ULSG Company Case Study

Net Premium Reserve, Deterministic Reserve and Stochastic Reserve

You are the Qualified Actuary supporting Individual Life Insurance at your company. You have been monitoring the progress of Principles Based Reserves (PBR) and recently found that PBR will be effective for new issues on January 1, 2017.

Your company profile is as follows:

Information	**ULSG Company**
Number of Policies in-force (1,000s)	700
Policies Issues per year (1,000s)	40
Total Premium in-force ($ millions)	$2,100
Total Adjusted Capital as % of Authorized Level	300%
Management Philosophy	Aggressive
No. of Life Entities	1
No. of Strategic P&Ls by Business Unit, Market, Distribution Channel	3
Measurement Accountability	Statutory earnings and capital; GAAP earnings in incentive compensation
Business Planning	Quarterly
Product Mix	ULSG: specified premium, shadow accounts, IUL and VUL
Staff Size (Credentialed/Student/Technical)	15/8/3
Organization	Five Actuarial Departments

When will you begin reporting under a PBR regime? Why?

How do you plan to define your model segments? Why?

Are you planning to apply the Stochastic Exclusion Test? If so, which test methodology will you apply? Why?

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What are your considerations for aggregating cashflows within scenarios when calculating the Stochastic Reserve?

Which method do you plan to use to determine the Deterministic Reserve? Why?

What are some considerations in assumptions and margins for premium patterns and policyholder behavior, particularly for flexible premium products?

How many scenarios do you plan to run? Why?

What is the length of the projection period being assumed? Why?

How do you plan to determine anticipated experience and develop the applicable margin?

What are some approaches you plan to use to validate model calculations?

Changes to the starting yield curve have significant impact on results, would you hold additional reserves, to avoid reserve volatility, if the yield curve increased by 100bp and reserves decreased by 15%?

Will the asset model be integrated with the liability model, or will a separate asset cash flow model be used? Describe the pros and cons of each approach.

How will you model YRT reinsurance premiums since there is an adverse prescribed margin being reflected in the mortality assumption?

Other questions, thoughts, or considerations from the group?

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