

# Solvency in the United States

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# Outline

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- US History
- Change process at NAIC for US
- Key elements of New Proposal
- What may be different from International
- What's left?



# History of Valuation

- 1858 Massachusetts Legislation
- Commissioner to Calculate Reserves on all policies of all licensed Companies
- Actuary Elizur Wright Appointed Commissioner
- Wright selected Net Level Premium Reserve Method and Combined Experience (1843 British) Mortality Table and 4% Interest Rate
- Controversial Decision of Immense Importance



# Valuation In 2006

- Commissioner to Calculate or Cause a Valuation to be made of all Policies of all Licensed Companies
- Commissioner's Reserve Valuation Method and 2001 CSO Mortality Table with 4% Interest Rate
- 1990's Asset Adequacy Analysis Required



# Valuation Methodology

- Virtually Unchanged for 147 Years
  - Is defined by a “deterministic” reserve
- One Size Fits All Companies
- Does not address all Insurance Risks
- Reserve too Conservative for Some Companies and not adequate for Other Companies



# Top Down vs. Bottom Up Implementation

- Solvency 2 approach for Europe is top down.
- Will apply to all lines of business and companies whether life, health or P&C and all risks
- US is Bottom up

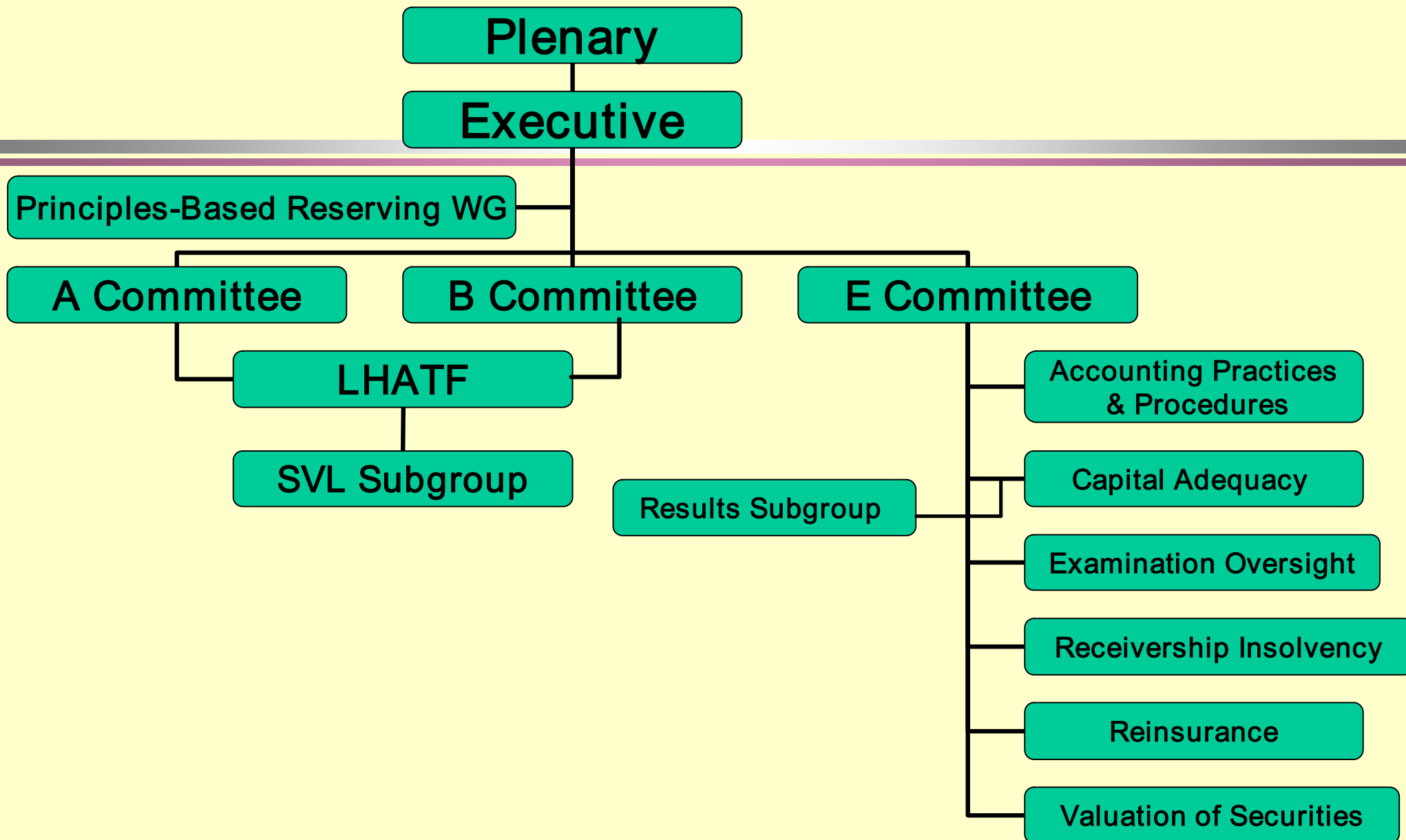


# How will US do Bottom Up?

- Reflects foundation on state regulation and US practice of open dialogue among all parties. A consensus building approach with NAIC steering committee oversight to pass a model law.
- Then must be approved by all 50 states.
- Essentially our LAMFALUSSY (Solvency 2 issue)



# NAIC Committee Structure



# Current Legal Framework

- Standard Valuation Law
  - Statute, Regulations, Actuarial Guidelines
- Risk Based Capital
  - Statute: References NAIC RBC Instructions
  - Regulations
- Financial Statement Filing
  - Statute: References NAIC Accounting Practices and Procedures & NAIC Blanks
  - Regulations
- Examination of Financial Condition
  - Statute: References NAIC Examiners Handbook
  - Regulations: Annual Examination by Independent CPA



# One Significant Change Already Done

- Risk Focused Examinations
  - Have passed model law and used already in half a dozen states with required usage for all by 2010
  - Company reports on all risk exposures, all risk mitigation and residual risk.
  - Examiner uses this to focus on highest priority risks of company



# Many perceived US differences stem from bottom up approach

- US defined top down objectives in 1999-2001, then began applying to product specific NAIC projects.
  - Capital for variable annuities was first
  - Reserves for variable annuities almost complete
  - Life Reserves, too, is now almost complete
  - More to come as specific projects
    - Life RBC, Long Term Care & Annuities



# 2007 Key Deliverables

- Valuation Manual
- Standard Valuation Law
- Integration of PBA into the examination structure and process
- Scope of Corporate Governance framework
- Finalize life reserve requirements
- Decide timeline and requirements for RBC
- Develop PBA timeline and requirements for annuity reserves



# Looking Ahead to 2008

- PBA Components ready for NAIC adoption in early 2008 (or late 2007):
  - Life Reserve Requirements
  - New Standard Valuation Law
  - Valuation Manual Content & Structure (1<sup>st</sup> exposure at June 2007 NAIC meeting)
  - Integration of PBA into the examination process



# Basic Framework for Life Reserves

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**Reserve is the greater of:**

1. A deterministic, seriatim, single scenario reserve calculation; or
2. A stochastically derived reserve (if needed) using multiple scenarios



# Deterministic Reserve

- Based on Gross Premium Valuation (GPV) method
- $\text{GPV reserve} = \text{Present Value (PV) of future benefits and expenses, less PV of future gross premiums.}$
- Is not designed to capture tail risk
- Is subject to a cash surrender value floor on a contract by contract basis



# Stochastic Reserve

- Multiple scenarios will be used to properly capture the “tail risk” of the contract (risks that have high impact, but low probability)
- Only interest rates and equity returns will be modeled stochastically
- Reserve for each scenario will be based on the same method used for C-3 Phase 2 and VACARVM (proposed reserve guidance for VA’s), that is, the Greatest PV of Accumulated Deficiencies (GPVAD)
- Will use a CTE (conditional tail expectation) level that is set by regulators, such as 65 CTE



# Valuation Assumptions

- Permits the use of company experience, if credible, to establish assumptions for risks over which the company has some degree of control or influence
- Industry experience will be used if company experience is not available or credible
- Valuation assumptions are not “locked-in” but may change over time as anticipated experience changes



# Valuation Assumptions

- Prescribed Assumptions
  - Needed for risks over which the company has no control or influence
  - Examples: interest rate movements, equity returns
  - Will be an explicit assumption for the Deterministic Reserve calculation
  - Will typically be modeled stochastically for Stochastic Reserve calculation



# Valuation Assumptions

- Assumptions not prescribed and not stochastically modeled will be based on “prudent best estimates”
  - Major risks include: mortality, policyholder behavior, asset default cost, and non-guaranteed elements
  - Actuary starts with their “best estimate” assumption
  - Then a margin for uncertainty is added to reflect estimation error and adverse deviation
  - Margins for each assumption will be determined using actuarial judgment, but the aggregate impact of all margins on the resulting reserve must satisfy the solvency objective of statutory reserve reporting requirements



# What May be Different?

- Role of Supervisor & Examination Process
  - International recognizes governance may be country specific
  - US has suggested an independent review as a regulatory tool/safeguard and to develop consistent use of assumptions
- Book vs. Market
  - US Stat assets are book, but International focus is market.



# Why not Just Use Risk Free Discount Rates?

- PUZZLE OF RISK FREE vs. BEST ESTIMATE for Life Insurance
  - “Best estimate” of asset yields leads to earned yields less discount used in models to be consistent with “best estimate” of liability non-god. elements and dividends.
  - Risk free used on assets is conservative, but if liabilities not lowered to reflect only risk free yield on assets, have “doubled the conservatism”



# Policy Issues for NAIC Commissioners to Consider

- Purpose of reserves in a principles-based framework
- Role of corporate governance in a principles-based environment
- Who “owns” which principles?
- Possible use of prototyping
  - i.e., select limited products for initial PBA roll-out
- Data collection oversight
- State Regulatory Feedback loop



# Content Projects - Detail

- Valuation Manual Requirements for:
  - PBA Reserves (could include life, annuity and health)
  - Independent PBA Review
  - Economic Scenarios
  - Stochastic Models (and/or standards)
  - Valuation Principles
  - Statistical Agent & Experience Studies
  - Aggregate Versus Individual Margins
  - Treatment of Reinsurance within PBA
  - Exclusions for small risk, not small size



# Content Projects (Part 2)

- Corporate Governance Principles (How to Oversee PBA)
  - Objectives of internal corporate governance
  - Assumptions or premises underlying proposed objectives
  - Draft outline of basic contents of a governance framework
  - Background/analysis on other existing governance structures as guidance
  - Propose where each element of governance framework should be documented (law, regulation, ASOP or valuation manual)
  - Initial placing of governance requirements - law, regulation, ASOP, valuation manual
  - Final wording for law, regulation, etc.



# Content Projects (Part 3)

- Scope – RBC Life & Annuities (Interest & Equity risk)
- How to Implement:
  - NAIC Blank changes
  - Requirements for disclosure & interrogatories
  - APPM changes
- How to examine - Examination Requirements & Process



# PROCESS PROJECTS

- For each Process Project below, there will be a need to decide which NAIC group(s):
  - Does ongoing evaluation of the process
  - Recommends changes
  - Reviews recommendations
  - Allows exemptions for immediate changes



# Processes to Oversee

- Making Valuation Manual Changes
  - Preparers of Statements & Sensitivity Tests
  - Reviewers of Statements & Sensitivity Tests
  - Examiners of Statements & Sensitivity Tests
  - Preparers of Data Collection
  - Reviewers of Data Collection
  - Review Scope & Effectiveness of Data Collection
- Checks and Balances on discretion given to preparers, reviewers and examiners
- Accounting Practices & Procedures Manual (APPM)



# Processes (Part 2)

- Examination Handbook
- RBC Instructions
- Possible Changes for:
  - Independent Review
  - Other Corporate Governance
  - Needed NAIC Coordination
  - Reporting Frequency
  - Reporting Requirements for Sensitivity Tests
  - Public vs. Regulatory Disclosure



# Question One - Prototyping

- Accelerate work of the Results Subgroup on C-3 Phase II
- Possibly accelerate the following to get real life experience with a smaller set of participants:
  - Variable Annuity reserves (VACARVM)
    - Could be done via guideline or regulation
    - Current exposure could be adopted in 2007
- RBC for life (C3 only) applied to inforce
- Choose to phase-in requirements, for example, for life products or lower risk products or higher risk products



# Question Two – Purpose of Reserves

- What is in reserves, what is in Risk-Based Capital, what is in ERM processes for solvency?
  - Basel refers to Capital, Disclosure & Supervisors
- Also includes frequency and manner of quarterly reporting (Who should oversee this?)
- Can risk-focused exams, PB reserves & independent review create a less costly but more effective and efficient reporting process, unique to the risk profile of each company?



# Question Three - Data

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- Who oversees the NAIC statistical agent requirements and the monitoring of its cost/benefit tradeoffs?



# Question Four – Feedback Loop

- Are changes needed in the NAIC structure?
  - Is there a better way to coordinate RBC and reserve changes and data collection impacts
  - How to get and incorporate input from preparers, reviewers and examiners



# Analytical Exam Review Today

- Life Today = Formula + Cash Flow test
- P&C Today
  - Schedule P – Continual reporting of actual to expected for assumptions
  - Adverse Development Reporting each quarter
- Authority/Hammer
  - Spend more time examining companies (costing \$ for the companies)
  - Use Risk Focused Exams to Prioritize
  - Set Company Action Plans



# Sample Regulator Comments on Governance Today

- P&C – 2 state actuaries feel current exam process works pretty well
- Life – 2 other state actuaries have stated a strong preference to be able to benchmark an exam/annual statement to reality vs. a formula
  - Life lacks an actual-to-expected reporting framework for key company risk drivers



# Proposed New Life Governance

- Opining and Review Reports from actuaries focus on key risk drivers, “Where might the company be going?” and define the company’s future expectations so a basis for actual-to-expected can be created
- Actuary sets reserve based on a prudent best estimate, and will be able to use actual experience in later process for setting assumptions
- Process is consistent with risk-focused examinations



# What's Left?

- Actuary core value = risk management.
- THIS MEANS PROCESS & CONCLUSIONS, NOT NUMBERS

