SOA Spring Meeting - Colorado Springs - 75PD

Phase II of the C-3 Project Update

AAA Proposal

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C-3 Phase II

Recommended Approach for Setting Regulatory Risk-Based Capital Requirements for Variable Products with Guarantees (Excluding Index Guarantees)

Presented by the American Academy of Actuaries' Life Capital Adequacy Subcommittee to the National Association of Insurance Commissioners' Life Risk-Based Capital Working Group

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History

- C-3 RBC factors have been formulaic, not reflecting degree of asset/liability mismatch risk of a particular company.
- Several years ago, NAIC asked the AAA to take a fresh look.
- December 31, 2000, the NAIC implemented Phase I, addressing interest rate risk for annuities and single premium life. Non-exempt companies determined their capital requirements for interest-sensitive products by scenario testing, using the interest rate generator provided and their own assets and liabilities. The possibility of having exempt companies run two standard scenarios instead of using factors is being considered.
- The AAA Life Capital Adequacy Subcommittee has recommended implementing Phase II to address both the interest rate and equity risk associated with variable products with guarantees (including living, death benefit and secondary guarantees), other than index guarantees.

Recommendation

- Unlike Phase I, any equity/interest rate scenario generator may be used, as long as it validates to prescribed percentile distribution (ensuring “fat tails”).
- Like Phase I, for each scenario, starting with no statutory surplus, the year by year accumulated statutory surplus is calculated (reflecting estimated statutory reserves, Federal Income Tax, and expenses) and its present value calculated.
- The lowest of these present values is then tabulated. The scenarios are then sorted on this measure.

Recommendation (continued)

- Unlike Phase I, a modified Conditional Tail Expectation ("CTE") 90 percent determines RBC requirements. (Modified CTE 90 is the arithmetic average of the worst 10 percent of all scenarios, with no scenario being calculated as a positive value of accumulated surplus.
- The CTE 90 estimated surplus requirement less the reserves set up for these benefits establishes the RBC amount required.
- Reinsurance and hedging will be reflected. For hedging, an adjustment (haircut) to the modeled result may be required (reflecting basis risk, gap risk, and cost risk, if any).

Issues to be Resolved

- Calibration requirements for interest rates and equity returns;
- Alternative simplified method
- Details of regulatory review and approval
- Does scope include VUL?
- What credit should be allowed for hedging
- Testing methodology and results
- Discount rates for accumulated negative surplus
- CARVM reserve floor