

# What is PBR for life insurance?

**PBR, or principle-based reserving, is a new method of calculating U.S. statutory reserves that better quantifies product risks.**

## Why is PBR needed?

The prior one-size-fits-all formulaic approach to reserves uses locked-in prescribed assumptions that tend to become stale with time. PBR replaces that with an approach that considers a range of future economic scenarios and uses justified company-specific assumptions that can change over time as company experience emerges, subject to regulatory guardrails. PBR also lessens the need for regulatory and/or legislative modifications to reserve formulas as companies develop new products or economic conditions change.

## What is VM-20?

VM-20 refers to Section 20 of the Valuation Manual, which contains the PBR requirements for life insurance contracts.

## Which policies are subject to VM-20?

Per Section II of the Valuation Manual (VM-II), VM-20 applies to all individual life insurance contracts issued on or after 1/1/2017 with an optional three-year transition period. VM-20 requirements do not apply to guaranteed issue, preneed, industrial life, and credit life insurance. By 1/1/2020 all applicable new issues are subject to VM-20 unless a company is exempt per the Life PBR Exemption or a Single State Exemption.

## Does my company have to do PBR?

Most companies are required to comply with VM-20. Companies with small amounts of ordinary life premium are optionally exempt from the requirements. Consult your state's standard valuation law.

## Minimum reserves under VM-20

Principle-based reserves reflect company-specific products and experience under a wide range of future economic conditions, with a minimum regulatory floor.

Minimum reserves are calculated separately for the following three categories: term products, UL products with secondary guarantees, and all other product types.

Minimum reserves are the maximum of three components, with an adjustment for any due and deferred premium asset.<sup>1</sup> The DR and SR are principle-based methods because they use methods and assumptions determined by the insurer, while the NPR is a prescribed formula similar to prior valuation methods.

### Minimum Reserve = Max (Net Premium Reserve, Deterministic Reserve, Stochastic Reserve)

Net Premium Reserve (NPR) provides a minimum floor and a method to allocate reserves to the policy level	Deterministic Reserve (DR) captures the level of assets needed to satisfy all future benefits and expenses	Stochastic Reserve (SR) measures the risk of a product across a wide range of future economic scenarios
<ul style="list-style-type: none"> <li>Rules-based reserve</li> <li>Set to the present value of future benefits less future net premiums</li> <li>Uses prescribed methodology and assumptions</li> <li>Does not require asset modeling because discount rate is prescribed</li> <li>Determined on a seriatim basis</li> </ul>	<ul style="list-style-type: none"> <li>Gross premium reserve</li> <li>Set to the present value of future policy outflows less future policy inflows</li> <li>Uses single prescribed economic scenario, company-specific prudent estimate assumptions, and additional prescribed elements</li> <li>Requires asset modeling to calculate discount rate</li> <li>Determined in aggregate for a group of policies</li> </ul>	<ul style="list-style-type: none"> <li>Average of the greatest present value of accumulated deficiencies in the worst 30% of scenarios</li> <li>Uses up to 10,000 interest and equity scenarios from a prescribed scenario generator</li> <li>Uses company-specific prudent estimate assumptions, and additional prescribed elements, similar to the DR</li> <li>Requires asset modeling to calculate investment income in each scenario</li> <li>Determined in aggregate for a group of policies</li> </ul>

### Minimum Reserve = Max (Net Premium Reserve, Deterministic Reserve)

At Company's option, the SR may be excluded, if the Stochastic Exclusion Test (SET) is passed, and documented. VM-20 provides for three methods of SET: a definitive ratio test; a demonstration test; and a certification path. Each has its own limitations and frequency detailed in VM-20.

### Minimum Reserve = Net Premium Reserve

At Company's option and assuming the SET is passed, the DR may be excluded, if the Deterministic Exclusion Test (DET) is passed, and documented. VM-20 provides for two methods of DET: a definitive premium comparison test or a certification path (used for groups of converted policies). Limitations and frequency are detailed in VM-20.

<sup>1</sup> Refer to Valuation Manual for further details: Minimum Reserve = NPR + Max(0, Max(DR, SR)-(NPR-DDPA))

## Key assumptions

- ▶ For the DR and SR, assumptions are based on company experience, if relevant and credible, for setting anticipated experience, for each risk factor. Otherwise, industry experience or other sources inform the risk factor assumption.

**Mortality**—company experience assumption grades into an industry mortality assumption

**Lapse**—company experience assumption where relevant and credible

**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

**Reinsurance**—minimum reserves are net of reinsurance<sup>2</sup>

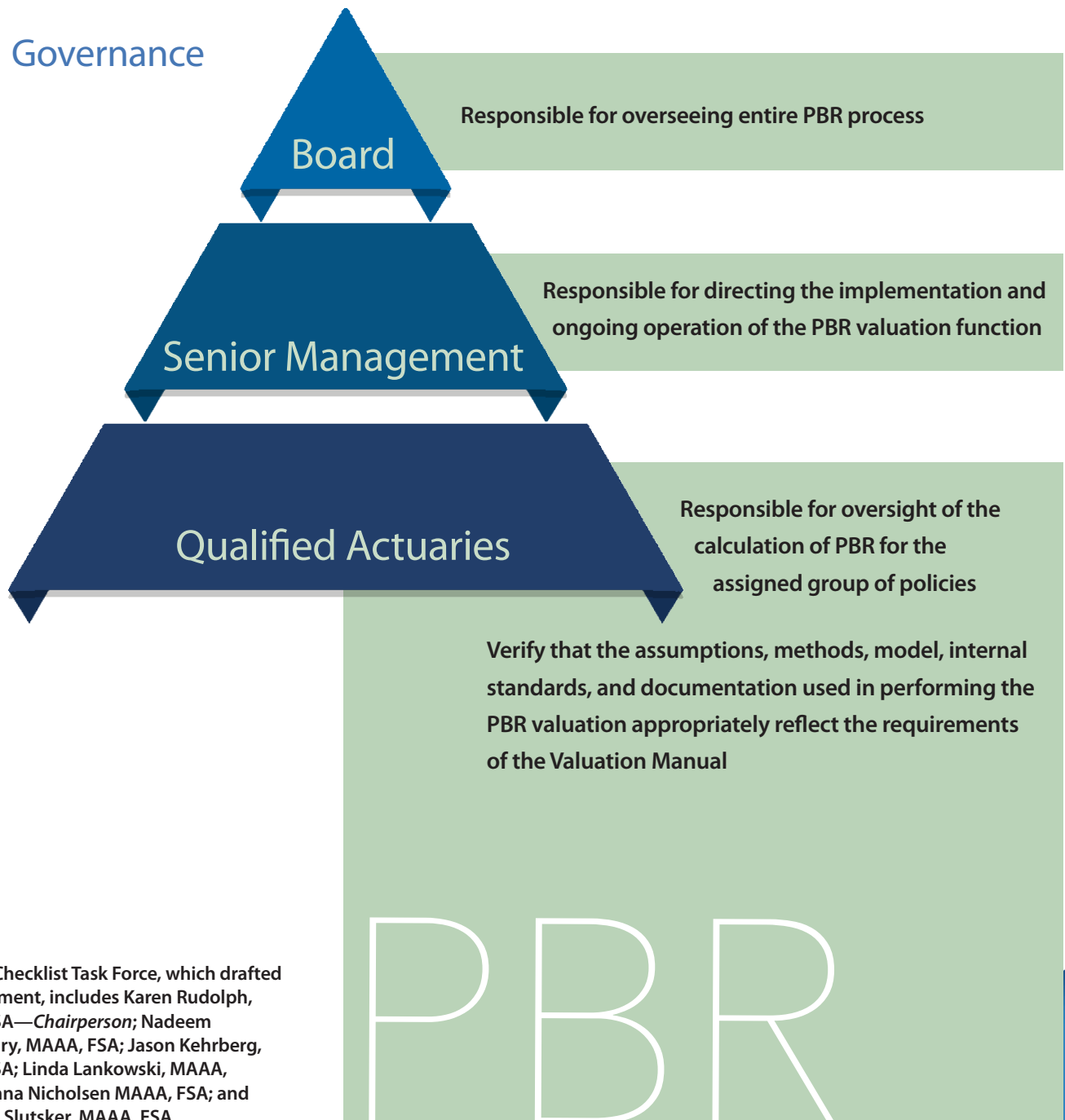
- ▶ Margins are applied to the anticipated experience assumption for each risk factor that is not prescribed or stochastically modeled
  - Mortality margins are prescribed based on amount of claim data (i.e., credibility)
  - Margins are required for all other material risk factors and are determined by the company
- ▶ Assumptions are periodically reviewed and revised

## Disclosure and reporting requirements

- ▶ VM-31 provides all reporting and disclosure requirements. The qualified actuaries are responsible for the content of the PBR Actuarial Report (PBRAR)
  - PBRAR is a confidential document including an Executive Summary and one or more sub-reports detailing the PBR valuation
  - Sub-reports of the PBRAR are permitted to accommodate having more than one qualified actuary responsible for the principle-based valuation across different product lines
  - 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 PBRAR is provided upon request of any commissioner
- ▶ Certifications—there are many certifications associated with the PBR valuation to be signed by either the qualified actuary, the investment officer, or senior management
- ▶ The NAIC statement blank includes a VM-20 Reserves Supplement to facilitate reporting of PBR valuation amounts by product type on pre-and post-reinsurance bases, or of exemption from PBR valuation requirements

<sup>2</sup> Refer to VM-20 for requirements around YRT reinsurance

## Governance



The PBR Checklist Task Force, which drafted this document, includes Karen Rudolph, MAAA, FSA—*Chairperson*; Nadeem Chowdhury, MAAA, FSA; Jason Kehrberg, MAAA, FSA; Linda Lankowski, MAAA, FSA; Reanna Nicholsen MAAA, FSA; and Benjamin Slutsker, MAAA, FSA.

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