

Life PBR Valuation Forum

November 4, 2015



Life PBR Valuation Forum

Interactive Panel

Actuarial Club of Hartford and Springfield

Hartford – November 4, 2015

Linda Lankowski, FSA, MAAA





Life PBR Valuation Forum

Interactive Panel

Actuarial Club of Hartford and Springfield

Hartford – November 4, 2015

Christopher Whitney, FSA, MAAA

Agenda

- I. Life PBR basics
- II. Assumption setting
- III. Governance
- IV. Standards of practice
- V. Readiness survey

The audience will be polled throughout (use your smart phone to go to www.govote.at) and an expert panel will weigh in during the discussions

What is the scope of Life PBR?

Life PBR will apply to all US companies and products, subject to certain exceptions

Description

Basic Scope

- **All Individual Life Products:** Whole life, universal life, variable life, term, combination products filed as individual life insurance
- **New Business Only:** All contracts issued on or after the operative date of the Valuation Manual

Companywide Exception

- **Premium Threshold:** Ordinary life first year premiums must be less than \$300M for the legal entity and less than \$600M for the associated group
- **RBC Threshold:** The company's RBC ratio must be at least 450%
- **ULSG:** There can be no material universal life with secondary guarantee business in force

Product Line Exclusions

- **Option 1:** Stochastic Exclusion Ratio Test
 - **Option 2:** Stochastic Exclusion Demonstration Test
 - **Option 3:** Deterministic Exclusion Test
-

Applicable sections of the valuation manual (“VM”) are highlighted on the next slide

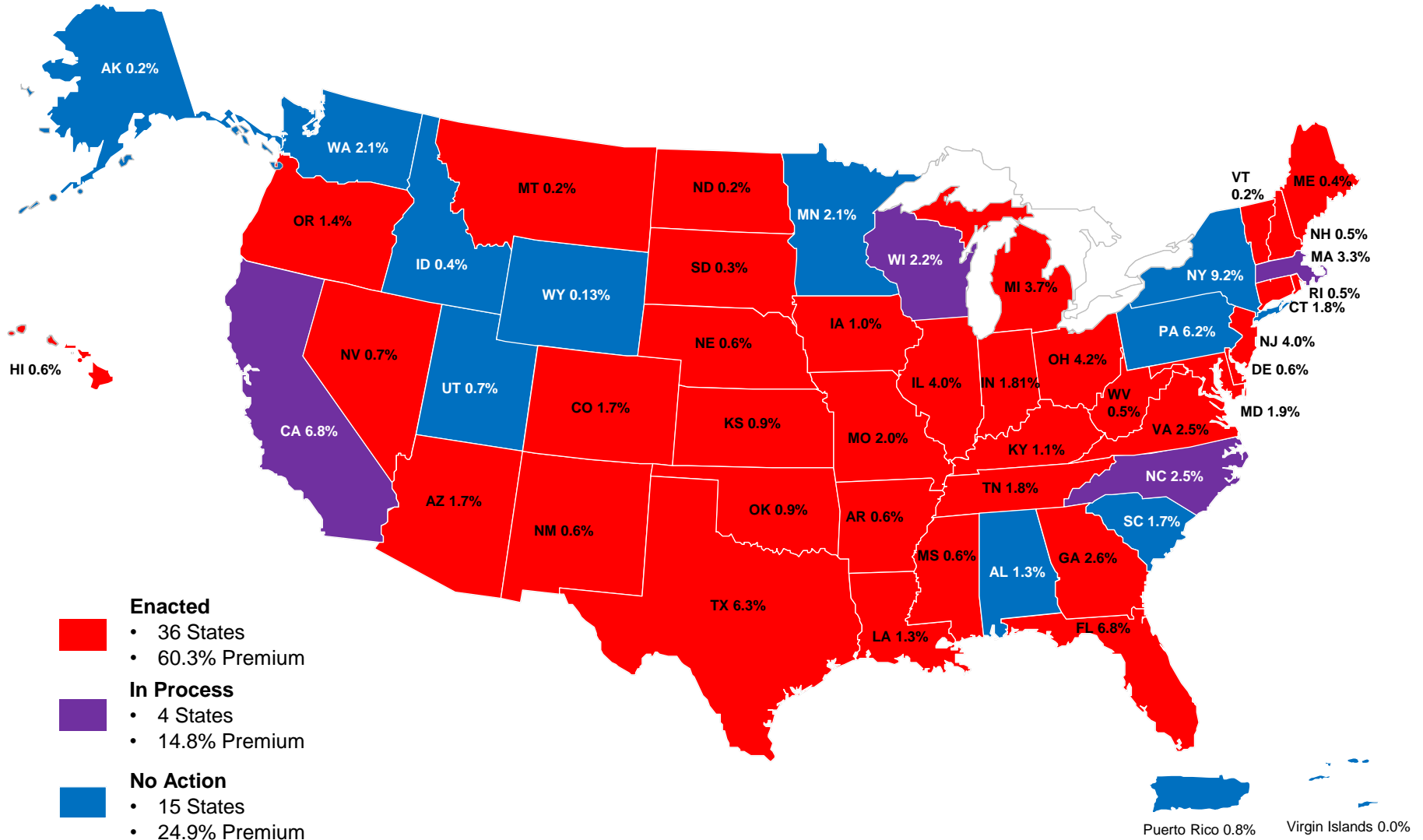
Applicable sections of valuation manual

- VM-01 Definitions for Terms in Requirements
- VM-02 Minimum Nonforfeiture Mortality and Interest
- VM-05 NAIC Model Standard Valuation Law
- VM-20 Requirements for Principle-Based Reserves for Life Products
- VM-21 Requirements for Principle-Based Reserves for Variable Annuities
- VM-25 Health Insurance Reserves Minimum Reserve Requirements
- VM-26 Credit Life and Disability Reserve Requirements
- VM-30 Actuarial Opinion and Memorandum Requirements
- VM-31 PBR Report Requirements for Business Subject to a Principle-Based Reserve Valuation
- VM-50 Experience Reporting Requirements
- VM-51 Experience Reporting Formats
- VM-Appendix A Requirements
- VM-Appendix C Actuarial Guidelines
- VM-Appendix G Corporate Governance Requirements for Principle-Based Reserves
- VM-Appendix M Mortality Tables

What we call Life PBR is really a subset of the new VM that covers both life and non-life reserving requirements

When will Life PBR take effect?

PBR will be effective after a three year transition period after law revisions are adopted by at least 42 states representing 75% of total U.S. premium



Life PBR effective date

When do you think Life PBR will be adopted?



VM-20 reserve definition

The PBR reserve is the greatest of three reserves*

Reserve	Description	Calculation	Assumptions	Reinsurance
1 Net Premium Reserve	<ul style="list-style-type: none"> First Principles Reserve (Similar to CRVM for products other than Term and ULSG) 	<ul style="list-style-type: none"> Serialtim 	<ul style="list-style-type: none"> Prescribed 	<ul style="list-style-type: none"> Excluded
2 Deterministic Reserve	<ul style="list-style-type: none"> Present value of liability cash flows under a single deterministic scenario 	<ul style="list-style-type: none"> Grouped 	<ul style="list-style-type: none"> Prudent 	<ul style="list-style-type: none"> Included
3 Stochastic Reserve	<ul style="list-style-type: none"> CTE(70) of the greatest present value of accumulated deficiencies under prescribed scenarios 	<ul style="list-style-type: none"> Grouped 	<ul style="list-style-type: none"> Prudent 	<ul style="list-style-type: none"> Included

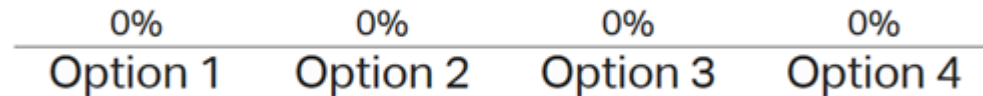
* After adjustment for any deferred premium asset

Deterministic and stochastic reserve exclusion tests are available for certain products

Exclusion tests

Do you envision passing exclusion tests for any of your life products?

(Select all that apply)



Option 1: Will pass Stochastic and Deterministic Exclusion Tests for Whole Life

Option 2: Will pass Stochastic Exclusion Test for Term

Option 3: Will pass Stochastic and Deterministic Exclusion Tests for current assumption Universal Life

Option 4: Will not even try to pass Stochastic or Deterministic Exclusion Tests

Assumptions

Prudent Estimate Assumptions  Anticipated Experience  Margin

Assumption	Considerations	Anticipated Experience	Prudence Elements
Mortality	<ul style="list-style-type: none"> • Mortality segments • Applicable industry table • Credibility of experience 	<ul style="list-style-type: none"> • Linearly grades to an industry table starting in the last duration that sufficient experience exists 	<ul style="list-style-type: none"> • Prescribed margins • Separate margins for company and industry experience
Policyholder behavior	<ul style="list-style-type: none"> • Dynamic assumptions • Required sensitivities • Credibility of experience 	<ul style="list-style-type: none"> • Consistent with actuarial practice • Based on available relevant experience 	<ul style="list-style-type: none"> • Prudent assumption should be at the high end of the plausible range • Specific requirements on sensitivities and increase in policyholder efficiency over time
Expenses	<ul style="list-style-type: none"> • Overhead allocation methodology • Non-recurring expenses 	<ul style="list-style-type: none"> • No future expense improvements • Exclude corporate taxes 	<ul style="list-style-type: none"> • Prudent assumption should be at the high end of the plausible range
Assets	<ul style="list-style-type: none"> • Asset segmentation • PBR credit rating 	<ul style="list-style-type: none"> • Company investment strategy • Anticipated investment expense • Economic scenarios (prescribed) 	<ul style="list-style-type: none"> • Margins embedded within prescribed default costs, interest rate scenarios and credit spreads

Assumption setting: comparison with US GAAP and asset adequacy testing

	Purpose	Basis	Margin
Mortality	PBR prudent estimate	<ul style="list-style-type: none"> Company experience and industry table 	<ul style="list-style-type: none"> Prescribed
	FAS 60	<ul style="list-style-type: none"> Company experience 	<ul style="list-style-type: none"> PAD
	FAS 97	<ul style="list-style-type: none"> Company experience 	<ul style="list-style-type: none"> None
	Cash flow testing	<ul style="list-style-type: none"> Company experience 	<ul style="list-style-type: none"> Varies
Expenses	PBR prudent estimate	<ul style="list-style-type: none"> Fully allocated 	<ul style="list-style-type: none"> Covers a range of potential outcomes
	FAS 60	<ul style="list-style-type: none"> Exclude overhead 	<ul style="list-style-type: none"> None
	FAS 97	<ul style="list-style-type: none"> Exclude overhead 	<ul style="list-style-type: none"> None
	Cash flow testing	<ul style="list-style-type: none"> Fully allocated 	<ul style="list-style-type: none"> Varies

Margins: Select the option that best describes...

Your company's approach to setting margins



0%	0%	0%	0%
Option 1	Option 2	Option 3	Option 4

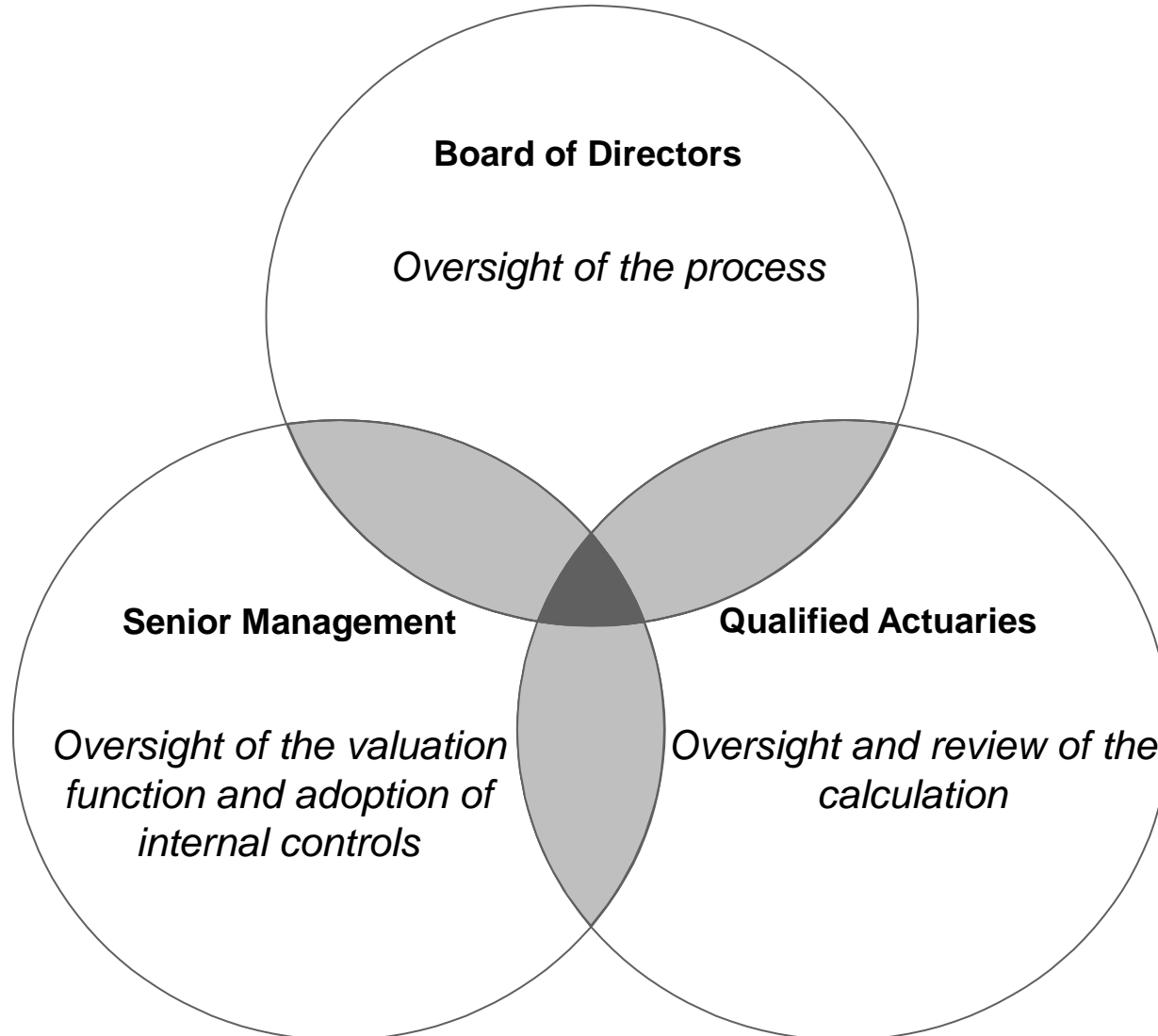
Option 1: Valuation actuary's judgment

Option 2: Procedure based on credibility of underlying experience

Option 3: Combination of judgment and credibility analysis

Option 4: 5% for everything! Just because...

Corporate governance is an important aspect of life PBR
Appendix G of the Valuation Manual provides guidance on corporate
governance



Board Oversight: Selection the option that best describes...

Current readiness of your Board in terms of oversight of PBR reporting



0	0	0	0
Option 1	Option 2	Option 3	Option 4

Option 1: Our Board already reviews reserves as part of its risk management program

Option 2: We have begun discussing what the Board's oversight role will be

Option 3: We will talk to the Board after the implementation date is set

Option 4: The Board does not know what a reserve is!

Senior Management Oversight: Select the option that best describes...

Current readiness of your Senior Management Team in terms of oversight of the PBR valuation function



0	0	0	0
Option 1	Option 2	Option 3	Option 4

Option 1: Our C-Suite already has a robust review mechanism in place

Option 2: We have some review today which will be expanded due to PBR

Option 3: We are starting from scratch

Option 4: We expect to be exempt from PBR

ASOPs to consider*

Category	ASOPs
1 Principles-Based Reserves	<ul style="list-style-type: none"> • ASOP XX [Not Yet Adopted]: Principle-Based Reserves for Life Products
2 Analysis of Cash Flows and Asset Adequacy	<ul style="list-style-type: none"> • ASOP 7: Analysis of Life, Health, or Property/Casualty Insurer Cash Flows • ASOP 22: Statements of Opinion Based on Asset Adequacy Analysis by Actuaries for Life or Health Insurers
3 Assumptions and Data	<ul style="list-style-type: none"> • ASOP 2: Nonguaranteed Charges or Benefits for Life Insurance Policies and Annuity Contracts • ASOP 12: Risk Classification (for All Practice Areas) • ASOP 15: Dividends for Individual Participating Life Insurance, Annuities, and Disability Insurance • ASOP 23: Data Quality • ASOP 25: Credibility Procedures
4 Other	<ul style="list-style-type: none"> • ASOP 1: Introductory Actuarial Standard of Practice • ASOP 11: Financial Statement Treatment of Reinsurance Transactions Involving Life or Health Insurance • ASOP 41: Actuarial Communications • ASOP 21: Responding to or Assisting Auditors or Examiners in Connection with Financial Statements for All Practice Areas

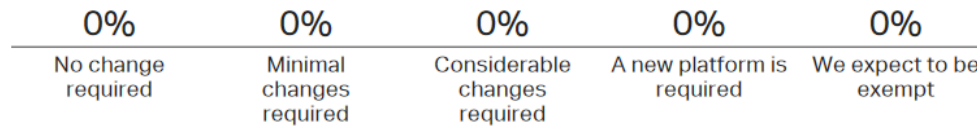
*Actuaries should independently consider ASOPs that may apply

Life PBR readiness survey



Deterministic Reserves: Select the option that best describes...

Your company's ability to calculate the Deterministic Reserve using your existing valuation models



Pricing Models: Select the option that best describes...

Your company's current attitude in terms of reflecting the impact of PBR in pricing models



0%	0%	0%	0%
Option 1	Option 2	Option 3	Option 4

Option 1: No plan, wait and see what the Valuation area is doing

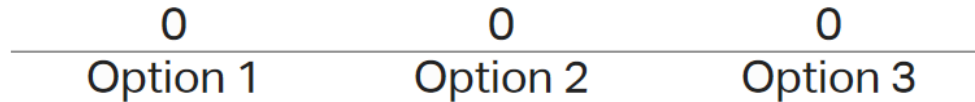
Option 2: Plan on implementing nested stochastic reserve calculations

Option 3: Plan on modeling a proxy reserve based on input from the Valuation area

Option 4: We expect to be exempt from PBR

Expense Allocation: Select the option that best describes...

Your company's current expense allocation methodology



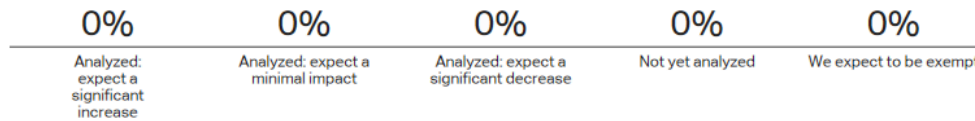
Option 1: It already has the level of granularity required for PBR

Option 2: It will require some work to determine the overhead allocation between inforce and new business

Option 3: It will require a substantial effort and coordination with our planning department to get the necessary level of information

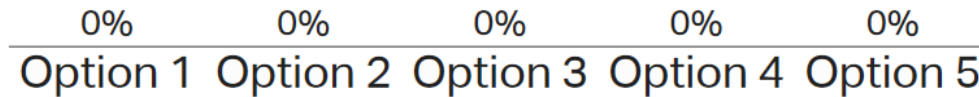
Reserve Impact: Select the option that best describes...

Analysis to date on the impact of PBR on reserves



Pricing Impact: Select the option that best describes...

Analysis to date on the impact of PBR on pricing



Option 1: Analyzed: expect to re-price all applicable products in response

Option 2: Analyzed: expect to re-price most applicable products in response

Option 3: Analyzed: expect to re-price some applicable products in response

Option 4: Not yet analyzed

Option 5: We expect to be exempt

Key takeaways

- 1 Life PBR is coming!**
- 2 Shift in paradigm; increased focus on assumption and model governance**
- 3 Great opportunities and challenges...**