What is VM-21?

VM-21 refers to Section 21 of the National Association of Insurance Commissioners (NAIC) Valuation Manual, which specifies requirements for principle-based reserves (PBR) for variable annuity (VA) contracts. Effective January 1, 2020,[1] VM-21 contains significant revisions to the previous framework.

Why are the revisions needed?

The previous Actuarial Guideline XLIII (AG 43) reserve and C3 Phase II risk-based capital (RBC) framework methodologies had certain misalignments, which contributed to the use of captive insurance companies, mismatches between hedging and liabilities, and non-economic statutory balance sheet and RBC ratio volatility. The revisions address these issues by better aligning the stochastic reserve and RBC framework and the corresponding standard scenarios.

Which policies are subject to VM-21?

VM-21 applies to the following contracts:

- Variable deferred annuity contracts and variable immediate annuity contracts regardless of whether the contracts contain any Guaranteed Minimum Death Benefit (GMDB) or Variable Annuity Guaranteed Living Benefit (VAGLB)
- Any group annuity contracts containing guarantees similar in nature to GMDBs or VAGLBs
- Any other policies or contracts which contain guarantees similar in nature to GMDBs or VAGLBs where there is no other explicit reserve requirement

VM-21 reserve requirements apply to all such contracts issued on or after January 1, 1981.[3]

Do companies have to comply with VM-21?

All companies with contracts falling within the scope of VM-21 have to comply with VM-21.[2] States' valuation laws should be consulted.

1 Early adoption was permitted for 12/31/2019.
2 Additional New York state requirements may be applicable.
3 Actuarial Guideline 43 references VM-21 and governs contracts issued on or after Jan. 1, 1981 and prior to the adoption of the Valuation Manual.

Minimum aggregate reserves under VM-21

The minimum reserves for all contracts falling within the scope of VM-21 equal the stochastic reserve plus an additional standard projection amount for all contracts not valued under the Alternative Methodology, plus the reserve for any contracts determined using the Alternative Methodology.

The VM-21 reserve comprises the stochastic reserve and any additional standard projection amount, plus any reserves for contracts under the optional Alternative Methodology.

Standard methodology: minimum reserve = Stochastic Reserve + Additional Standard Projection Amount

Alternative Methodology

- Optional, simplified approach for contracts that contain no guaranteed benefits or only GMDBs
- Uses pre-2010 formulaic reserve requirements for contracts without guaranteed benefits

Stochastic Reserve
Uses a principle-based approach and company prudent estimate assumptions

- Average of the greatest present value of accumulated deficiencies in the worst 30% of scenarios
- Uses up to 10,000 interest and equity scenarios from a prescribed scenario generator; non-prescribed scenarios are permitted if not materially lowering reserves
- Uses company-specific prudent estimate assumptions except for prescribed asset defaults and spreads
- Determined in aggregate for contracts in scope
- Reflects the projected costs and benefits of Clearly Defined Hedging Strategies (CDHS), with adjustments based on back-testing and model sophistication; companies without a CDHS may reflect the impact of existing hedges

Additional Standard Projection Amount
Captures outliers via prescribed assumptions

- Intended to be a guardrail against potential assumption outliers
- Re-estimates reserves using prescribed assumptions, and amounts in excess of the stochastic reserve after a specified allowance (or "buffer") are added on to the stochastic reserve and total asset requirements
- Uses reserve amounts excluding any CDHS to determine add-on amount
- Floored at zero

C-3 Phase 2 RBC

Capital requirements are aligned with reserves.

C-3 Phase 2 Risk-Based Capital

- The stochastic amount leverages the stochastic reserveprojections; the capital charge is based on 25% of the tax-adjusted difference between the worst 2% of scenarios and the Statutory Reserve
- Contracts valued using the VM-21 Alternative Methodology follow a similar factor-based approach for capital

Key assumptions

- For the stochastic reserve, liability assumptions are based on company experience, if relevant and credible, with appropriate margins for conservatism.
  - **Policyholder behavior**—within materiality considerations, company should consider policyholder behavior assumptions including but not limited to surrenders, partial withdrawals, fund transfers, future deposits, reset or ratchets of guaranteed amounts
  - **Mortality**—based on either available experience or published tables, with adjustment for experience credibility and margin for data uncertainty
  - **Expense**—company fully allocated experience assumption
  - **Asset**—assumptions for credit spreads and default costs are prescribed
  - **Economic Scenarios**—interest and equity return scenarios are prescribed; use of non-prescribed economic scenario generator is permitted if it doesn't materially reduce reserve

- For additional standard projection amount, prescribed assumptions shall be used.
  - **Policyholder behavior**—assumptions are intended to reflect industry average experience; they generally vary by guarantee benefit type, key features and the in-the-moneyness of the guarantee
  - **Mortality**—updated to more recent industry experience
  - **Expense**—maintenance expense is prescribed

- Company assumptions need to be periodically reviewed and revised. Prescribed assumptions may be reviewed and updated every three to five years by the NAIC.

Disclosure and reporting requirements

- Section 31 of the Valuation Manual (VM-31) provides for all reporting and disclosure requirements. The designated qualified actuaries are responsible for the content of the PBR Actuarial Report.
  - The Principle-Based Reserve (PBR) Actuarial Report is a document that should include an Executive Summary and one or more sub-reports detailing the PBR valuation including life and variable annuities
  - The Executive Summary portion must be filed with the domiciliary commissioner no later than April 1 of the year following the year of reporting; the full PBR Actuarial Report is provided upon request of any commissioner

- Certifications—There are many certifications associated with the PBR valuation to be signed by either a qualified actuary, investment officer, or senior management.

- The NAIC statement blank includes two VA supplements to facilitate reporting of VM-21 valuation amounts.

Governance

Board

Responsible for overseeing entire PBR process

Senior Management

Responsible for directing the implementation and ongoing operation of the PBR valuation function

Qualified Actuaries

Responsible for oversight of the calculation of PBR for the assigned group of policies

Verify that the assumptions, methods, model, internal standards, and documentation used in performing the PBR valuation appropriately reflect the requirements of the Valuation Manual

PBR

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