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# Professionalism and Principle Based Reserves

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# Presentation Disclaimer

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# Presentation Overview

1. Introduction
2. Valuation Manual
3. Professional Qualification Standards
4. Actuarial Standards of Practice
5. Closing Remarks

# 1. Introduction

## Why Principle Based Reserves (PBR)?

- ▶ Life insurance products are more complex
- ▶ Difficult to value complex new designs with a formula based system
- ▶ Formula based system only specifies valuation mortality table and valuation interest rate

# 1. Introduction

## Why Principle Based Reserves (PBR)?

- ▶ Increasingly difficult for regulators to define how to fit complex benefit designs
  - Attempted to address this issue with Actuarial Guidelines
  - Inefficient; always lagged the product development cycle
- ▶ PBR will increase transparency and regulator understanding of the embedded risk

# 1. Introduction

**When will PBR be effective? . . . in six months !**

**Effective for new business January 1, 2017**

*(Adopted unanimously by NAIC Executive Committee on June 10, 2016)*

*Based on 45 states representing 79.5% of total premium*

# 1. Introduction

## When will PBR effect my company?

- ▶ Potentially Never - Small Company Exemption
- ▶ Soon - Three Year Transition Period
- ▶ It Already Has (and I'm Technically Prepared)

# 1. Introduction

## Small Company Exemption

(VM-20 Section 6.A.2.)

- ▶ How determined?
  - Less than \$300m of ordinary life premiums
  - Group of life insurers less than \$600m,
  - Adjusted Capital 450% of authorized control level RBC,
  - Appointed Actuary provides unqualified opinion, and
  - Universal Life with Secondary Guarantee (ULSG) issued or assumed meets definition of *non-material secondary guarantee*



# 1. Introduction

## Small Company Exemption

(VM-20 Section 6.A.2.)

- ▶ If company meets the criteria
  - Use VM-A/VM-C for all policies (i.e. pre-PBR CRVM)
  - With 2017 CSO (may use 2001 CSO until 2020)
- ▶ Company needs to meet the criteria (previous slide) each year
- ▶ Not retroactive if no longer exempt

# 1. Introduction

## Three Year Transition Period

- ▶ Completely up to company
- ▶ No notification\* to regulator to use the three year transition (no regulatory approval required)
- ▶ Can do for all products or on a product by product basis

\* *Part 2 of VM-20 Supplement*

# 1. Introduction

## Three Year Transition Period

- ▶ If company uses the transition period:
  - Determine which blocks of policies to value under VM-20 (thereafter must always be valued under VM-20)
  - Other blocks are valued under VM-A/VM-C
  - With 2017 CSO (may use 2001 CSO until 2020)
  - Complete *Part 2 of VM-20 Supplement* accordingly

# 1. Introduction

## PBR has already impacted me! Preparing Technically

Net Premium Reserve (NPR)

Default Assumptions

VM-20

Stochastic Exclusion Test (SET)

Assumptions

Margins

Cash Flow Models

ULSG

Deterministic Exclusion Test (DET)

Starting Assets

Stochastic Reserve (SR)

Deterministic Reserve (DR)

. . . *but what about Professionally?*

# 1. Introduction

## Preparing Professionally

Valuation Manual (VM)

Professional Qualification Standards (USQS)

Applicable Actuarial Standards of Practice (ASOP)

# Valuation Manual

## 2. VM - Principle Based Reserves

### Where do I find the PBR Regulations?

#### Valuation Manual (VM), April 6, 2016

- ▶ VM gives details and requirements supporting PBR
- ▶ Continues to evolve through Amendments
- ▶ VM Amendments approved by Life Actuarial Task Force (LATF)

## 2. VM - Products

### Products Subject to PBR Requirements

- ▶ VM-20: Life contracts, except those addressed by other VM sections.

VM-20 sets requirements for:

- Term
  - ULSG
  - Other UL
  - Whole Life
  - Variable Life
- ▶ VM-21: Variable annuity contracts
  - ▶ VM-22: Fixed annuity contracts (VM-A until VM-22 is final)
  - ▶ VM-25: A&H contracts
  - ▶ VM-26: Credit Life and disability contracts



## 2. VM - Products

### Products Not Subject to PBR Requirements

- ▶ **VM-A: CARVM and CRVM**
  - ▶ Life policies (VM-20) issued prior to the effective date of the VM
  - ▶ Life policies sold by companies using three-year transition period or small company exemption
  - ▶ Preneed life, Industrial life
  - ▶ Fixed annuity contracts (until VM-22 is final)
  - ▶ Deposit-type contracts
  - ▶ Claim reserves
  - ▶ Group
- ▶ **VM-C: Actuarial Guidelines 1 through 49**
  - ▶ All the above products included here

## 2. VM - Products

### Products either subject or not subject to PBR Requirements?

#### RIDERS AND SUPPLEMENTAL BENEFITS:

- ▶ With a separately identified premium or charge:
  - Generally the reserve shall be valued as part of the base policy
  
- ▶ With no separately identified premium or charge:
  - All cash flows associated with the rider or supplemental benefit must be included in the calculation of the reserve for the base policy.

## 2. VM – Other Requirements

### CORPORATE GOVERNANCE GUIDANCE FOR PBR

- ▶ VM-G

### ACTUARIAL OPINION AND REPORT REQUIREMENTS

- ▶ VM-30: Requirements regarding the annual actuarial opinion and memorandum
- ▶ VM-31: PBR Report requirements

### EXPERIENCE REPORTING REQUIREMENTS

- ▶ VM-50: Experience reporting requirements
- ▶ VM-51: Associated experience reporting formats and instructions

## 2. VM – Other Requirements

### VM-G: Corporate Governance Guidance for PBR

Guidance for oversight function provided for:

- ▶ Board of Directors is responsible for review of reports including the certification of the effectiveness of internal controls
- ▶ Senior Management is responsible for oversight of the principle-based actuarial functions
- ▶ Qualified Actuary is responsible for overseeing the calculation of principle-based reserves

## 2. VM – Other Requirements

### VM-30: Actuarial Opinion and Memorandum Requirement (AOMR)

- ▶ Provides prescribed wording and requirements for AOMR

### VM-31: PBR Report Requirements for Business Subject to a PBR Valuation

- ▶ Requires detailed descriptions and demonstrations
  - Approach to model the assets
  - Approach to model risk management (e.g., hedging)
  - Assumptions and margins
  - Rationale for determining material
  - Related Risks
  - Reliance made
- ▶ VM-31 raises the bar!

## 2. VM – Other Requirements

### VM-50: Experience Reporting Requirements

- ▶ Provides for the submission and analysis of the insurer data
  - Collection of industry experience provides database to establish PBR assumptions
  - The statistical agents bring the expertise of collecting and sorting data from multiple sources into the database

### VM-51: Experience Reporting Formats

- ▶ Focused on the experience submissions and provides detailed descriptions of the requirements on the company

# Professional Qualification Standards

## 3. U.S. Qualification Standards

### ▶ Code of Professional Conduct

Precept 2 – Actuary must satisfy applicable qualification standards

[http://dev.actuary.org/files/code\\_of\\_conduct.8\\_1.pdf](http://dev.actuary.org/files/code_of_conduct.8_1.pdf)

### ▶ US Qualification Standards (USQS)

- Basic Education Requirement
- Experience Requirement
- Continuing Education Requirement

[http://www.actuarialstandardsboard.org/wp-content/uploads/2014/06/qualification\\_standards.pdf](http://www.actuarialstandardsboard.org/wp-content/uploads/2014/06/qualification_standards.pdf)



## 3. U.S. Qualification Standards

### Question:

What are the minimum requirements an actuary should consider to be qualified to render opinions related to PBR under the U.S. Qualification Standards (USQS)?

### Answer: Primary USQS requirements

1. Basic Education and Experience Requirements
2. Section 2.2 - Remain current in emerging advancements of actuarial practice that are relevant to services provided (relevant continuing education)
3. Law applicable to PBR Statements of Actuarial Opinion (SAO)
4. Section 3 - Specific Qualification Standards when signing an NAIC Annual Statement opinion
5. Section 4 - If area of practice is new to the actuary

### Further AAA Direction:

[http://naic.org/documents/committees\\_a\\_latf\\_faq\\_qualifications\\_pbr.pdf](http://naic.org/documents/committees_a_latf_faq_qualifications_pbr.pdf)

# Applicable Actuarial Standards of Practice

# 4. Actuarial Standards of Practice

## Relevant to Principle Based Reserves

- ▶ **Current Standards**
  - Nos. 1, 7, 11, 21, 22\*, 23, 25\* & 41
- ▶ **Pending Exposure Draft**
  - ASOP No. XX\* - Principle Based Reserves for Life Products (dated June 2015)
- ▶ **Past Exposure Drafts (comment deadline)**
  - **Modeling** (March 1, 2015 - Third exposure being released soon)
  - **ASOP No. 21 Revision – Responding to or Assisting Auditors or Examiners in Connection with Financial Audits, Financial Reviews, and Financial Examinations** (December 31, 2015)
  - **ASOP No. 23 Revision - Data Quality** (February 29, 2016)

\* Practice Notes available for these three ASOPs

## 4. ASOP No. 1 (cont.)

### Introductory Standard of Practice

- ▶ Section 2: Definitions
  - *Must/Should, May, Materiality, Practical, Professional Judgement, Reasonable, Reliance . . .*
- ▶ ASOP 1. Explains the Organization within an ASOP

Section	Description
1	Summarizes the Scope of the ASOP
2	Defines the terms used
3	Provides an analysis of issues and recommended practices
4	Addresses communication and disclosure
Appendix	Often describes current practices

## 4. ASOP No. XX – Pending Draft

### Principle Based Reserves for Life Products

Obviously the most directly related to actuary's VM-20 work

- ▶ Section 2: Definitions
  - A very helpful and lengthy list of definitions focused on VM-20
- ▶ Section 3: Analysis of Issues and Recommended Practices
  - Good coverage of Assumptions and Determining Margins (Section 3.4.2)
- ▶ Practice Note also available (February 2014 – Updates being worked on)

[https://www.actuary.org/files/VM-20\\_Practice\\_Note\\_Exposure\\_Draft\\_2-24-14.pdf](https://www.actuary.org/files/VM-20_Practice_Note_Exposure_Draft_2-24-14.pdf)

# 4. ASOP – Past Exposure Draft

## Modeling

Guidance for selecting, designing, building, modifying, developing, using, reviewing, or evaluating

- ▶ Section 2: Definitions
  - Examples: Model, Intended Purpose, and Granularity
- ▶ Section 3: Analysis of Issues and Recommended Practices
  - Meeting Intended Purpose, Mitigation of Model Risk, Presentation of Results . . .
- ▶ Third Exposure Draft to be released soon
- ▶ Model Governance Practice Note being developed

## 4. ASOP No. 7

### Analysis of Life, Health or Property/Casualty Insurer Cash Flows

#### ▶ Section 3: Analysis of Issues and Recommended Practices

- Guidance for many VM-20 related items and VM-31 PBR Report related items
- Guidance on Asset Characteristics, Investment Strategy, Sensitivity Testing . . .
- Actuary is reminded to consider and establish criteria consistent with the purpose of the cash flow analysis
- Analysis need not be further refined if it would not result in a materially different opinion (Section 3.7)

## 4. ASOP No. 7

### Analysis of Life, Health or Property/Casualty Insurer Cash Flows (cont.)

- ▶ **Section 4: Communications and Disclosures**
  - Documentation should be more complete for more significant assignments
  - Provides a list of items that should be documented for cash flow analysis
  - Refer to this section if departing from the guidance of this standard



## 4. ASOP No. 11

### Financial Statement Treatment of Reinsurance Transactions Involving Life or Health Insurance

- ▶ As title suggests, focus is financial statement treatment
- ▶ Section 3: Analysis of Issues and Recommended Practices
  - Guidance on Reinsurance Cash Flows (Section 3.2)
  - Guidance on Treatment of Reinsurance Ceded (Section 3.3)
- ▶ VM-20 consideration related to reinsurance . . . an example

## 4. Example - Mortality Assumption

### Mortality Assumption and Reinsurance

- ▶ Section 9.A.6. - To extent company experience is not available or credible, may use other data to establish the anticipated experience
- ▶ Practice Note on PBR - Actuary can rely on calculations performed by the other party in the reinsurance transaction but . . . .

# 4. Example - Mortality Assumption

## Mortality Assumption and Reinsurance (cont.)

### ► Some Points to Consider

1. Appropriate only if underwriting and expected mortality are similar
2. Reinsurer's model segments will likely be grouping similar treaties from several ceding cos.
3. How representative is reinsurer mortality when a blend of experience with different average size, age . . . ?
4. The structure of reinsurance agreement denotes differences (first dollar, excess of retention)
5. Would need to make modifications to reflect the circumstances of company
6. Greater uncertainty { data is: (i) less relevant, (ii) of lower quality, or (iii) less reliable }, the larger the required margin
7. How does reinsurer determine credibility?
8. Will reinsurer share all relevant information?

## 4. ASOP No. 22

### Statements of Opinion Based on Asset Adequacy Analysis by Actuaries for Life or Health Insurers

#### Section 3: Analysis of Issues and Recommended Practices

- ▶ Review and apply applicable law and applicable ASOPs
- ▶ Determine that you meet the requirements of USQS for Issuing Statements of Actuarial Opinion
- ▶ Use professional judgment to determine which considerations apply
  - Reasonableness of Results
  - Adequacy of Reserves and Other Liabilities
  - Analysis of Scenario Results
  - Aggregation During Testing and Aggregation of Results
  - Trends, Management Action and Subsequent Events

## 4. ASOP No. 25

### Credibility Procedures

#### ▶ Section 2: Definitions

- Full Credibility
- Relevant Experience
- Professional Judgment

#### ▶ Appendix: Current Practices

- Classical Credibility Procedures such as the Limited Fluctuation Method
- Bayesian, in particular Buhlmann, Credibility Procedures (VM-20 Sec 9.C.4.)

#### ▶ Credibility Practices Theory Report

- SOA Website: [research-credibility-theory-pract.aspx](https://www.soa.org/Research/Credibility-Theory-Pract.aspx)

## 4. ASOP No. 41

- ▶ **An Actuarial Communication is:**
  - Written, electronic, or oral communication
  - With respect to actuarial services
  
- ▶ **Section 3: Analysis of Issues and Recommended Practices**
  - Ensure content is appropriate to circumstances and clearly communicated
  - Be mindful of needs and concerns of the intended users
  - Important considerations for the items disclosed

## 4. ASOP No. 41 (cont.)

### Section 4.3: Responsibility for Assumptions and Method when relying on other sources

#### Necessary Disclosure

- Assumption or method set by other(s)
- Who set it
- Reason that they set it
- Either:
  1. Assumption or method conflicts with what would be reasonable;  
or
  2. Unable to judge the reasonableness without performing additional work.

## 4. ASOP No. 41 (cont.)

### Section 4.4: Deviation from the Guidance of an ASOP

If the actuary has deviated materially from the guidance set forth in an applicable ASOP, the actuary can still comply with that ASOP by providing an appropriate statement with respect to the nature, rationale, and effect of such deviation.



# 4. Practice Notes

- ▶ **Life Principle Based Reserves under VM-20**

(February 2014 Exposure Draft – updated version being developed)

[http://www.actuary.org/files/VM-20\\_Practice\\_Note\\_Exposure\\_Draft\\_2-24-14.pdf](http://www.actuary.org/files/VM-20_Practice_Note_Exposure_Draft_2-24-14.pdf)

- ▶ **Asset Adequacy Analysis (August 2014 Exposure Draft)**

[http://www.actuary.org/files/Asset\\_Adequacy\\_Practice\\_Note\\_Exposure\\_August2014.pdf](http://www.actuary.org/files/Asset_Adequacy_Practice_Note_Exposure_August2014.pdf)

- ▶ **Credibility (July 2008)**

[http://www.actuary.org/files/publications/Practice\\_note\\_on\\_applying\\_credibility\\_theory\\_july2008.pdf](http://www.actuary.org/files/publications/Practice_note_on_applying_credibility_theory_july2008.pdf)

- ▶ **Scenario and Cell Model Reduction (September 2010)**

<http://www.actuary.org/files/Scenario%20and%20Cell%20Model%20Reduction%20PN%20Final%20092210.4.pdf/Scenario%20and%20Cell%20Model%20Reduction%20PN%20Final%20092210.4.pdf>

- ▶ **PBR Model Governance (coming soon)**

## 5. Closing Remarks - ABC

### **ASOPs** - Re-familiarize Yourself With Them

Numbers 1, 7, 11, 21, 22, 25 & 41

### **Beyond** the 'Technical' Aspects of PBR

Professional Qualifications

Non-Technical VMs such as VM-G

### **Continue** to Remain Current

Pending PBR ASOP

Latest Exposures for Other Related ASOPs

VM Amendments

## 5. Closing Remarks

**THANK YOU**