



Article from

The Financial Reporter

March 2019

Issue 116

VM-20 PBR for Life Insurance—Survey Highlights

By Emily Cassidy and Hans Harris

The principle-based reserving (PBR) model is a significant change to the life insurance regulatory framework. As the three-year grade-in period comes to an end and the Jan. 1, 2020, mandatory adoption date approaches, companies are actively preparing for (or at least contemplating) more complexities surrounding their processes, assumption setting, modeling efforts and information systems.

In order to benchmark the current adoption and implementation progress of the Valuation Manual (VM) Section 20—PBR for Life Insurance, in September 2018, KPMG surveyed 20 companies. The survey questions were broken down into four broad categories: (1) liability assumptions and margins; (2) asset and liability management (ALM), asset assumptions and margins; (3) reinsurance; and (4) modeling/methodology. This article summarizes the survey's key findings.

LIABILITY ASSUMPTIONS AND MARGINS

Adding more rigor to the process of setting, governing and documenting margins is top of mind for the responding companies. The VM-20 framework states that companies shall include margins to provide for adverse deviations and estimation error in the prudent estimate assumption for each risk factor that is not stochastically modeled or prescribed. Explicit margins on liability assumptions are a new concept for statutory reserving for life insurance. Margins can be a challenge, and when not prescribed, like mortality, companies must reflect prudent estimates based on their own experience. In addition, the process and ultimate margin must be documented in the VM-31 report. Most respondents have indicated that formal policies for setting margins are under development. Respondents also indicated that the use of sensitivity testing will be core to their process of determining margins on assumptions. Because any changes in margins from period to period will create volatility and the need to explain results, development of a formal, repeatable process will aid in driving appropriate consistency in setting margins on an annual basis.

With regard to anticipated policyholder behavior, VM-20 generally requires the use of dynamic modeling or other scenario-dependent formulation. The majority of respondents will apply dynamic adjustments to the lapse assumption, which is consistent with the principles-based valuation of variable annuities. Just under half of the respondents indicated that they would vary lapse margins by duration, one-fourth will keep lapse margins constant, and the rest have yet to decide. We expect that the lapse assumption and appropriateness of dynamic multipliers is an area that the industry will need to monitor as experience is gained and leading practices emerge.

For flexible premium products such as universal life with secondary guarantees, renewal premium assumptions are typically challenging for companies to quantify, and premium persistency experience studies are often unsophisticated or emerging. Of the respondents who sell these flexible premium products, about 35 percent indicated that they would apply a constant margin to renewal premiums on all scenarios. Given the disclosure requirements pertaining to premium payments, this is an assumption that companies will need to thoroughly document and have solid reasoning to support.

ASSET LIABILITY MANAGEMENT, ASSET ASSUMPTIONS AND MARGINS

The complexity in the approach to asset modeling for both valuation and projections lends itself to some operational challenges. About half the respondents indicated that they intend to use a single integrated model that projects assets and liabilities instead of standalone asset and liability models. For others, presumably, modeling systems have not yet transformed to a state where integrated modeling is easily accomplished. Similarly, about half the respondents indicated that they will use either company-based or market data in the modeling of economic assumptions.

Under the guidance of VM-20, “model segment” refers to a group of policies and associated assets that are modeled together to determine the path of net asset earned rates. Under each model segment, companies select starting assets equal to the estimated value of modeled reserve plus the pre-tax interest maintenance reserve. The starting asset value can be determined using direct iteration of actual assets or an estimate that is within 2 percent of the modeled reserve, i.e., collar approach. About 80 percent of respondents indicated they will apply the 98 to 102 percent collar to determine the starting assets for the combined model segments. The collar approach is simpler and reduces the additional run time that PBR will require. If the starting assets of the combined model segments are less than 98 percent, or greater than the larger of net premium reserve (NPR), or 102 percent of final modeled reserve, the company



will need to provide documentation that the modeled reserves are not materially understated.

REINSURANCE

Reinsurance plays important roles to insurers, which include sharing risk, sharing expertise, volatility management and assumption setting. Seventy-five percent of respondents indicated that they will either use the same amount of reinsurance or use the same types of reinsurance with the adoption of PBR. Despite the intention that PBR would reduce reliance on reinsurance captives, only 20 percent of respondents indicated that they will stop using captives. This seems to indicate that the cost/benefit analysis shows that PBR is not necessarily giving enough reserve relief to offset the benefit of using captives. The effects of tax reform are also likely playing a role in these decisions.

Reinsurance impacts all three reserve components under PBR. For reinsurance on a yearly renewable term (YRT) basis, the NPR is reduced by the net amount at risk. Most respondents did not yet have conclusive results on whether the reinsurance reserve credits for YRT arrangements would be positive or negative for both term and universal life products. Half the respondents will project nonguaranteed YRT premiums with either the current scale or addition of a margin.

MODELING/METHODOLOGY

The VM-20 framework is multifaceted and involves modeling of several reserve components, which can be a technology challenge. Most respondents indicated that they plan to use a single software platform to model all of the VM-20 reserve components.

Slightly more than half the respondents will perform a full stochastic calculation at each quarterly valuation period in determining the stochastic reserve component. For respondents who indicated that they would perform a stochastic calculation, about 80 percent will use more than 500 scenarios, with over half indicating that they would use more than 1,000 scenarios.

The deterministic and stochastic reserve may be calculated no earlier than three months before the valuation date, provided an appropriate method is used to adjust reserves to the valuation date. However, company data used in the determination of prudent estimate assumptions are not subject to the three-month limitation. Slightly more than 50 percent of respondents indicated that they would use asset information with a lag, while only 20 percent indicated that all data would be as of year-end.

SUMMARY

Based on the survey results, we observed the following:

- Companies are faced with multiple new regulatory requirements and accounting change initiatives over the next few years. The respondents to the survey are primarily delaying adoption as long as possible, with nearly 70 percent responding that they would adopt in 2019 or 2020.
- One of the original intentions of a principle-based framework was to reduce reliance on reinsurance captives. However, the results of this survey indicate that companies are still evaluating their planned use of reinsurance. Only a small percentage responded that they would stop using captives.
- Explicit margins on liability assumptions is a new concept for statutory reserving of life insurance. The majority of companies state that a formal policy for setting margins is under development and that margins will primarily be set using sensitivity testing rather than a more complex statistical technique.

- A fully integrated asset-liability model increases the complexity of the valuation process. About half of the participants indicate they plan to use a single integrated model that projects assets and liabilities. However, more than 80 percent of respondents plan to use the simplification of the 2 percent collar approach to setting starting assets rather than a direct iteration approach. ■

The views expressed in this article are those of the survey participants (on an anonymous basis) and do not necessarily reflect the views of KPMG, nor are they intended as methods of regulatory or tax compliance.



Emily Cassidy, FSA, MAAA, is a director at KPMG LLP. She can be reached at emcassidy@kpmg.com.



Hans Harris, ASA, CERA, is a senior associate at KPMG LLP. He can be reached at hharris@kpmg.com.

Listen at Your Own Risk

Stay tuned to thought-provoking topics affecting the actuarial practice. Listen as host Andy Ferris, FSA, FCA, MAAA, leads his guests through insightful discussions on the latest actuarial trends and challenges.

Hear the latest discussion at
SOA.org/Listen

