C-3 Alignment

Life Risk-Based Capital (E) Working Group

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American Academy of Actuaries

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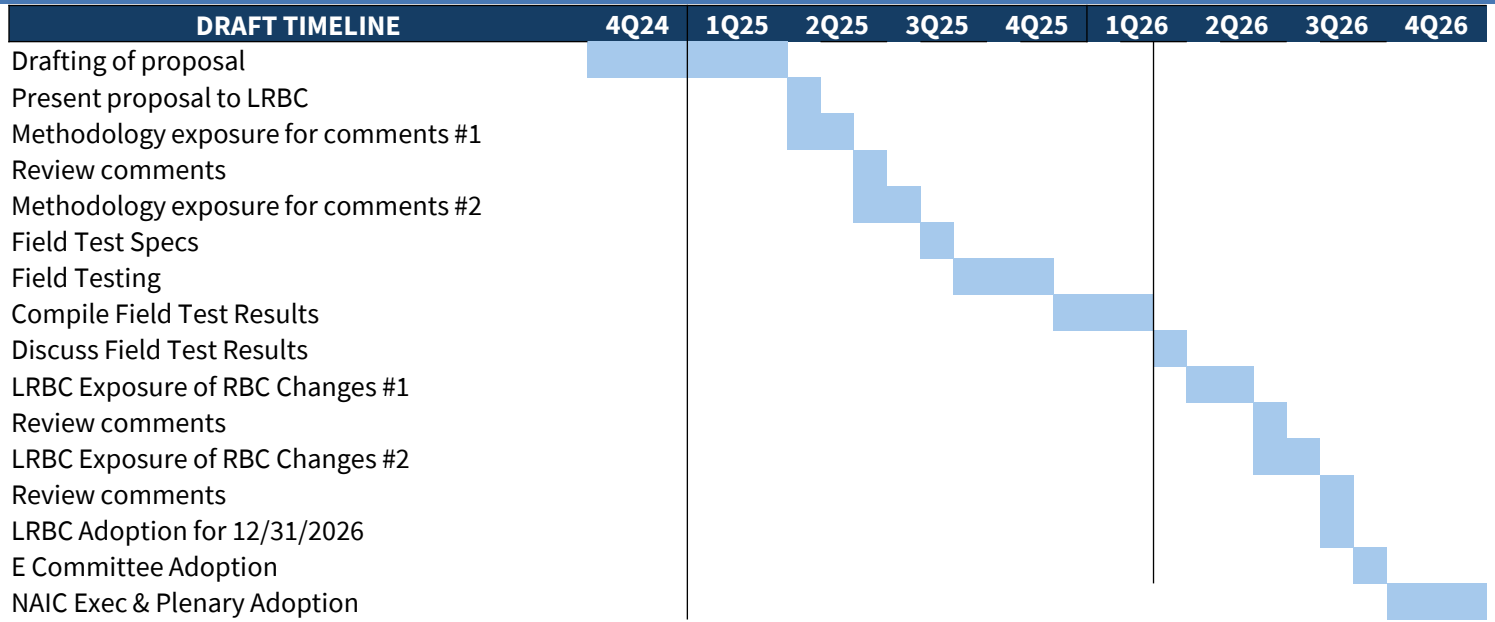
Background

- C-3 Phase 1 applies to Single Premium Life and Non-Variable Annuities (excluding Fixed Index Annuities – FIA) and has not been updated in decades.
- C-3 Phase 2, which applies to Variable Annuities including Registered Index Linked Annuities, was recently updated and tested.
- Our purpose is to propose how to harmonize C-3 Phase 1 and C-3 Phase 2 methodology.

Approach to C-3 Alignment

- C-3 Phase 2 methodology was reviewed by the NAIC over the past 8 years.
- Where possible, C-3 Phase 1 will adopt changes to align with C-3 Phase 2.
- Given the scale of changes, we propose a phased approach with some changes being reflected by year-end 2026.
    - This would include the adoption of the new Generator of Economic Scenarios (GOES) which will also the prescribed generator for C-3 Phase 2 and PBR.
- Other changes may be deferred due to feasibility, magnitude of impact, and to avoid unintended consequences.

Timeline, Adoption, Phase In Period



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Timeline, Adoption, Phase In Period

- We anticipate a field test during 2025 and adoption effective year-end 2026.
- We propose a three-year phase-in period for changes that are effective at year-end 2026.
- We propose that other C-3 changes are phased in during future years and will be outlined in the rest of the presentation

Scenarios

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Economic Scenarios

- C-3 Phase 1 scenarios have a high Median Reversion Point (MRP) and do not include equity returns.
- C-3 Phase 2 scenarios have a formulaic MRP weighted toward recent rates and include equity returns.
- Propose using the new GOES that is expected to be adopted for an effective date of 2026.

Product Scope

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Product Scope

The ultimate goal is a C-3 framework with consistent scenarios, metrics, and legal entity level aggregation for all products. We propose reviewing other products at a future date.

		Smallest step Option1	**Recommended** Option 2[1]	Option 3	*Closest to Ultimate Goal* Option 4
C3P1	Single Premium Life	Old C3P1	**New C3P1**	Old C3P1	**New C3P1**
	Single/Flexible Premium Annuity	**New C3P1**	**New C3P1**	Old C3P1 **PBR Annuity to New C3P1**	**New C3P1**
C3P2	VA RILA	C3P2	C3P2	C3P2	C3P2
Currently out of scope	FIA	**New C3P1**	**New C3P1**	**New C3P1**	**New C3P1**
	LTC	defer	defer	defer	**New C3P1**
	ULSG	defer	defer	defer	**New C3P1**
	Remaining Life & Health products	defer	defer	defer	defer
	Pro	small manageable step	maintains existing aggregation	aligns reserving and capital models to PBR only business	closest to ultimate goal
	Con	lose aggregation between life & annuity - which would ultimately be added back later	larger step, could be harder to execute quickly	inconsistent capital between in force and new business	most difficult to implement in one step

1: This option aligns with the timeline presented on slide 5

Discounting

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Discounting

- **Background**
  - Phase 1 uses one-year Treasury rate discounting. Inforce assets and reinvestment assets are typically longer in duration than one year and lower in credit quality than Treasuries, both of which tend to increase yields.
  - Phase 2 allows discounting at the Net Asset Earned Rate (NAER), which likely produces better estimates of the amount of additional assets needed to eliminate a deficiency than does phase 1 discounting.
  - Phase 2 also allows Direct Iteration which solves for the amount of additional assets needed to eliminate a deficiency, whereas Phase 1 does not.
- **Proposal**
  - Use Phase 2 discounting rules which allow the use of NAER for discounting or Direct Iteration.
- **Rationale**
  - Better estimate of the amount of additional assets needed to eliminate a deficiency.
  - More principle-based.

Assumptions and Models

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Current Assumptions and Models

- C-3 Phase 1: Cash Flow Testing (CFT)-based assumptions that are considered “moderately adverse.”
- C-3 Phase 2: Principles Based Reserve (PBR) prudent estimate assumptions.

Short-Term Solution Starting Year-End 2026 (Recommended)

- **Proposal: bifurcated solution**
  - Use PBR models and assumptions for business subject to PBR (VM-20, VM-21, VM-22).
  - Use CFT models and assumptions for non-PBR business.
  - Potentially allow flexibility between the two approaches for business subject to PBR due to operational complexity.
  - Add other products if/when underlying reserve moves to PBR.
- **Pros**
  - Efficiency of using same underlying model for reserves and capital.
  - Similar to C3P2 for Variable Annuities.
- **Cons**
  - Need to maintain two sets of models/assumptions.

Default Costs

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C-3 Default Costs

Current		
	Non-PBR	PBR
Reserves	Moderately adverse (approach varies)	CTE70
Reserves (assumed in C-1 RBC)	Mean + ½ standard deviation	Mean + ½ standard deviation
C-3 Phase 1	Expected Defaults	Expected Defaults
C-3 Phase 2	CTE70	CTE70

Recommended		
	Non-PBR	PBR
Reserves	Moderately adverse (approach varies)	CTE70
Reserves (assumed in C-1 RBC)	Mean + ½ standard deviation	Mean + ½ standard deviation
C-3 Phase 1	CTE70	CTE70
C-3 Phase 2	CTE70	CTE70

- Recommend updating default cost assumptions in C-3 Phase 1 to more conservative CTE70 level.
- CTE70 is a generally accepted standard for moderately adverse default costs and consistent with PBR and C-3 Phase 2.
- Because of difference with default assumption in C-1 capital, results in potential additional margin on C-1 risk capital.

C-1 Risk Capital Credit

- Generally, adjustments are not made in the RBC framework for potential deficiencies or excess in other components.
- If an adjustment is included, a possible recommendation is a factor-based credit applied to the assets included in C-3 testing to offset the C-1 risk capital margin.

Asset category	Estimated factor credit
Bonds – investment grade bonds	20%
Bonds – below investment grade	15%
Commercial mortgages	Double bond credit

- Recommend further study to explore an *optional* credit that would address the double counting.

Stochastic Equity Risk

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Stochastic Equity

- **Background & Considerations**
  - Similar to default costs, double counting of RBC related to general account (GA) equity (or equity-like) assets is being reviewed
  - Additionally, equity risk reflected in the current C-1 charge (based on 2013 historical experience measured over a 2-year exposure period) differs from the C-3 stochastic equity element captured over a set of real-world scenarios
  - Considerations for companies with a material equity exposure in the GA are being discussed. Topics include:
    - Definition of the materiality threshold, e.g., 5% of GA for liquid liabilities or 15% for illiquid liabilities
    - Excluding equity-like assets in C-3 calculations from C-1 charge
    - Maintain C-1 charge, but allow for deficiency smoothing to address equity volatility, akin to SSAP 108 hedge accounting practices

Aggregation of C3P1 and C3P2

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Aggregation

- **Background**
  - C-3 Phase 1 and C-3 Phase 2 are calculated separately with no aggregation.
- **Ideal Proposal**
  - No differences between C-3 Phase 1 and C-3 Phase 2 methodology and aggregation fully reflected.
- **Current Proposal**
  - Aggregation is permitted but not required (under certain conditions). Pros and cons reference this proposal.
- **Pros**
  - Reflects diversification between products, consistent with how a company manages interest rate risk.
- **Cons**
  - Requires consistency between C-3 Phase 1 and C-3 Phase 2 methodologies (dependent on outcome of other C3 – Alignment proposals)
  - Operationally complex; requires methodology for splitting VA market risk from aggregated interest rate risks.

Aggregation - Continued

- **Parameters for Permitted Aggregation in 2026**
  - This will need to be revisited based on proposals for other topics, such as models, assumptions, and number of scenarios.
  - If there is not full consistency between C-3 Phase 1 and C-3 Phase 2, is there still some level of aggregation that can be used?
  - For example, if Company does not have alignment on interim reserves for CFT vs. PBR assumptions, can Company still reflect aggregation across scenarios if both C-3 Phase 1 and C-3 Phase 2 use the same 1000 scenarios?

Factor Based C-3 Floor

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C-3 Floor Amount - Background

- The C-3 factors are meant to provide for a “lack of synchronization of asset and liability flows.”
  - Factors are from the 1991 study report. The “Low-Risk” category assumes a well-matched portfolio (1/8th of a year difference). The other risk category factors were developed by stochastic modeling of asset and liability cashflows.
- For companies that utilize the C-3 cash flow approach, there is a floor equal to ½ the standard factors.
- Assets, liabilities, and investment strategies are likely much different today than 1991, for many companies:
  - Assets – ABS, floating rate assets, equities
  - Liabilities – Embedded options in products
  - Investment Strategies – Using floating rate assets and/or equities to support some fixed rate liabilities

C-3 Floor Amount - Recommendation

- C-3 Phase 2 does not have a floor
  - PBR applies to almost all VA products and such reserves are reset each quarter, with a floor.
  - C-3 Phase 2 is based on a high CTE level (CTE 98) to encourage tail hedging.
- Significant changes to C-3 Phase 1 are being proposed for year-end 2026
  - GOES scenarios
  - Equity risk
  - FIAs
- Given the timeline, we cannot support the effort to update the C-3 factors and/or review the appropriateness of the floor at this time
- **Proposal**
  - Retain the current factors and floors for year-end 2026.
  - To be reviewed in greater detail after efforts to adopt year-end 2026 recommendations are complete.

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Metric, Scalar, Working Reserves, Time Horizon

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Metric and Scalar

- C-3 Phase 1 metric is a **surplus** measure whereas C-3 Phase 2 uses an **asset** measure (working reserves are set to zero).
- Currently contemplating two Greatest Present Value of Accumulated Deficiency (GPVAD) methods:
    - GPVAD (**assets**) with projection horizon to sufficiently represent life of the business.
        - Set working reserves to zero and focus on claim payment capabilities – most aligned with C-3 Phase 2.
    - GPVAD (**surplus**) with shorter projection horizon, reasonable working reserve proxy and focus on reserve funding capabilities.
        - Working reserve proxy may range from Cash Surrender Value to Actuarial Present Value methods.

Metric and Scalar

- Consideration for measurement of the risk is ongoing, but will hinge on the defined metric while using the following formula:
  - **YY% x (CTE XX less Reserves)**
- YY% and CTE XX to be finalized with support of field testing results.
- The projection length, or time horizon, will also be dependent on whether a working reserve is included.

Next Steps

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Next Steps

- Provide recommendation on remaining topics:
    - Metric and Scalar
    - Working Reserves and Interim Measurement
    - Time Horizon
    - Stochastic Equity Risk
- Design field test

Questions?

For more information, please contact

Amanda Barry-Moilanen, Policy Project Manager, Life

barrymoilanen@actuary.org

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