49 - Practical Perspectives from VM-20 Implementations

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Session 49WS: Practical Perspectives from VM-20 Implementations

Topics/Moderator

1) **Assumptions**

   Tom Bruns , Cincinnati Life Insurance Company

2) **Margins**

   Laura Hanson, Allianz Life Insurance Company

3) **Models**

   Reanna Nicholsen, New York Life Insurance Company

4) **Governance and Management**

   John Robinson, Minnesota Department of Commerce

5) **Documentation and Reporting**

   Dylan Strother, Oliver Wyman

Host & Free Agent: Tim Cardinal, Actuarial Compass

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Workshop Notes: Assumptions

Mortality assumption setting was the topic of most interest to many:

- Many companies are developing their company assumption to be based off of the 2015 VBT tables as a result of PBR. This is not required by the Valuation Manual, but it does make it easier to check that grading to the industry table increases mortality
- NAIC references for aggregation are helpful for understanding the "top down" or "bottom up" approach to mortality aggregation. See https://www.naic.org/documents/pbr_data_mortality_aggregation_2019_presentation.pptx
- Appropriate to use Limited Fluctuation for simplified issue and Buhlman for our fully underwritten. You don't need to use the same credibility method for both. The Valuation Manual will be changed to clarify this.
- Reinsurers are having difficulty in developing their mortality assumption – due to varying underwriting details of the blocks they reinsure
- Many companies are aggregating accelerated u/w blocks with fully u/w blocks. Regulators are expecting significant margins to be place on accelerated u/w assumptions

Other assumptions discussed:

- Less prescriptive description of UL premium payment assumption could result in wide variety of assumption formats
- Assumptions for Non-guaranteed elements, including credited interest and COIs on UL, will require margins
- Sensitivity analysis is needed to determine significant assumptions
- Many are using CFT assumptions for expenses on PBR
- Some are using dynamic assumptions for premium, lapse, inflation that vary by interest rates. Still need a margin on the base assumption in these cases.

Other references:

- Life PBR assumptions resource manual (https://www.actuary.org/sites/default/files/files/publications/PBR_Assumptions_Resource_Manual_012919.pdf) is a handy resource for setting assumptions and margins

Workshop Notes: Margins

Margin Setting

- Reminder that margins for term lapse assumptions will likely have at least one inflection point where the signs change
- Recommendation to start with margins on assumptions where you are most comfortable and work out from there
- Uncertainty about setting additional margin for mortality on accelerated u/w business given low experience
- Uncertainty about dynamic lapse assumptions and whether margins need to be added to both the base rate and the formula
- Uncertainty around margin setting for premium pattern assumptions and expense assumptions

Interest in Aggregate Margin Approach

- Concern that individual margins are overly conservative in aggregate
- Would work better with YRT reinsurance
- Would enable more small companies to use PBR

Regulatory Review

- Companies are receiving feedback from the CDI OPBR on their margins; some were asked to change their margins and re-run reserves

Workshop Notes: Models

Some companies are including the following simplifications:

- Excluding riders that are not on the base insured
- Excluding pre-term conversion reserves; many are noting low incidence of conversions to justify that the reserve is immaterial
- Using auto-pool YRT premium rates for all treaties rather than pulling all facultative rates; some received questions on if this reflects expected rates on those treaties
- Testing for seriatim post-level term losses once a year to justify using a 100% shock lapse; some discussed including a small terminal reserve for any post-level losses discovered
- Many companies need to model term riders as a separate record to appropriately model as standalone products; other companies will apply simplified term calculations until the model could be further developed

Many companies are using some or all of the following validation approaches:

- Use small set of policies in test bed to validate calculations
- Use excel to reproduce key calculations, particularly for formulaic reserve
- There was less consensus on how to validate modeled reserve. Some companies can replicate cash flows on a few key cells, other relied on general validation of the model for other purposes like AAT
- Many companies using back testing to validate cash flows. However, it was noted that this is hard to use for new business, but can be useful to validate cash flows and assumptions generally
- Some have used consultants for independent review and provided consultant sign off in VM-31

Companies who have already gone live have received regulator feedback and questions:

- Documentation that grouped / compressed model points did not understate reserves
- Documentation that scenario subsets did not understate reserves
- Request to tie blue book numbers to results in VM-31, including documenting which reserves are included in PBR (which riders, policies, etc.)

Workshop Notes: Governance and Management 1

Focus was VM-G

1. *Moderator's Kick-off Question: What has changed, either for the company or for your work?*

- There is now more emphasis on model governance, and a more formalized governance process.
- We already had governance and controls, but some parts will need to be more formal.
- We are building a formalized framework that all business units can fit into. Prior to this, we operated in product line siloes.
- A more formal process for assumption changes. They now need to be approved by a governance body before the change is implemented. Actuaries working on PBR must now submit a recommendation for a change, rather than just make it themselves.
- We now have formalized assumption governance.
  - Who has authority to do what.
  - Includes GAAP, CFT, pricing, PBR.

- We now need to plan our model changes.
- LDTI (GAAP) is another motivator.
- My company has formed a new PBR Committee.

- VM-G adds new communication to senior management.
- VM-20 has led to pricing considerations.
- Pricing considerations:
  - Pricing is an iterative process: Premiums impact reserves which impact premiums.
  - Spreadsheets are used for exclusions tests.
  - Focusing on setting up products that we won't have to do PBR on.
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- There has been a positive impact on companies' risk management.
- It is difficult to nail down governance requirements when VM-20 is in flux.
- New York companies need to review New York's proposed requirements, which are different than the version in the NAIC Valuation Manual.

Workshop Notes: Governance and Management 2

2. Other topics put forward by participants:

(a) Regulatory review:

- California Insurance Department Audit:
    - 1 month after submission;
    - Year 1 - 65 questions + 3 day visit;
    - Year 2 – 20 questions;
    - Other states are relying on them because they have the staff.
- Do regulators do independent testing?
    - Likely no.
    - California asks companies to show them details.
- Assumptions may vary by model, and CA asked why. The reason might be that different actuaries set different assumptions for different models.
- CA asked many questions about model governance.
- Suggestion from regulator: Talk to your regulators early, show them draft report, educate them on what you are doing.
- Concerning the role of regulators in assessing PBR work: Regulators will check whether the company has followed the principles. It is a huge challenge. States may team up to share the load, such as MN teaming up with CA.

(b) Educating the Board and interactions with non-actuaries:

- Discussion within the group of how to educate the Board of Directors about PBR in response to VM-G requirements.
- Specific discussion in context of an actuary with "non-technical" Board. Since VM-20 reserves will be small in the first years, educate the Board gradually over time as reserves get larger.
- Auditors will consider materiality – just new issues, term, therefore not material now.
- The group discussed the difficulties of communicating actuarial concepts to non-actuaries, including the desire of the non-actuaries to have an exact number. One participant suggested presenting more like a weather forecast with ranges and probabilities, and explaining that whatever the assumptions are in VM-20, they are not going to be exactly right.

Workshop Notes: Documentation and Reporting

PBR Report (VM-31) success tips

- Have somebody at your company peer review the report (perhaps somebody that is not close to PBR), some companies are even asking for feedback from their regulators
- Attach full documentation of model validation reports, model governance structures and procedures and model output as appendices
- Lengths of reports – 40 pages did not seem long enough, 70-100 pages for multiple products seemed like a fairly common answer

Regulatory review

- Companies are getting questions from the California Department of Insurance Office of PBR (CDI OPBR), some questions are common among companies, others are company specific
- Some regulators are partnering or deferring review of PBR to CDI OPBR
- Question list seem to range from 70-100 questions, and there are often follow up questions, then on-site visits. Some reported less questions in year 2. 3-week turn around time for responses.
- Preparing for on-site visits, performing model walkthrough with the regulators and having the regulators talk to the actuaries that did the work (instead of just senior management) was helpful in conducting the review (the regulators do deep dives on various topics and do policy level recalculations)

Resources

- VAWG report on VM-31 https://naic-cms.org/sites/default/files/inline-files/cmte_e_valuation_analysis_wg_2017_pbr_review_report.pdf
- Academy PBR website https://www.actuary.org/content/pbr-practice
- If you have attended PBR Boot camp, there is a VM-31 template, but note that CDI also reviewed this sample report and had a list of 80 or so questions