American Academy of Actuaries

September 8, 2025

Mr. Philip Barlow
Chair, Life Risk-Based Capital (E) Working Group (LRBC)
National Association of Insurance Commissioners

Re: Questions on covariance topic raised at 6/18/25 meeting

Dear Chair Barlow,

On behalf of the Life Investment and Capital Adequacy Committee of the American Academy of Actuaries,[1] I am providing comments on the two questions that were posed for the Academy to consider during the June 18, 2025, meeting as part of the discussion on whether to seek public comment regarding the topic of covariance within the Life Risk-Based Capital formula.

(1) Would the work of the Generator of Economic Scenarios (GOES) (E/A) Subgroup impact a decision on Covariance within Life Risk-Based Capital?

Considerations supporting the view that **"Yes"** GOES changes would likely impact RBC Covariance:

- It is important to ensure consistency across the statutory framework. Relationships between market variables prescribed for statutory reporting expressed through GOES should be consistent with relationships between risks expressed by covariance within Life Risk-Based Capital.

Considerations supporting the view that **"No"** GOES changes are not likely to impact RBC covariance:

- The scope and application of the economic scenarios are materially different from those of covariance within Life Risk-Based Capital. GOES work applies to reserves and calculation of C-3 capital and does not directly impact the relationship between capital risks. While scenarios do include values for interest rates, equities, and fixed income returns, they are for the purpose of calculating C-3 Market Risk capital only and do not address correlations with other capital risks such as Credit Risk.
- The statistical safety level targeted for reserves is different than for capital, and different correlation assumptions for capital purposes may be justified to appropriately capture relationships in tail scenarios.
- Both the GOES scenarios and preliminary work on capital covariance indicate a correlation between interest rates and equities. Consistency across statutory reporting can be achieved with assumptions that do not contradict each other even if specific

[1] The American Academy of Actuaries is a 20,000-member professional association whose mission is to serve the public and the U.S. actuarial profession. For 60 years, the Academy has assisted public policymakers on all levels by providing leadership, objective expertise, and actuarial advice on risk and financial security issues. The Academy also sets qualification, practice, and professionalism standards for actuaries in the United States.

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assumptions differ when designed for different purposes. Consistency across statutory reporting also does not require that the GOES generator be used directly in the calibration of correlations for capital.

(2) Would it be necessary to consider changes to individual capital factors concurrent with any changes to Covariance within Life Risk-Based Capital?

Considerations supporting the **"Yes"** view that changes should be considered together:

- Capital factors have been set considering both historical data as well as some degree of regulatory judgment. Changes to the covariance formula may impact that judgment element on appropriate capital factors even if the starting analysis of historical data were calibrated consistently across risks. For example, the calibration of C-4 capital factors requires a greater level of judgment given the scarcity of historical data relative to market risks. It seems plausible that this judgment could in part be impacted by the overall effect of Business Risk on final company capital requirements. The preliminary recommendation to include C-4 within the covariance formula would materially reduce the effect of Business Risk on final company capital requirements which could be cited as rationale to review that capital factor concurrent with a review of covariance.
- The scope of the current review has been limited to correlation between existing capital factors. We had previously noted that correlation within a risk category could be another subject of review such as within C-1o between corporate credit, mortgage loans, and real estate[2]. Since there may be offsetting impacts of these changes, it may be appropriate to broaden the scope to avoid unintended volatility in RBC.

Considerations supporting the **"No"** view that changes should be considered separately:

- If existing capital factors are calibrated to a consistent statistical safety level, then the capital factors themselves are appropriate, and it is therefore reasonable to consider changes to covariance separately. While there is no explicit target for the statistical safety level of RBC, past analysis used in setting and reviewing LRBC capital factors has consistently targeted values in an approximately consistent range.
- The observation that capital factors have been calibrated to different time horizons complicates the analysis but does not fundamentally change the conclusions on risk correlations. For example, the key observation of our analysis that Credit Risk and Equity Risk have exhibited positive historical correlations remains true for 2-year cumulative Equity Risk correlated with longer 10-year cumulative Credit Risk.
- The observation that changes to correlation could impact final RBC amounts at a company or industry level does not necessarily indicate that the changes are inappropriate or inconsistent with the purpose of RBC. A guiding principle in the review of correlation was to target a statistical safety level for LRBC after covariance consistent with how individual capital factors have been calibrated.

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[2] Per slide 23 of Life-Presentation-LRBC-Correlation-4-24.pdf, "The scope of this analysis is initially focused on correlation between C-risks within LRBC; an extension of this effort could also consider correlation within individual C-risks (such as within C-1o)".

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Should you have any questions or comments regarding this letter, please contact Amanda Barry-Moilanen, life policy project manager at the Academy (barrymoilanen@actuary.org).

Sincerely,

Jason Kehrberg, MAAA, FSA
Chairperson, Life Practice Council
American Academy of Actuaries