material interest or asset return volatility risks in the excluded blocks).
- The Qualified Actuary (QA), on NAIC Model 820 compliance—the Section 12 requirements discussed previously.
- The Qualified Actuary (QA), on conservatism of mortality assumption for converted policies (VM-20 only).

Oversight

VM-G provides guidance on PBR roles and responsibilities for company personnel. The Board oversees the PBR process and ensures that material weaknesses in the PBR control environment are addressed. Board responsibilities need not involve the entire board—a relevant sub-committee (for example, the Audit Committee) can take PBR responsibility on behalf of the entire board.

The board must ensure that there is sufficient infrastructure supporting the PBR process. This includes policies, procedures, controls, and resources. Policies and procedures should cover model governance and controls, instructions for running the models, a model change log, and analyses of the results from each model run. Controls should verify accuracy of input, calculation, and output for the PBR valuation. Resources include valuation software and the actuarial staff needed to competently use that software for PBR valuation. The board also interacts with management to resolve issues and must ensure that its review and actions taken regarding the PBR process are documented in board meeting minutes.

While the board ensures that infrastructure is provided to support PBR, management implements the infrastructure. This means establishing policies and procedures, creating the control environment, and acquiring resources needed for PBR valuation. Management must also ensure that the PBR valuation is consistent with other risk assessment procedures. For example, is the modeling of renewal interest rate guarantees consistent with the way in which these guarantees are actually set? If reinsurance is in place to mitigate certain risks, is that reinsurance appropriately modeled? Management must make the board aware of the infrastructure supporting PBR, critical risk elements in the valuation, and knowledge and experience of staff involved in the PBR process.

When unusual PBR findings emerge, it may become a team effort to resolve them—but management must take the lead. Management must also create a control environment that minimizes risk of PBR valuation errors—for example, controls to ensure that the asset and liability data input to the PBR process is complete and accurate.

The Qualified Actuary (QA) oversees the PBR calculations. Under PBR, assumptions are set by the company, but the Qualified Actuary (QA) must verify that assumptions, methods, and models conform to the VM—e.g., assumptions are prudent estimates, with appropriate margins.

In addition to preparing the VM-31 report, the Qualified Actuary (QA) must provide a summary of the report findings to the company's board and senior management. The company may designate separate Qualified Actuaries (QAs) for each PBR process: VM-20, VM-21 and soon, PBR for fixed annuities. If there is more than one Qualified Actuary (QA), they must coordinate efforts to generate a single VM-31 report covering all products. The Qualified Actuary (QA) is also required to disclose any significant unresolved issues to external auditors and regulators.

Controls

A basic control is to verify that the asset and liability data inputs to the valuation process are complete and accurate. Policy counts and benefit amounts going into the PBR valuation should match corresponding values appearing in administrative systems.

A second good check is to explain results of the valuation relative to what was observed in the most recent prior period. This can be challenging for stochastic reserves, which may involve thousands of scenarios. One approach is to analyze the change in the conditional tail expectation (CTE) 70 metric itself. Or, analyze a single scenario that produces a Present Value of Accumulated Deficiency that is close to the CTE 70 value. Does the change in value make sense given in-force and economic condition changes—movements in the US Treasury curve, quality spreads, and equity values?

Model validations are critical to building confidence that PBR values accurately reflect all model inputs. The Qualified Actuary (QA) must discuss model validations in the VM-31 report. The Model Audit Rule (MAR) is a good source of controls for all valuation processes and can be made part of the PBR control environment. Among other things, MAR requires testing around data accuracy and model changes, and verification that assumptions are being properly applied.

Review

Each of us can read the VM and draw our own conclusions as to what it requires, but it is a good practice to engage peers to sense check whether our interpretations seem appropriate. Before releasing PBR model results, consider engaging another actuary to first perform an internal review of your PBR report. This could be an actuary who is familiar with the products that are the subject of the review, but not a modeler—because the review should focus on the report as a whole, without necessarily diving into the modeling details. Do the results make sense, and is the report accomplishing what is intended through VM-20, VM-21 and VM-31? The internal reviewer should document the scope of the review, and specific recommendations from the review. Steps taken to respond to those recommendations should also be documented.

While the internal review process is voluntary and proactive, external reviews are typically involuntary and may be reactive. Auditors may want to review the PBR valuation as part of their work. State examiners are likely to review the VM-31 report during periodic audits, if not more frequently. For example, California wants to see all PBR reports every year from all companies doing business there—not just California domestic companies. External reviewers typically start by asking questions about content of the VM-31 report. These questions may ultimately lead to recommendations for changes in the report. It is a good practice to respond as quickly as possible to those recommendations.

Change Management

The VM allows regulators to revise valuation requirements when needed. Since the VM went live in 2017, there have already been numerous refinements. Valuation actuaries must ensure that required changes are incorporated in PBR processes and reports. Through the American Council of Life Insurers (ACLI), it’s possible to stay abreast of Amendment Proposal Forms (APFs)—changes proposed by regulators, the industry and others. Not all APFs will be adopted, but reviewing APFs and the discussion around them allows actuaries to get a head start on important changes. Consider reviewing the redlined version of each year’s VM update to identify all changes that have been adopted.

Change management can be challenging in larger organizations where processes are impacted for many actuaries. Consider designating a lead actuary to take responsibility for documenting and communicating all changes that impact the PBR process. Also, maintain a model change log to capture descriptions of each model update and its impact. Changes should be reviewed with risk and audit committees that provide oversight to the PBR process.

A well-designed governance structure will keep the board, management, and Qualified Actuaries (QAs) engaged in maintaining a robust valuation process—thus achieving a primary goal of PBR!