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Practical Considerations to Implement and Productionalize VM-20

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On Dec. 2, 2012, the National Association of Insurance Commissioners (NAIC) adopted the Valuation Manual (VM) that sets forth principle-based reserve (PBR) requirements for life insurance and annuities, passing the matter onto state legislatures. The only step that remains is for 42 jurisdictions that represent at least 75 percent of direct premiums to adopt the new Standard Valuation Law (SVL) and accompanying VM. Once that happens the new law will take effect on January 1 of the following one or two years, depending on whether the deciding vote happens in the first or second half of the year.

Section VM-20, "Requirements for Principle-Based Reserves for Life Products," will likely be the most challenging section of the new manual for most insurers to implement. The goal of PBR is to better reflect risk and right-size reserves by replacing prescribed, one-size-fits-all, formulaic reserves with reserves based on company-specific experience, models and risk management practices. Although a "true" PBR may be relatively simple to define, VM-20 took years to develop and is quite complex. A formulaic reserve called the net premium reserve remains, and deterministic and stochastic modeled reserves have been added. There are many prescribed elements in all three reserves, as well as prescribed data and documentation requirements. VM-20 also creates new obligations for the company by relying more heavily on actuarial judgment and company data.

One thing is for certain when it comes to implementing and productionalizing VM-20 … it is not going to be easy. This article focuses on some common challenges and practical considerations for companies that will have to implement and productionalize VM-20.

DEVELOPING EXPERTISE

Jan. 1, 2015 is the first possible effective date for VM-20, and there will be a three-year phase-in, perhaps longer for small companies with domestic state approval. It could also not happen at all. But the passage by the NAIC represents a significant milestone, and those companies taking a "wait and see" approach may now want to consider their next steps given the amount of work that could be involved in implementing VM-20. One of the first tasks is simply getting up to speed on VM-20 and developing expertise by reading the document, available on the NAIC's website, and staying on top of emerging practices and interpretations via industry websites and conferences and speaking with peers, vendors or consultants. With at least a basic understanding of VM-20, companies can then work to determine which of their products are in scope and which areas of the business will be affected.

EXCLUSION TESTS

VM-20 contains a deterministic reserve exclusion test and stochastic reserve exclusion test. Early on you should work to determine preliminary results to these exclusion tests since passing them can significantly reduce the amount of work required to implement VM-20. In order to conduct the exclusion tests, you will need anticipated experience assumptions, but not margins. You will also need gross and net premiums, and the capability to project assets and liabilities on 17 scenarios. For business that passes both tests, only the seriatim and formulaic net premium reserve need be calculated. For business that passes the stochastic but fails the deterministic reserve exclusion test, you will still not be required to calculate the stochastic reserve, potentially saving you hours of run time or from having to run on the grid, but you will have to develop margins for non-prescribed assumptions for calculating the deterministic reserve.

WHERE IN THE COMPANY SHOULD THE WORK BE DONE?

An important, early-on consideration when implementing VM-20 is the people, processes and systems that will be leveraged to do the work. In addition to being able to simply do the calculations and having access to the grid, there are other important factors to consider:

- Front-end data—VM-20 relies more heavily on company data than current formulaic reserves. Manual front-end data work may be acceptable for cash flow testing or preliminary VM-20 calculations, but ultimately the required data from administration and other systems needs to be as automated as possible. Although VM-20 only applies to life insurance policies, some riders will be in scope, complicating data requirements. Familiarity and proximity to the data will be a plus when modifying data extracts.

- Frequency of the calculation—Reserves are calculated at least quarterly. A fully automated production process is a must.
- Model point compression—The net premium reserve calculation is seriatim. Also, any excess over the net premium reserve must be allocated back to seriatim policies. Model point compression is currently allowed for the deterministic and stochastic reserves, but there are significant documentation and justification requirements. With the right setup, deterministic and stochastic reserves can be calculated using seriatim records, eliminating the need to document and justify model compression.
- Leverage grid hardware to meet the close schedule—Run time will almost certainly be an issue in a close process that is managed to the day or even hour.
- Relationship with IT—Productionalizing VM-20 will be easier if those involved have a good relationship with IT.
- Level of scrutiny by managers, auditors, regulators—Unlike cash flow testing, VM-20 numbers will flow through to financial statements. The level of scrutiny will be intense, and short-staffed regulatory departments may bring in consultants to conduct periodic reviews and ensure the mechanics are correct. The general level of system auditability will be key, as will a secure production environment with good controls, data management and documentation. In addition, the new SVL has certain governance requirements related to controls on PBR valuations.
- Documentation and reporting—Like other VM-20 work, an automated solution to documentation and reporting within a secure production environment will make it much easier to satisfy auditors and stay on schedule.
- Level of prescription—The people, processes and systems involved with VM-20 will have to deal with a relatively high level of regulatory prescription, compared to cash flow testing for example. The following are examples of VM-20 items that include prescribed elements: liability assumptions and margins, exclusion tests, default rates, scenarios, starting asset levels, reinvestment spreads, certain cash flows to include/exclude in the calculation of reserves, and the entire net premium reserve calculation.
- Revisions—The new SVL references the VM, which can be amended as needed by the NAIC, without state legislative action as currently required. Revisions may occur frequently and quickly become effective.
- Outsourcing—Much of the solution and process can be outsourced. Weigh the pros and cons of a do-it-yourself approach vs. vendor solution.
- Costs—Budgets should include all implementation and ongoing maintenance costs, including additional staff, IT, vendor expenditures, etc.

EXPERIENCE STUDIES

VM-20 allows for company experience to be used in setting assumptions and margins for deterministic and stochastic reserve calculations. But those assumptions must be justified and documented by frequent and robust experience studies. Now is the time to evaluate the state of your experience studies and decide if improvements are necessary or worthwhile for VM-20. Are experience studies set up properly and done frequently enough? Do they have appropriate controls and enough documentation? Are you prepared to meet VM-50 and VM-51 requirements for reporting your experience data? In light of these questions, many companies will want to increase the frequency of experience studies or improve their thoroughness or controls. Manual, spreadsheet-based experience studies may be hard to support going forward. But before you can productionalize your experience studies you will have to get the data streams in order.

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ASSUMPTIONS AND MARGINS

VM-20 leaves much open to the interpretation of the actuary. Although common industry practices related to VM-20 are beginning to emerge, specific situations at your firm will sometimes require firm-specific interpretations of VM-20. Making such judgments can be difficult and may involve sensitivity testing and other techniques to determine the appropriate course of action. Your VM-20 mortality will depend on the mortality segments you define, the data you include, the specifics of the experience studies used, underwriting rules, and how you include data from your reinsurers.

Establishing assumption margins is another area where practice and results will differ depending on the data available and the sensitivity of results to the assumption in question. Given these differences, it is safe to say that more scrutiny will be placed on the development of actuarial assumptions and margins under VM-20.

DOCUMENTATION AND REPORTING

I mentioned above that documentation and reporting should occur, as much as possible, in an automated, production environment. But what documentation and reports should be produced? At a minimum you will need to meet the requirements in VM-31, the section that deals with process documentation and results reporting requirements. You may be able to leverage existing process documentation to meet VM-20 requirements.

In addition to regulatory requirements, and just as important, results reporting includes the ability to produce what you need to get comfortable with the results. This would include the results of automatic checks and controls that happen throughout the process, baseline results, an analysis of change, summary reports for management, and audit reports. Given the increased volatility of principle-based reserves, much more time will need to be spent understanding results and quantifying and explaining changes to senior management.

CONCLUSION

VM-20 is a monumental change in the way reserves are calculated for life insurance products. It is a challenge all life companies must face. Implementation will be difficult, but by starting now, developing an overall roadmap, and then taking a piecemeal approach to the calculation, you can identify potential roadblocks in time and begin to allocate the necessary resources to address them and move on to product redesign. ■