Equity Product Accounting Approaches

SOA Annual Meeting
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ACTUARIAL STRATEGIES

Topics for Discussion

- Overview of Current U.S. Framework
- Overview of Proposed U.S. Framework
- U.S. and Canadian Comparison

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Current U.S. Framework

- Statutory Accounting
  - Balance sheet oriented
  - Designed to be conservative
  - Deterministic
- GAAP Accounting
  - Designed to be more economic based
  - Deterministic
  - Best estimates

Current U.S. Statutory Accounting

- Variable Annuities
  - A.G. 33
    - Basic reserves
    - Deterministic
    - Typically equal to CSV
  - A.G. 34
    - Death benefit reserves
    - Drop and recovery
  - A.G. 39
    - VAGLB reserves

Current U.S. Statutory Accounting

- Variable Life
  - CRVM
    - Basic reserves
    - Deterministic
  - A.G. 37
    - Death benefit reserves
    - AALR
    - OYT

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Current U.S. Statutory Accounting

- RBC
  - Formulaic
  - Based on quality/type/duration of assets backing liabilities
  - Separate account assets have little RBC requirement
  - Currently not set to accommodate equity guarantees

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Current U.S. GAAP Accounting

- FAS 97
  - Deterministic approach
  - DAC based on deterministic assumptions
  - Some mean reversion placed in calculations
  - Assumption unlocking effects DAC levels
  - Not integrated with statutory accounting

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Current U.S. GAAP Accounting

- SOP 03-1
  - Effective for fiscal years beginning after Dec 15, 2003
  - Covers FAS 60, 97 and 120 products

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Current U.S. GAAP Accounting

Key items of interest

- Four conditions for recording separate account arrangement at fair value
  - – Accounts are legally recognized
  - – Assets are legally insulated from general account liabilities
  - – Contract holder directs investment strategy
  - – All performance, net of fees, is passed through to contract holder
  - – If conditions not met, SA assets and liabilities are accounted for as general account assets and liabilities
- Variety of disclosures are required
- Clarifies that the account value to be recorded as a liability is that which is essentially available in cash
  - Prior to any surrender charges or MVA
  - Accrued but not yet credited benefits are included

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Current U.S. GAAP Accounting

Key items of interest

- Clarifies mortality and morbidity for classification as an investment contract or universal life contract
  - – Based on PV of benefits in excess of AV compared to PV of PV of charges
- Defines sales inducements
  - – Liability to be accrued over the period that the contract is in force for the contract holder to qualify for the inducement
  - – Deferred inducements are to be amortized using EGPs over the life of the contract
- Guidance on establishing additional liabilities for specific benefits such as death benefits and no lapse guarantee
- Guidance on establishing additional liabilities for annuitization benefits such as GMIBs

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Current U.S. GAAP Accounting

Additional Liability

- BR
  - PV of cumulative actual plus expected excess benefits, over
  - PV of cumulative actual plus expected total assessments
- Additional liability is BR times
  - Cumulative actual assessments, minus
  - Cumulative actual excess payments, plus
  - interest

Current U.S. GAAP Accounting

Additional Liability

- Liability to be valued over a range of assumptions
  - Set of stochastic scenarios
  - Representative set of scenarios
- Testing a range of policyholder behavior assumptions may be required as well
- Liability is unlocked if experience or assumption changes result in a new BR

Current U.S. GAAP Accounting

Additional Liability

Liability might be required if:

- Contract contains a benefit feature providing an amount in excess of AV
- Contract classifies as a FAS 97 UL contract with fees and benefits that are not fixed and guaranteed
- It is expected that charges assessed will result in early year profits, followed by subsequent losses

Current U.S. GAAP Accounting

Additional Liability

- GMDBs on Vas
- No lapse guarantees on UL and VUL
- LTC on deferred annuities
- Earnings protection benefits
- GMDBs provided by mutual funds or other noninsurance contracts

Proposed U.S. Framework

C3 P2/VACARVM

- Mimics Canadian MCCSR rules
- Covers VAs only to start
- Stochastic approach

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Proposed U.S. Framework

- Reserves
  - 65^{th} CTE
  - Ignores FIT
  - Seriatim calculation with floor on each contract
  - GPV of accumulated deficiencies
- TAR
  - 90^{th} CTE
  - After tax
  - LPV of accumulated surplus

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Proposed U.S. Framework

- Modeling approaches
  - Use 12 asset class scenarios provided
  - Develop scenarios
  - Alternative Method
  - Standard Scenario

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Proposed U.S. Framework

- For modeling
  - Use best estimate assumptions with PAD
  - Reflect hedging & reinsurance
  - Dynamic lapses
  - Dynamic annuitization rates
  - 65% or 85% of GMDB table
  - Model all product cash flows
  - Greatest PV of statutory deficiency
  - Proposal to include inv mgt fees

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Proposed U.S. Framework

- Alternative Scenario
  - Only used for VAs with
    - GMDBs
    - No Guarantees
  - 80,000 nodes, 3 factors per node
  - Seriatim calculation
  - Expected higher results

Proposed U.S. Framework

- Standard Scenario
  - Single scenario for reserves and capital
    - No aggregation at reserve level
    - Floor applies on a seriatim basis
  - Serves as guide during the transition
    - Evaluate reasonableness
    - Floors capital and reserves

Proposed U.S. Framework

- Certification Requirements
  - Reserves calculated in accordance with requirements
  - Material change
  - Hedging certification
    - Clearly defined hedging strategy
    - Model may not include foreknowledge

Proposed U.S. Framework

- Proposed smoothing method
  - Ratio to apply to year end CSV to smooth TAR
  - f x current TAR/CSV + (1-f) x prior year's ratio
  - Currently, f = .2, .4, .6 thereafter

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Proposed U.S. Framework

- Adoption Status
  - Reserves
    - Draft Actuarial Guideline
    - Apples to new and inforce business issued after 1980
    - Proposed effective date 12/31/05
  - RBC
    - Applies to new and inforce contracts
    - Proposed effective date 12/31/05

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Proposed U.S. Framework

- Documentation
  - Method used
  - Description of scenarios and calibration
  - Standard scenario results
  - Hedging method and assumptions

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U.S. vs. Canadian Methods - Similarities

- Both use a stochastic projection
- Both have calibration tests
- Both use best estimates with PAD
- Both project all product cash flows

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U.S. vs. Canadian Methods - Differences

- TAR
  - MCCSR set at 95th CTE
  - U.S. at 90th CTE
- Reserves
  - MCCSR set between 60th and 80th CTE
  - U.S. either 65th CTE or current levels

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U.S. vs. Canadian Methods - Differences

- Modeling
  - MCCSR
    - Use PV of all benefit cash flows
    - Assign a MFO for use in benefit reserve and capital projections
  - U.S.
    - PV of greatest statutory deficiency
    - PV of lowest statutory surplus

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U.S. vs. Canadian Methods - Differences

- Assumptions
  - MCCSR
    - Capital and reserve PADs can be different
    - Reserve PADs are more conservative
  - U.S.
    - Unaware that regulation discusses PADs
- Fee Capital
  - MCCSR explicit
  - U.S. implicit

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U.S. vs. Canadian Methods - Differences

- Hedging
  - MCCSR allows a 50% credit for hedging programs
  - U.S. proposal still undecided
- Integration with DAC
  - MSSCR
    - MFO used in MCCSR calculation must be used in DAC
  - U.S.
    - No Integration

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THANK YOU

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