NATIONAL ASSOCIATION OF INSURANCE COMMISSIONERS

TO: Carrie Mears, Chair, Valuation of Securities (E) Task Force
Members of the Valuation of Securities (E) Task Force

FROM: Eric Kolchinsky, Director, NAIC Structured Securities Group (SSG) and Capital Markets Bureau
Charles A. Therriault, Director, NAIC Securities Valuation Office (SVO)
Marc Perlman, Managing Investment Counsel, NAIC Securities Valuation Office (SVO)

RE: Risk Assessment of Structured Securities - CLOs

DATE: May 25, 2022

Introduction - A collateralized loan obligation (CLO) is type of structured security backed by a pool of debt, typically corporate loans with low credit ratings. The loans are managed by a collateral manager which bundles the initial loans (generally 150 or more) together and then actively manages the portfolio -- buying and selling loans. To fund the purchase of new debt, the CLO manager sells various tranches of the CLO to outside investors, such as insurers. Each tranche differs based on the order in which the investors will be paid when the underlying loan payments are made. As a result, they also differ with respect to the risk associated with the investment since investors who are paid last have a higher risk of default from the underlying loans. To compensate for the risk, the interest coupon payments on the subordinate tranches are higher. Investors who are paid out first have lower overall risk, but they receive smaller interest coupon payments, as a result.

There are two general types of tranches: debt tranches and equity tranches. Debt tranches are treated just like bonds and typically have credit ratings and coupon payments. Between the debt tranches there is a priority of payments, called a waterfall, by which senior debt tranches are paid before junior, or mezzanine, debt tranches. Equity tranches typically do not have credit ratings and are paid out after all debt tranches on a periodic basis.

Regulatory Issue – An insurer that purchases every tranche of a CLO holds the exact same investment risk as if it had directly purchased the entire pool of loans backing the CLO. The aggregate risk-based capital (RBC) factor for owning all of the CLO tranches should be the same as that required for owning all of the underlying loan collateral. If it is less, it means there is risk-based capital (RBC) arbitrage.

It is currently possible to materially (and artificially) reduce C1 capital requirements just by securitizing a pool of assets. This is best illustrated through the following example. Investment A is a pool of corporate loans that would typically comprise a CLO and have a credit rating provider (CRP) rating of 'B'. At a 'B' rating level these investments would be mapped automatically through the Filing Exemption process to an NAIC Designation of NAIC 4.B and receive an RBC factor of 9.535%. Putting those same 'B' rated corporate loans into a CLO divided into six tranches rated AAA, AA, A, BBB, BB and equity, and an insurer buys all of those tranches would result in an overall RBC factor of 2.917%, an RBC arbitrage benefit of +6.618%.

Investment A

Direct investment in a portfolio of 'B' rated loans (NAIC 4.B)

Bond Rating	RBC Factor
AAA (1.A)	0.158%
AA (1.C)	0.419%
A (1.F)	0.816%
BBB (2.B)	1.523%
BB (3.B)	4.537%
B (4.B)	**9.535%**
CCC (5.B)	23.798%

Investment B

Securitize those same loans into a CLO and hold the entire transaction

Tranche Rating	Tranche Size	RBC Factor
AAA (1.A)	63.0%	0.158%
AA (1.C)	12.0%	0.419%
A (1.F)	6.0%	0.816%
BBB (2.B)	6.0%	1.523%
BB (3.B)	5.0%	4.537%
B (4.B)	0.0%	9.535%
CCC (5.B)	0.0%	23.798%
Equity	8.0%	30.000%
Total	**100.0%**	**2.917%**

Investment	RBC Factor
Investment A	9.535%
Investment B (all tranches)	2.917%
RBC Arbitrage Benefit	**6.618%**

Investments A and B:

- Both have the same earnings (less structuring fees) and market value.
- Both have the same economic risk.
- Investment B require about 1/3 the regulatory capital because it is a securitization and how they are rated.

Recommendation - The capital required for holding all tranches of a structured security should be consistent with the capital required when holding all of the underlying collateral. As the example above illustrates, there is a significant RBC arbitrage opportunity available today because of the ratings process and the NAIC's RBC factors. The Structured Securities Group (SSG) can model CLO investments and evaluate all tranche level losses across all debt and equity tranches under a series of calibrated and weighted collateral stress scenarios to assign NAIC Designations that eliminate the RBC arbitrage. Highlights of the proposed modeling approach are listed in Appendix A.

The Valuation of Securities (E) Task Force can initiate and approve the assignment of NAIC Designation Categories to CLOs modeled by SSG to eliminate this RBC arbitrage. The Investment Analysis Office staff recommends the Task Force approve staff's request to draft an amendment to the *Purposes and Procedures Manual of the NAIC Investment Analysis Office* permitting SSG to model CLO investments.

Staff also recommends the Task Force direct referrals to the Capital Adequacy (E) Task Force (CATF) and its Risk-Based Capital Investment Risk and Evaluation (E) Working Group (RBCIREWG) to request that those groups consider adding two new RBC factors. These new RBC factors can account for the tail risk in any structured finance tranche. Staff suggests adding NAIC Designation Categories (e.g. 6.A, 6.B and 6.C). with recommended RBC factors of 30%, 75% and 100%, respectively.

https://naiconline.sharepoint.com/teams/SVOVOSTaskForce/Shared Documents/Meetings/2022/00 Work in Progress/CLOs included in Part Four/2022-XXX.XX - Risk Assessment of Structured Securities - CLOs v2.docx

Appendix A

Modeling:

- Starting with the general approach set forth in the CLO Stress Test Methodology, SSG can make the following modifications:
    - Add multiple (8-12) probability weighted scenarios.
    - The probabilities will be derived via an arbitrage free approach such that the ∑(asset risk) = ∑(tranche risk) based on current RBC factors.
    - Since tranche performance is non linear, practically this means that SSG can look at a batch of typical deals and set probabilities: ∑(asset risk) = ∑(tranche risk) ± 10% or so.
- The process will be transparent and be reviewed periodically.

Regulatory approach:

- Follow the current RMBS/CMBS approach.
- Annual assessment at year end.
- Publish designations / breakpoints via AVS+ (or similar)

https://naiconline.sharepoint.com/teams/SVOVOSTaskForce/Shared Documents/Meetings/2022/2022-06-09 - Interim Meeting/05 - CLOs included in Part Four/2022-004.01 - Risk Assessment of Structured Securities - CLOs v3.docxIAO designations must be used for YE reporting