July 6, 2026

Mr. Philip Barlow, Chair
Risk-Based Capital Investment Risk and Evaluation (E) Working Group
National Association of Insurance Commissioners
1100 Walnut Street, Suite 1000
Kansas City, MO 64106-2197

Re: American Academy of Actuaries' Presentation on C-1 for CLO Residual Tranches

Submitted Electronically

Dear Chair Barlow:

The American Council of Life Insurers (ACLI) appreciates the opportunity to comment on the exposure regarding the calibration of C-1 factors for collateralized loan obligation (CLO) residual tranches, as reflected in the American Academy of Actuaries' ("Academy") presentation on May 6, 2026 titled *C-1 Subcommittee Update on CLO C-1 Factors Modeling—Residual Tranches and Portfolio Adjustment Factors*.

ACLI continues to support the Academy's broader effort to develop a transparent, analytically grounded framework for calibrating C-1 factors for CLOs. As noted in ACLI's prior submission on April 16, 2026, a robust and credible framework should incorporate appropriate model enhancements, sensitivity testing, and validation before it is relied upon for regulatory capital purposes.

ACLI appreciates the Academy's continued analytical work in this area, including refinements to the modeling framework and evaluation across both Practical Expedient and Allowable Earned Yield accounting approaches. We recognize that the risk profile of CLO residual tranches may vary meaningfully based on portfolio characteristics and accounting outcomes. Continued model development, sensitivity testing, and validation could further strengthen the framework and support confidence in any final calibration decisions if regulators decided to make any changes to the current RBC treatment for the residual tranches. And, we note that the conclusions on pages 31 and 32 are not an indication that the Academy's CLO C-1 modeling work is complete.

ACLI respectfully encourages the Working Group to continue advancing the model enhancements for all CLO tranches, as identified in ACLI's April 16, 2026 comment letter (details copied in the Appendix to this letter), including the following:

- Incorporating and expanding sensitivity testing for key assumptions shown to materially affect modeled tail risk, including systemic risk correlation, recovery assumptions, collateral reinvestment prices, and prepayment assumptions;

- Developing separate modeled C-1 factors for middle-market CLOs based on dedicated analysis of MM collateral performance, structural features, and available data;
- Enhancing grading between adjacent tranche ratings to reduce cliff effects and improve alignment with economic risk; and
- Considering tranche thickness as a comparable attribute for both BSL and MM CLOs, particularly for below-investment-grade tranches.

This would support transparency, analytical rigor, and supervisory confidence, while reducing the risk of embedding unintended outcomes into the capital framework.

ACLI appreciates the Academy's continued progress in advancing the CLO C-1 modeling framework and the Working Group's engagement on these issues. We believe that incorporating the recommended model enhancements and revisiting the residual tranche analysis would further strengthen the analytical foundation for final factor calibration and related conclusions.

We look forward to continued engagement with the Working Group and the Academy as this important work progresses.

Respectfully submitted,

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APPENDIX: ACLI RECOMMENDED MODEL ENHANCEMENTS FOR YEAR-END 2027 ADOPTION

Copied from ACLI Comment Letter Dated April 16, 2026

ACLI recommends the following enhancements to be considered as part of the 2027 implementation:

1. Incorporation of Sensitivity Test Results

ACLI supports incorporating insights from the Academy's sensitivity testing as presented on December 15, particularly where results identify assumptions that materially influence modeled tail risk. These results can help inform appropriate calibration choices and strengthen confidence in the selected C-1 factors.

Specifically, ACLI recommends the sensitivity testing be expanded where possible to include the universe of CLOs as well as targeted additional analysis, focused on three assumption areas that the Academy's sensitivities showed to be material:

- Systemic risk correlation (Academy sensitivities #1 and #2)
- Recovery average (Academy sensitivity #5)
- Collateral repurchase price and prepayment (Academy sensitivities #6 and #7)

Systemic Risk (Sensitivities #1 and #2)

The Academy's presentation demonstrates that small changes in correlation assumptions can drive material changes in modeled C-1 factors. The Academy pointed to a set of studies providing academic ballast to the observed behavior that default correlations increase during stress, especially for non-investment grade issuers. In other words, correlations are state-dependent and not static properties of ratings. Accordingly, ACLI contends that not fully conducting this sensitivity analysis risks misaligning the factor with the underlying risks.

Finally, it should be noted that the Academy points out in their presentation that it is important to test their chosen systemic risk correlation assumption because "leveraged loans may carry more systemic risk than bonds."

ACLI recommends:

- Finalizing the systemic risk correlation of tranches under stressed economic and financial market scenarios (e.g., correlation of price movements across issuances by ratings) that may amplify tail outcomes. The literature indicates this much for bonds and the Academy suggests that loans may have more systemic risks.
- Documenting the rationale for the chosen systemic risk correlation given its outsized influence on tranche tails and on "equal capital for equal risk."

Recoveries (Sensitivity #5)

The Academy's presentation demonstrates that lower recovery rate assumptions materially increase modeled C-1 for Baa and below tranches. We understand the baseline uses S&P recovery deciles by seniority (capturing tail shape), while Sensitivity #5 tests higher average loss given default (LGD) rates derived through statistical fitting. ACLI recommends:

- Refreshing recovery assumptions against the most current, seniority-aware empirical sources and ensuring that tail behavior remains realistically represented, particularly for first-lien/senior secured loans predominating CLO collateral.

- Assessing independence of structures (e.g., correlation of recoveries across issuers and with default intensity) that may amplify tail outcomes, as the Academy's correlation-in-severities sensitivity (Sensitivity #4) also shows meaningful impacts for mezzanine tranches.

- Evaluating whether a weighting technique may be appropriate when using historical data to derive recovery assumptions given the consistently lower loan recoveries observed in the last decade as a consequence of the material changes to standard loan structures and terms in the market versus the prior historical norm.

- Documenting the rationale for the chosen recovery distribution (level and shape), given its outsized influence on tranche tails and on "equal capital for equal risk" across otherwise similar CLOs.

- Using loan probability of default (PD) assumptions rather than broader all-issuer defaults across exposure types, as the broader dataset includes issuers and instruments that are not representative of predominantly senior-secured CLO collateral and therefore can overstate default incidence[1].

- Pairing any higher CLO collateral LGD assumption with a corresponding enhancement to loan PD, as expected loss reflects both default frequency and loss severity. A framework that increases severity without also calibrating behavior of the same collateral assumptions can overstate the overall loss profile of CLO collateral and therefore assign a capital charge that exceeds the collateral's actual risk profile.

Collateral Reinvestment Price and Prepayment (Sensitivities #6 and #7)

ACLI appreciates that the baseline assumes no prepayment and par reinvestment, consistent with rating-agency cash-flow setups. However, the Academy's stressed-market sensitivities, introducing below-par reinvestment prices and non-zero prepayments, show material dispersion across CLOs and material reductions in C-1 factors for junior tranches in certain structures. We recommend:

- Joint calibration of price-at-reinvestment and prepayment to historically consistent, stress-period relationships (e.g., linking loan prices and prepayment rates to observed default-rate

[1] Loan default rates (that generally include senior secured borrowing) are expected to be lower than all-issuer default rates (that include unsecured, bond-only issuers) when applying Moody's Default and Recovery Database data.

regimes). This would avoid overstating or understating risk when these drivers move together in real markets.

- Bounding or stratifying assumptions by collateral quality mix and reinvestment horizon (e.g., within the CLO reinvestment period versus after), to reflect realistic manager behavior and market liquidity conditions.

- Explicitly testing stability across a broader deal set (beyond the initial six deals) to confirm that the approach is robust – recognizing the Academy's finding of widely varying results across deals under these sensitivities.

ACLI agrees with the Academy's observation and recognizes these sensitivities move in opposite directions and may not fully offset each other. Treating the assumptions jointly will better align the C-1 factors with underlying risk. Given their interaction, we recommend an integrated sensitivity suite (like the Academy's combined tests #8 and #9 but incorporating the three sensitivities mentioned above) be used to select final calibration points, so that RBC factors reflect the net portfolio-tail effect rather than canceling assumptions in isolation. Additionally, an enhancement to replace the application of all-issuer default rates with loan default rates would produce lower PD assumptions that are expected to offset the higher LGD sensitivity in the bond C-1 framework even before any prepayment or reinvestment enhancements.

2. Development of Separate Factors for MM CLOs

Although currently a smaller subset of the overall CLO universe, MM CLO issuance has grown rapidly, with new issue volumes reaching record levels in recent years. As exposure increases, the proportion of insurer-held CLOs backed my middle market collateral will rise. Therefore, ACLI recommends development of separate modeled C-1 factors for MM CLOs, based on dedicated analysis of MM collateral performance, structural features, and available data. Separate calibration would improve risk alignment while remaining consistent with the Academy's overall framework. Developing separate modeled C1 factors now proactively addresses the trajectory of insurer-held MM CLOs, adapting to innovation in financial markets while protecting policyholders and preventing future capital distortions or the need for ad hoc adjustments.

Some analyses suggest MM CLOs may carry different risks than BSL CLOs due to less liquid collateral, higher weighted average spreads compensating for credit profiles, greater industry/issuer concentration profile, and limited secondary market pricing transparency. At the same time, MM structures often incorporate compensating features such as stronger credit enhancements and manager alignment through risk retention and origination. A dedicated MM analysis would empirically evaluate those factors, ensuring C-1 factors reflect "equal capital for equal risk" and avoid BSL-centric assumptions that may not capture MM nuances. Extending BSL logic to MM CLOs is a natural and feasible extension of the Academy's work given the data now available from rating agencies and managers.

3. Enhancement of Grading Between Tranche Ratings

ACLI encourages continued enhancement of grading between adjacent tranche ratings, particularly where model outputs imply discontinuities that may not reflect commensurate differences in economic risk. Reducing cliff effects would help promote smoother transitions, strengthen alignment with the broader C-1 bond framework, and improve interpretability across market environments. In periods of market stress, investment-grade CLO tranches, while generally expected to remain performing, may nonetheless experience meaningful rating migration potentially by multiple letter grades rather than single-notch moves. More gradual capital transitions can help limit the potential for procyclical dynamics

by reducing incentives for forced selling at inopportune points in the cycle (as illustrated by subprime RMBS during the financial crisis, where rapid rating migration contributed to the NAIC's subsequent adoption of a break-point methodology).

4. Consideration of Tranche Thickness for BSL and MM CLOs

ACLI supports further consideration of tranche thickness as a comparable attribute for both BSL and MM CLOs, particularly for below-investment-grade tranches, where the Academy's analysis shows it provides incremental information about tail risk.