Life Capital Work Group

Update to the Life RBC Working Group

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AMERICAN ACADEMY *of* ACTUARIES

LCWG Charge

The charge of the American Academy of Actuaries' (Academy) Life Capital Work Group is to review and evaluate the interest rate and market risk (C3) component of the current Life Risk-Based Capital framework in the context of life products valued under a principles-based reserving approach. The Academy's Life Capital Work Group will work with the Academy's Life Reserves Work Group and recommend changes to the Life Risk-Based Capital formula, as necessary.

- Scope of the work does not include review of C1 or C2 components.
- C3P3 Project seen as next step toward a future comprehensive Principles-based approach to capital.

LCWG Working Construct: Scope

- Rules will apply to all life insurance products inforce. No restriction to those policies in LRWG scope.
- Recommend:
  - Inclusion of Single Premium Life business in C3P3 and removal from scope of C3P1
  - Eliminate current C1 required capital on expense allowance for variable products within scope
  - Eliminate current C1cs amount on equities owned at the valuation date which back the life product reserves
  - Allocation of C3 RBC amount into interest rate and equity/market risk components, combined with existing C3a and C3c components respectively

LCWG Working Construct: Scope (cont.)

- LPC and LCAS recognize there may be significant practical implementation issues applying C3P3 to all inforce policies, but LPC believes that application to inforce is theoretically correct.
- Provides for Exclusion Amount. This amount may be determined by the actuary without going through the stochastic scenarios and calculation process, as long as the amount can be demonstrated to be larger than that computed applying the stochastic scenarios process, subject to minimum.
- Thought needs to be given to demonstration requirements which might enable such exclusions / exemptions.

LCWG Working Construct: Calculation Basis

- C-3 Component of Risk-Based Capital = TAR - reserve
  - Possible that some portion of C3 amount covered by reserves under this approach.
  - Alternate formulation being considered.
- TAR recommended to be set at CTE(90) consistent with risk level set for other products.
- TAR is an after-tax calculation reflecting stochastic interest rate and equity scenarios.
- TAR calculated as the Greatest PV of Accumulated Deficiency calculation.

LCWG Working Construct: Calculation Basis (cont'd)

- Starting Assets are set equal to reserve.
- Discount rate consistent with C3P2.
- Working Reserve
  - May be CSV for products having cash values, or
  - Present value of expected benefits and expenses less premiums for products without cash values
  - Otherwise use estimate of projected reserve where estimate consistent with actual reserve at projection start date

LCWG Working Construct: Assumptions

- Projections reflect Prudent Best Estimate Assumptions.
  - Report contains guiding principles underlying the determination of Prudent Best Estimate Assumptions.
  - Principles consistent with LRWG proposal
  - Further guidance under development
- Asset projections:
  - Reflect Company's reinvestment & disinvestment policies.
  - Spreads on reinvestments prescribed by NAIC, consistent with LRWG proposal.

LCWG Working Construct: Assumptions (cont.)

- Scenarios, at option of actuary, may be generated from either:
  - AAA supplied generator [C3P1 update recommended]
  - Proprietary generator, subject to calibration criteria established by AAA Economic Scenario Work Group
- Treatment of Hedges:
  - Will be directly reflected in the C3P3 calculation, based on existing C3P2 framework.
  - Certification Requirements.
  - Consistent with LRWG requirements.

LCWG Working Construct: Implementation

- Actuarial Certification and Actuarial Report are required.
  - Whether PBA Review should apply and scope of such review are under discussion. Possible Alternatives:
    - PBA Review when such review required for reserves.
    - Triennial Review.
    - Delayed implementation for n years.
- Documentation requirements to be consistent with C3P2.

LCWG Proposed Timeline

- Initial report presented at December, 2006 NAIC meeting
- Guidance on Prudent Best Estimate Assumptions – initial draft March 2007

- Exposure period through June 2007
- Updated drafts substantially complete by June 2007 to enable CADTF adoption with YE-08 effective date.

- 18 months for companies to begin and complete implementation

- Necessary 2008 LRBC Instructions changes drafted and approved by Dec. 2007

- YE-08 becomes effective

Issues

- TAR – Reserve approach
- Discount Rates
- Prescribed Spread to Treasuries on Reinvestments
- Demonstration Requirements for Exclusion Amount
- Allocation of required amount between C3a and C3c components
- Adjustments for use of earlier “as-of” date
- Scope + Applicability of PBA Review
- Additional Guidance
- Principles Evolving

Alternate Formulation

- Proposed: C3 RBC Component = TAR – Reserve
- Alternate: C3' RBC Component = TAR – CTE65
- RSVDiff = Reserve – CTE65 (may be > 0) *
- So C3 = C3' – RSVDiff (less than C3' where RSVDiff >0)
- And C3' = C3 + RSVDiff (exceeds C3 where RSVDiff >0)

- $RBC = C0 + C4a + \sqrt{(C1cs + C3c)^2 + (C1o + C3)^2 + C3b^2 + C4b^2}$
- $RBC' = C0 + C4a + \sqrt{(C1cs + C3c)^2 + (C1o + C3')^2 + C3b^2 + C4b^2} - RSVDiff$

* For example, where reserve mortality much greater than PBE

- Under proposed formulation reserve will reduce C3 requirement where RSVDiff > 0.
- Alternate formulation sets C3 as differential risk level on consistent assumptions, with post-covariance adjustment for differences between valuation and PBE assumptions.