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Evolving Frontiers, Exciting Prospects

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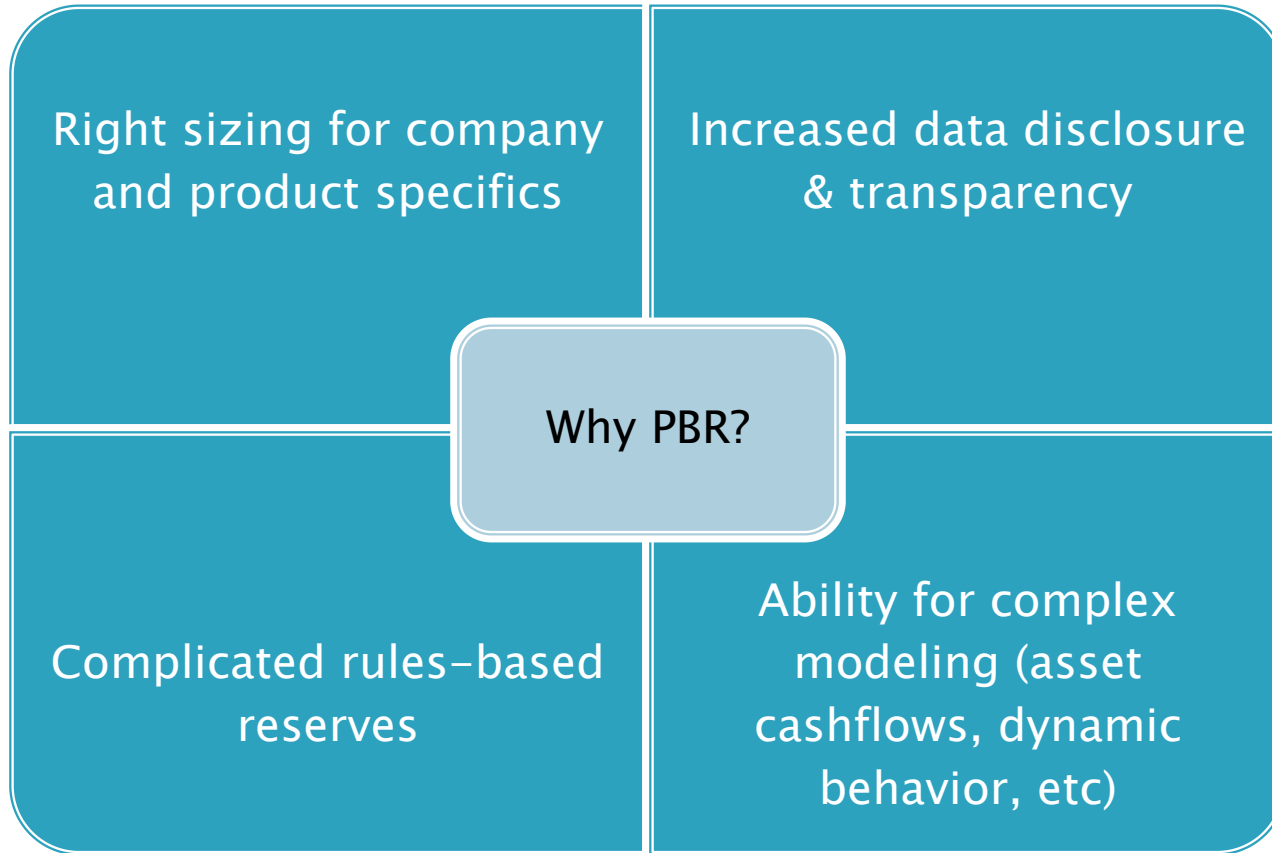
Common US Life products and terminology

- ▶ Term
- ▶ Whole Life
- ▶ Universal Life – Variable Life
- ▶ Variable Universal Life (VUL) – Unit Linked Life
- ▶ Universal Life with Secondary Guarantee (ULSG) – a type of UL, which assures coverage even when account value is zero (based on some more lenient charges)
- ▶ NAIC – the regulator

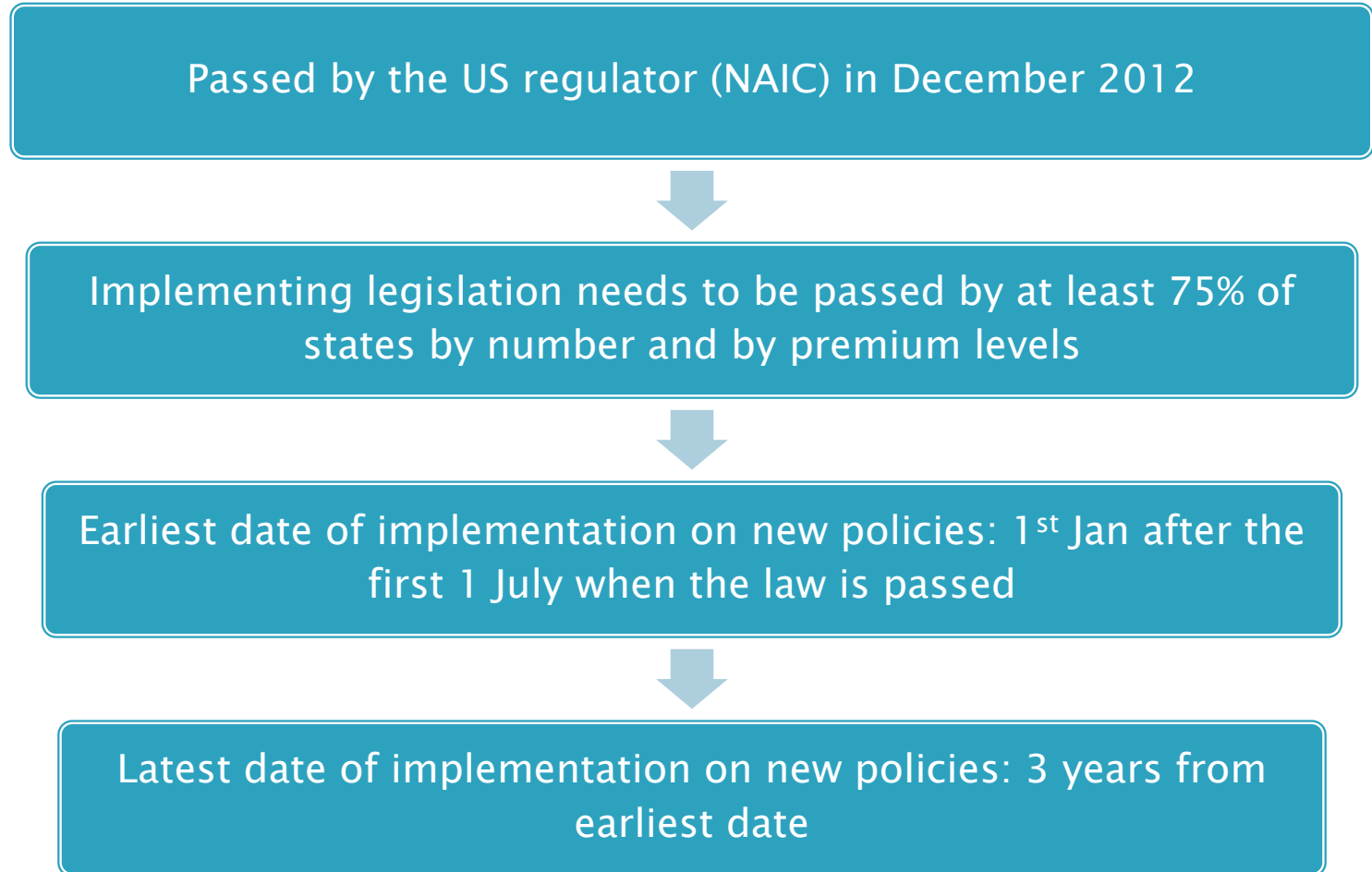
What kind of stat reserving is done in the US for Life Insurance?

- ▶ Net premium reserves also called CRVM
- ▶ Expense allowance (Zillmerisation)
- ▶ Generally uses formulas
- ▶ Rules-based
- ▶ Additional requirements for non-level premium Term
- ▶ Additional requirements for ULSG products

Why principles based reserves?



Timeline of implementation



Structure of the manual

- ▶ Maximum of Net premium reserves (NPR), deterministic reserves(DR) and stochastic reserves(SR)
- ▶ SR required only for VUL and ULSG which fail the stochastic reserve exclusion test (SRET)
- ▶ DR is required for products which fail the deterministic reserves exclusion test (DRET) and for ULSG
- ▶ Some assumptions in the Valuation Manual are prescribed

Net premium reserves

- ❖ The methodology and assumptions of NPR are prescribed and not open to actuarial judgment.
- ❖ Acts as a regulator set floor for reserves
- ❖ Assumptions varying widely with product features and economic environment
- ❖ At present only Term and ULSG products will use the new reserves. Other products will use the existing NPR methodology as of now.

Assumptions for deterministic reserves

- ▶ Gross premium reserves based on cashflows
- ▶ Best estimate + PAD for all assumptions
- ▶ Discount rate does not reflect product-specific risks
- ▶ Mortality PAD to be determined using credibility theory
- ▶ No mortality improvement/expense improvement

Assumptions for stochastic reserves

- ▶ Which assumption is Stochastic? Only Interest rate/equity needs to be.
- ▶ Other assumptions – as in deterministic reserve
- ▶ Dynamic Policyholder behavior
- ▶ Asset assumptions
- ▶ CTE (70%)

Exclusion tests

- ▶ Why exclusion tests? – Save time/effort
- ▶ What do they measure? – interest rate/equity sensitivity, NP sufficiently below GP
- ▶ How do they measure this?
- ▶ What happens if the test is passed? – No need to calculate SR and DR

Impact Study results

- ▶ Results as of 2011, submitted to Towers Watson and Milliman for analysis
- ▶ Most ULSG products failed the exclusion tests
- ▶ Change shows mixed trend
- ▶ Most Term products passed both exclusion tests
- ▶ Term products reduced reserves considerably
- ▶ Effectiveness of exclusion tests

Thank you – Questions?