2022 Fall National Meeting
Tampa, Florida

RISK-BASED CAPITAL INVESTMENT RISK AND EVALUATION (E) WORKING GROUP
Wednesday, December 14, 2022
8:00 – 9:00 a.m.
HB Plant Ballroom E & F - Level 2 - JW Marriott

ROLL CALL

Philip Barlow, Chair  District of Columbia  William Leung/Debbie Doggett  Missouri
Thomas Reedy  California  Lindsay Crawford  Nebraska
Wanchin Chou  Connecticut  Bob Kasinow/Bill Carmello  New York
Ray Spudeck/Carolyn Morgan  Florida  Dale Bruggeman/Tom Botsko  Ohio
Vincent Tsang  Illinois  Rachel Hemphill  Texas
Carrie Mears  Iowa  Steve Drutz/Tim Hays  Washington
Fred Andersen  Minnesota  Amy Malm  Wisconsin

NAIC Support Staff: Dave Fleming/Julie Gann/Charles Therriault/Linda Phelps/Peter Kelly

AGENDA

1. Consider Adoption of its Summer National Meeting Minutes
   —Philip Barlow (DC)  Attachment A

2. Discuss its Working Agenda—Philip Barlow (DC)  Attachment B

3. Hear a Presentation from the American Academy of Actuaries (Academy)
   on Collateralized Loan Obligations—Philip Barlow (DC)  Attachment C

4. Receive Updates from the Valuation of Securities (E) Task Force and the
   Statutory Accounting Principles (E) Working Group—Philip Barlow (DC)

5. Discuss an Interim Proposal to Address Arbitrage—Philip Barlow (DC)  Attachments D & E

6. Discuss Any Other Matters Brought Before the Working Group
   —Philip Barlow (DC)

7. Adjournment
Draft: 8/22/22

Risk-Based Capital Investment Risk and Evaluation (E) Working Group
Portland, Oregon
August 11, 2022

The Risk-Based Capital Investment Risk and Evaluation (E) Working Group of the Capital Adequacy (E) Task Force met Aug. 11, 2022. The following Working Group members participated: Philip Barlow, Chair (DC); Thomas Reedy (CA); Wanchin Chou (CT); Virginia Christy (FL); Carrie Mears and Kevin Clark (IA); Vincent Tsang and Bruce Sartain (IL); Fred Andersen (MN); Nolan Beal (NE); Bob Kasinow and Bill Carmello (NY); Dale Bruggeman and Tom Botsko (OH); Rachel Hemphill (TX); Steve Drutz (WA); and Adrian Jaramillo (WI).

1. Adopted its Spring National Meeting Minutes

Mr. Bruggeman made a motion, seconded by Mr. Chou, to adopt the Working Group’s Spring National Meeting minutes (see NAIC Proceedings – Spring 2022, Capital Adequacy (E) Task Force, Attachment Seven). The motion passed unanimously.

2. Adopted its Working Agenda

Mr. Barlow noted the number of items included in the working agenda and said the Working Group is going to prioritize those items directed to the Working Group by the Financial Condition (E) Committee, particularly the work on collateralized loan obligations (CLOs).

Ms. Mears made a motion, seconded by Mr. Bruggeman, to adopt the Working Group’s working agenda (Attachment ). The motion passed unanimously.

3. Received Updates from the Valuation of Securities (E) Task Force and the Statutory Accounting Principles (E) Working Group

Mr. Barlow said it is important to have the chairs of these two groups as members of this Working Group because it is clear to him that there needs to be collaboration from the beginning in determining appropriate risk-based capital (RBC) charges. He said it is also important to have the chairs of the Capital Adequacy (E) Task Force and the other risk-based capital working groups as members because while most of the interest may be for life insurers, consistency in the RBC formulas is a goal where appropriate, so it is good to have all parties involved as early in the process as possible.

Ms. Mears said the Valuation of Securities (E) Task Force is working to potentially give direction to NAIC staff to begin modeling CLOs. She said this work will be to remove CLOs from the filing exempt (FE) process and instead use a modeling process with the intent being to effectively normalize treatment across CLOs by making them subject to the same modeling process and results. At this point, she said the details of this process have not been fully defined, but the Task Force exposed its intent to pursue this for comment, with some of those comments suggesting aspects to be considered in more detail. She said the Task Force will be discussing these in what is planned to be a transparent process involving all stakeholders. She said a referral to this Working Group to look at the RBC factors with some recommendations to be considered will likely be part of this process. She emphasized the point that with or without any changes to the RBC framework, the modeling, and the resulting normalization of the treatment of CLOs will be incredibly valuable.
Mr. Bruggeman provided an update from the Statutory Accounting Principles (E) Working Group. He highlighted the work of state insurance regulators and key industry representatives on the principles-based bond project to better define what is permitted to be reported as a bond on Schedule D, Part 1, to improve accounting and reporting, and ensure state insurance regulators have transparency to the investment risks held by insurers. As a result of this collaborative effort, he said the Working Group has been successful in developing and recently exposing several documents for comment. This included an updated bond definition, issue paper, and proposed revisions to Statement of Statutory Accounting Principles (SSAP) No. 26R—Bonds and SSAP No. 43R—Loan-Backed and Structured Securities to incorporate the bond definition concepts into authoritative statutory accounting guidance. Mr. Bruggeman said these revisions, once adopted and in effect, will improve the designation of investments as bonds, requiring that the investments qualify as bonds in substance, not just legal form. He said the revisions should also significantly improve consistency with the allocation of bond investments between SSAP No. 26R and SSAP No. 43R, and the application of accounting provisions specific to each SSAP, such as the assessment of cash flows or impairment, for similar types of securities.

While these exposures are significant, Mr. Bruggeman said the exposures that occurred during on the Working Group’s July 18 meeting may be of more interest to the Risk-Based Capital Investment Risk and Evaluation (E) Working Group. Those exposures reflect significant reporting revisions to Schedule D, Part 1 to capture valuable information on actual investments held by insurers. This includes a proposed expansion of Schedule D, Part 1 from one to two separate schedules. Schedule D-1-1 will include issuer obligations, and schedule D-1-2 will include asset backed securities (ABS). The sum of the two schedules will still roll up to the Bonds line on the Assets page. With the separation of the schedules, different data columns can be designed based on the broad investment classification. A review of the reporting instructions has been completed, and several revisions are proposed to streamline reporting, eliminate elements not applicable to certain securities, and propose new columns to capture desired information. Mr. Bruggeman said the revisions should result in providing improved information to state insurance regulators, as well as eliminating inconsistency or uncertainty for industry in compliance. Lastly, he said a key change for more granular reporting, rather than classifying all bonds into one of four generic reporting groups, new reporting groups have been proposed to separate investments based on underlying characteristics. An example of this is instead of classifying all ABS as either residential mortgage-backed securities (RMBS), commercial mortgage-backed securities (CMBS), or other ABS, reporting lines are proposed to separate ABS based on whether they are financial asset-backed-self-liquidating, financial asset-backed-non-self-liquidating, non-financial asset-backed, etc. Although these categories provide valuable information, specific reporting lines within these categories have been proposed to be even more granular. Mr. Bruggeman noted the concern with being able to identify CLOs accurately in the financial statements and the use of the collateral codes in determining underlying investments. He said the proposed reporting revisions would separately capture CLOs as a type of financial asset-backed security.

Whether these granular reporting lines are used immediately for RBC, by having this structure in place, Mr. Bruggeman said future assessments, along with ease of understanding the magnitude of certain types of investments, will be easier. He noted questions pertaining to the effective date and transition and said the earliest the guidance could be effective, with both accounting and reporting revisions in place, would be Jan. 1, 2024, but it is likely the revisions will be effective Jan. 1, 2025. With respect to transition, Mr. Bruggeman said there is no grandfathering planned for investments to continue to be reported as bonds that do not comply in order to ensure consistency with reporting across entities. Although grandfathering guidance is not expected, he said some practical transition assessments will be considered, and reasonable accommodations are anticipated to prevent undue hardship for reporting entities in complying with the guidance.

4. **Discussed its Next Steps**
As the Working Group addresses the items on its working agenda, Mr. Barlow said he has goals he would like for the Working Group to achieve in order to accomplish that work. He said the first of these is to have information, to the extent possible, easily identifiable from the annual statement through to the RBC charge with a minimum of reliance on company records so that the RBC charge for a particular asset is clear and that two companies having the same asset will end up with the same RBC charge. He said a second goal is to make sure it is clearly understood what risks are being analyzed in the process of assigning ratings to assets, as well as those risks that may not be part of the analysis so that it is evident whether some adjustment is needed for the purpose of developing an RBC charge. He said a third goal is to have a structure for RBC that facilitates new types of assets as they appear with the ability to identify them as new items that have not been evaluated yet and assign them an interim or introductory RBC treatment until any needed analysis can be done as opposed to trying to fit them into existing categories. He said he would like the Working Group to keep these goals in mind as it works through the individual projects before it.

Mr. Barlow said the Working Group has received direction from the Financial Condition (E) Committee to focus its attention on two items, which the Working Group will look at simultaneously. He said the first is to develop an approach for determining RBC charges for CLOs, and the second is to look at a potential interim approach to address concern about potential arbitrage in the structuring of assets through CLOs and similar kinds of assets. Whether it involves assets or other items in RBC, Mr. Barlow said he believes it is important that the opportunity to reconfigure risks and end up with a different RBC charge is eliminated. To that end, he said the Working Group will consider whether there is something that should be done in the shorter term to address that aspect. If there is an interim step that the Working Group pursues, he said it should be intended to stay in place only until a new more fully developed methodology is determined so it may not have the same degree of rigor, but it should have sufficient analysis done so that there are no unintended consequences. He said there may be ways other than specific RBC charges to address an interim approach and said the Working Group is welcome to input from all parties. For clarification, Mr. Bruggeman asked if the work being considered for CLOs includes all of the tranches, those that would be on the bond schedule, and residual tranches. Mr. Barlow said he meant all of the tranches. While the Valuation of Securities (E) Task Force is looking at CLOs currently, Ms. Mears said she believes it is important for this Working Group to be cognizant of the broader universe of structured assets.

Mr. Barlow said he has asked the American Academy of Actuaries (Academy) if this is a project it would be willing to assist with. Steve Smith (Academy) said the Academy is willing to help with the CLO project. He said the Academy’s view is that it is important to have actuarial review of any model that has downstream impact on RBC and that includes a consideration of the broader statutory framework and broader solvency framework within RBC. Mr. Barlow agreed and said the Academy in general, and actuaries in particular, have contributed a lot of expertise to many, if not all, aspects of RBC, and he would like to make sure that continues. He said he believes it is important to try to coordinate with the work that the Valuation of Securities (E) Task Force is doing on modeling CLOs, and a good first step would be, as that work develops, to have it shared with the Academy. If some adjustment is needed for the purpose of RBC, he said as long as all parties are involved in the process from the beginning, it will put the Working Group in a good position to consider if that can be done and have it work for the purposes of those involved.

5. Received a Referral from the Macroprudential (E) Working Group

Mr. Barlow said a referral from the Macroprudential (E) Working Group has been received and will be added to the working agenda.

Having no further business, the Risk-Based Capital Investment Risk and Evaluation (E) Working Group adjourned.
<table>
<thead>
<tr>
<th>2023 #</th>
<th>Owner</th>
<th>2023 Priority</th>
<th>Expected Completion Date</th>
<th>Working Agenda Item</th>
<th>Source</th>
<th>Comments</th>
<th>Date Added to Agenda</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carryover Items Currently being Addressed – RBC IR &amp; E</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>RBC IRE</td>
<td>2</td>
<td>2022 or later</td>
<td>Supplementary Investment Risks Interrogatories (SIRI)</td>
<td>Referred from CADTF Referral from Blackrock and IL DOI</td>
<td>The Task Force received the referral on Oct. 27. This referral will be tabled until the bond factors have been adopted and the TF will conduct a holistic review all investment referrals.</td>
<td>1/12/2022</td>
</tr>
<tr>
<td>9</td>
<td>RBC IRE</td>
<td>2</td>
<td>2022 or later</td>
<td>NAIC Designation for Schedule D, Part 2 Section 2 - Common Stocks Equity investments that have an underlying bond characteristic should have a lower RBC charge? Similar to existing guidance for SVO-identified ETFs reported on Schedule D-1, are treated as bonds.</td>
<td>Referred from CADTF Referral from SAPWG 8/13/2018</td>
<td>10/8/19 - Exposed for a 30-day Comment period ending 11/8/2019 3-22-20 - Tabled discussion pending adoption of the bond structure and factors.</td>
<td>1/12/2022</td>
</tr>
<tr>
<td>10</td>
<td>RBC IRE</td>
<td>2</td>
<td>2022 or later</td>
<td>Structured Notes - defined as an investment that is structured to resemble a debt instrument, where the contractual amount of the instrument to be paid at maturity is at risk for other than the failure of the borrower to pay the contractual amount due. Structured notes reflect derivative instruments (i.e. put option or forward contract) that are wrapped by a debt structure.</td>
<td>Referred from CADTF Referral from SAPWG April 16, 2019</td>
<td>10/8/19 - Exposed for a 30-day Comment period ending 11/8/2019 3-22-20 - Tabled discussion pending adoption of the bond structure and factors.</td>
<td>1/12/2022</td>
</tr>
<tr>
<td>11</td>
<td>RBC IRE</td>
<td>2</td>
<td>2022 or later</td>
<td>Comprehensive Fund Review for investments reported on Schedule D Pt 2 Sn2</td>
<td>Referred from CADTF Referral from VOSTF 9/21/2018</td>
<td>Discussed during Spring Mtg. NAIC staff to do analysis. 10/8/19 - Exposed for a 30-day comment period ending 11/8/19 3-22-20 - Tabled discussion pending adoption of the bond structure and factors.</td>
<td>1/12/2022</td>
</tr>
<tr>
<td>New Items – RBC IR &amp; E</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td></td>
<td></td>
<td>2023 or later</td>
<td>Evaluate the appropriate RBC treatment of Asset-Backed Securities (ABS), including Collateralized Loan Obligations (CLO), collateralized fund obligations (CFOs), or other similar securities carrying similar types of tail risk (Complex Assets).</td>
<td>Request from E Committee, SAPWG, VOSTF</td>
<td>Per the request of E Committee comments were solicited asking if these types of assets should be considered a part of the RBC framework.</td>
<td>1/12/2022</td>
</tr>
<tr>
<td>13</td>
<td></td>
<td></td>
<td>2023 or later</td>
<td>Evaluate the appropriate RBC treatment of Residual Tranches.</td>
<td>Request from E Committee, SAPWG, VOSTF</td>
<td>Per the request of E Committee comments were solicited asking if these types of assets should be</td>
<td>1/12/2022</td>
</tr>
<tr>
<td>Rank</td>
<td>Organization</td>
<td>Phase</td>
<td>Timeframe</td>
<td>Description</td>
<td>Source</td>
<td>Comment</td>
<td></td>
</tr>
<tr>
<td>------</td>
<td>--------------</td>
<td>-------</td>
<td>-----------</td>
<td>-------------</td>
<td>--------</td>
<td>---------</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td></td>
<td>2025 or later</td>
<td>Phase 2 Bond analysis - evaluate and develop an approach to map other ABS to current bond factors following the established principles from Phase I where the collateral has an assigned RBC. This project will likely require an outside consultant and the timeline could exceed 2-3 years.</td>
<td>Request from E Committee</td>
<td>Per the request of E Committee comments were solicited requesting the need for outside review.</td>
<td>1/12/2022</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>RBC IRE</td>
<td>2023 or later</td>
<td>Address the tail risk concerns not captured by reserves for privately structured securities.</td>
<td>Referral from the Macroprudential (E) Working Group</td>
<td>8/11/2022</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
C1 Work Group (C1WG) Presentation to the Risk-Based Capital Investment Risk and Evaluation Working Group (RBCIRE WG) on Collateralized Loan Obligations (CLOs)—Status Update

December 14, 2022
Scope of this update

• At the request of the NAIC’s RBCIRE WG, the Academy’s C1WG has been investigating CLOs to understand the risk they pose to life insurers’ statutory capital and considerations for establishing capital requirements.
• Our discussions are ongoing—this report is a status update representing our current thinking.
• Parts of this report are provided as commentary on the Investment Analysis Office (“IAO”) letter proposing a new approach to CLO C-1, including modeling by the Structured Securities Group (“SSG”) and the introduction of new sub-categories of NAIC-6 having 30%, 75%, and 100% factors
• Our observations in this update focus on statutory capital requirements in principle, without regard to materiality or practical considerations, both of which are important but not the focus of this status update.
Agenda

1. CLO Basics
2. U.S. Life Insurers’ Exposure to CLOs
3. Relevant Risk-Based Capital (“RBC”) Concepts
4. Residual Tranches
5. Key Questions for Regulators to Consider
6. Next steps for C1WG
1. CLO Basics
Collateral—Bank loans

- A CLO is a tranched security issued by a Special Purpose Vehicle ("SPV") holding a large, diversified portfolio predominantly made up of bank loans.
- Bank loans are typically below investment grade (most are rated BB and B) and issued as senior, secured, floating-rate corporate credit.
- Two main types of collateral: broadly syndicated loans ("BSL") and middle market loans ("MML")
- A CLO typically contains mostly BSL or mostly MML but not both
In this hypothetical structure, weighted average coupon on CLO tranches is S+272, compared to collateral coupon of S+350. Lacking defaults, the excess spread accrues to the subordinated notes, but as defaults occur the excess spread provides credit enhancement in addition to the subordination of principal.

<table>
<thead>
<tr>
<th>Assets: Loan Portfolio</th>
<th>Liabilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Illustrative Coupon S+3.50%</td>
<td>Thickness</td>
</tr>
<tr>
<td>CLO A Notes (AAA)</td>
<td>65%</td>
</tr>
<tr>
<td>CLO B Notes (AA)</td>
<td>12%</td>
</tr>
<tr>
<td>CLO C Notes (A)</td>
<td>5%</td>
</tr>
<tr>
<td>CLO D Notes (BBB)</td>
<td>5%</td>
</tr>
<tr>
<td>CLO E Notes (BB)</td>
<td>5%</td>
</tr>
<tr>
<td>Subordinated Notes</td>
<td>8% + deal setup costs</td>
</tr>
</tbody>
</table>

Source: Neuberger Berman. Capital structure and indicative portfolio are presented for illustrative purposes only and may not represent the final capital structure and portfolio of any particular CLO.
CLO lifecycle

Source: VanEck. This is not an offer to buy or sell, or recommendation to buy or sell any of the securities mentioned herein.
Current U.S. life insurance CLO holdings

U.S. Life Insurance Totals ($bn)

- CLO Holdings: 166
- TAC: 635

U.S. Insurance CLO Holdings by Rating

- AAA: 39.6%
- AA: 22.4%
- BBB: 11.2%
- A: 15.2%
- NR: 8.3%
- BB/below: 3.3%

Sources: NAIC Capital Markets Bureau for CLO holdings and ratings, NAIC Center for Insurance Policy and Research for TAC. CLO holdings and ratings as of 2021, TAC as of 2020.
Life insurance CLO holdings over time (% of general account assets)

Sources: S&P Global, Neuberger Berman
Individual life insurers with largest CLO allocations, anonymized

Sources: S&P Global, Neuberger Berman
C1WG observation—Materiality

In the C1WG’s view, CLOs do not present a material risk to the aggregate solvency of the life insurance industry currently.

Our view recognizes the limitations in identifying CLO holdings and that industry exposure to CLOs may increase in the future. Further, it is important to remember that RBC is a blunt measure based on industry averages that should not be relied upon as the sole indicator of risk; there may be individual life insurers with more material exposures.

Note: The remainder of this presentation sets aside materiality and practical considerations and will focus on what may be necessary to identify appropriate RBC treatment.
3. Relevant RBC Concepts
Key concepts

In our review of CLOs and capital requirements, several RBC concepts came up repeatedly. Our observations/questions are based on these concepts and how these concepts should be applied to CLOs:

1. Statistical safety level—risk measure and time horizon
2. Comparability of C-1 factors for corporate bonds and common stock to CLOs
3. Application of a new concept of RBC arbitrage
Statistical safety level—Risk measure and time horizon

- Bond factors use 96th percentile of greatest loss over 10 years
- Equity factors use 95th percentile of the max drawdown in the S&P500 index over 2 years
- C-3 Phase 2 uses \((1/4) \times \text{CTE-98}\) (Conditional Tail Expectation or CTE is also used for reserves in VM-20)
- CLO losses tend to be binary events for the debt tranches other than AAA, with losses often equal to 0% or 100%. This results in a loss distribution that is both “fat-tailed” and resembles a step function. Risks for fat-tailed distributions are better measured using a CTE metric vs. a percentile metric.
  - Using the capital structure from slide 6 of this presentation as an example\(^1\), a collateral loss of up to 8% results in zero losses to the BB tranche but a collateral loss of at least 13% results in a 100% loss.

1. 8% equity, 5% BB, 5% BBB, 5% A, 12% AA, 65% AAA
Statistical safety level—Risk measure and time horizon (cont.)

- The 10-year time horizon for the C-1 Bond factors is based on an average credit cycle for corporate bonds
- The two-year time horizon for common stocks is based on an observation that equity market drawdowns typically play out fully within about two years
- What should be assumed to be the risk cycle for CLO debt tranches?
- What should be assumed to be the risk cycle for the CLO residual tranches?
A CTE would better represent tail risk for CLO debt tranches than would a percentile. CTE is better suited to the cliff issue associated with binary loss distributions and would reflect differentiation of risk across all debt tranches.
Comparability of C-1 factors for corporate bonds and common stock to CLOs

- In the higher CLO debt tranches, the bond charges are probably too high
- For the lower CLO debt tranches, the bond charges are probably too low
- Unsure of the precise crossover point between higher and lower debt tranches
- Primary reason: Securitization leads each tranche to have a more precise statistical safety level than corporate bonds have—senior tranches are highly unlikely to experience losses\(^1\) at the statistical safety level defined for C-1, whereas junior tranches are much more likely to experience losses\(^1\) at that same statistical safety level

---

1. It’s worth specifying that “loss” here refers to the amount of loss, not merely whether a loss occurs. Differences in loss given default are perhaps the most important distinguishing factor separating the respective loss distributions of CLOs, bank loans, and corporate bonds.
RBC arbitrage

- IAO Issue Paper dated May 25, 2022, recommends that total C-1 requirement for all debt and equity issued by a CLO ("vertical slice") should equal the total C-1 requirement for all the underlying collateral if an insurer owns the vertical slice
- In a typical CLO, total C-1 for the underlying collateral is approximately 3 times larger than C-1 for a CLO vertical slice
- IAO recommends modeling constraint that eliminates RBC arbitrage
C1WG observation—Risk equivalence through structuring

At any one point in time, the **total risk** in a portfolio of loans is equal to the total risk of all CLO tranches that are collateralized by these same loans.
C1WG observation—Disagreement with the ‘No RBC Arbitrage’ principle

1. While a CLO’s total collateral and a vertical slice of its tranches have the same risk at a point in time, it does not follow that they must have the same total C-1 requirement.
   a. Each of corporate bonds, bank loans, and CLOs have unique structures and risk profiles.
   b. C-1 corporate bond factors are not appropriate for bank loans or for CLOs due to different assumptions and models (e.g., secured vs. unsecured, time horizon, etc.)
   c. It would not be appropriate to force equivalence using the current C-1 corporate bond factors.

2. While structure does not reduce aggregate risk at any given moment, it does transform risk. The CLO structure introduces a kind of callability and extension risk that resembles C-3 risk. Active trading, which is an element of CLOs but not of other modeled securities (residential mortgage-backed securities [“RMBS”], commercial mortgage-back securities [“CMBS”]), can reduce or increase risk over time.
C1WG observation—Broader application of ‘No RBC Arbitrage’ principle

The concept of sum of the parts equaling the whole is not applied elsewhere in C-1. Should it also be applied to RMBS & CMBS? Or should it be applied to funds (a version of this is applied to exchange-traded funds (“ETFs”), but not to other fund types)? Or to asset-backed securities (“ABS”), where most of the underlying loans are typically unrated and would thus be NAIC-6 (highest risk, near or at default)? It’s not clear to us what the limiting principle is for enforcing a “No RBC Arbitrage” concept.
4.

Residual Tranches
Current C-1 RBC treatment

- With residual tranches being reported on Schedule BA, a 30% pre-tax C-1 factor applies (which can come in through C-1o or C-1cs depending on how it is recorded).
- The 30% factor is derived from a study on unaffiliated common stock. Thirty percent is equal to the 95\textsuperscript{th} percentile of the maximum loss over a 2-year horizon.
- The 30% factor was not derived based on anything resembling the loss experience of a CLO residual tranche.
C1WG observation—Residual tranche C-1 factor

We are unaware of any quantitative analysis on the loss experience for the residual tranches of CLOs. As such, we haven’t seen specific evidence that would support the use of a 30% capital charge for residual tranches. In addition, we have not concluded that sub-categories of NAIC-6 are needed, as have been proposed by the IAO. The justification of a CLO residual tranche charge or new sub-categories of NAIC-6 will require substantial analysis.
5.

Key Questions for Regulators to Consider
Key regulatory questions

- Is the allocation to CLOs sufficiently material within insurer portfolios or expected to increase beyond a materiality threshold to warrant the significant investment of time and focus to assess appropriate capital requirements?
- Should the “No RBC Arbitrage” principle be applied to CLOs? If so, should it also be applied to other asset classes where it isn’t currently enforced?
- What statistical safety level is desirable for CLOs? Should the time horizon be consistent with other assets?
Summary Observations and Next Steps for C1WG
Summary of C1WG observations

1. In aggregate, CLOs are not a major risk to the life insurance industry capital & surplus currently.

2. Great care should be exercised in using existing C-1 factors for CLOs due to a lack of equivalence between the risk models for corporate bonds, equities, and structured securities. While using existing factors is expedient, current factors were not developed using assumptions and models that would be appropriate for CLOs or the bank loans that serve as CLO collateral.

3. CLOs (and other structured securities) are complex. CLOs contain risks that differ from risks contained in other assets. Accurately capturing the risks posed to an insurer’s surplus requires complex models. Regulators need to balance the need for measurement of complex risks with the cost of measuring those risks.
C1WG next steps

1. Obtain RBCIRE WG feedback
2. Continue review of IAO proposal on residual tranches
3. Continue discussion of CLO risks, particularly in relation to the risks of other assets
4. Continue discussion of possible methods for calculating capital requirements for CLOs, including a comparison to other structured securities, fixed income assets, and equity investments.
Contact

Amanda Barry-Moilanen
barrymoilanen@actuary.org
TO: Thomas Botsko, Chair, Capital Adequacy (E) Task Force  
Members of the Capital Adequacy (E) Task Force  
Phillip Barlow, Chair, Risk-based Capital Investment Risk and Evaluation (E) Working Group  
Members of the Risk-based Capital Investment Risk and Evaluation (E) Working Group

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

CC: 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: Referral on the Risk Assessment of Structured Securities - CLOs

DATE: August 30, 2022

Summary – The Investment Analysis Office (IAO) staff have recommended to the Valuation of Securities (E) Task Force to direct the modeling of collateralized loan obligations (CLO) to the Structured Securities Group (SSG). SSG is already responsible for the modeling of residential mortgage-backed securities (RMBS) and commercial mortgage-backed securities (CMBS). Included in their recommendation was a request to refer to the Capital Adequacy (E) Task Force and Risk-based Capital Investment Risk and Evaluation (E) Working Group a request that your groups consider creating or breaking out risk-based capital factors for three new NAIC 6 designation categories; i.e. 6.A, 6.B, and 6.C.

Rationale - A collateralized loan obligation (CLO) is type of structured security backed by a pool of debt, typically corporate loans with low credit ratings. Each tranche of a CLO 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. The aggregate risk of owning all the underlying corporate loans held by a CLO structure should be the same as owning all of the CLOs tranches. Therefore, the RBC impact of both should be equivalent if it is free from any risk-based capital (RBC) arbitrage.

Regulatory Issue – As the attached memorandum reflects, there is currently the potential to materially (and artificially) reduce C1 capital requirements just by securitizing a pool of assets into a CLO. 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 this RBC arbitrage.

**Recommendation** – The Valuation of Securities (E) Task Force has requested NAIC staff to draft an amendment to the *Purposes and Procedures Manual of the NAIC Investment Analysis Office* permitting SSG to model CLO investments for the assignment of NAIC Designations. The Task Force also requests that the Capital Adequacy (E) Task Force and its Risk-Based Capital Investment Risk and Evaluation (E) Working Group contemporaneously consider NAIC staff’s recommendation to add new RBC factors to account for the tail risk in any structured finance security. Staff suggests adding new NAIC Designation Categories (e.g. 6.A, 6.B and 6.C) with recommended RBC factors of 30%, 75% and 100%, respectively. The Task Force understands that the recommended new RBC factors may only be an interim step until structured finance securities can be studied more fully by your groups, but the Task Force believes there is a pressing regulatory need to take timely action to eliminate this RBC arbitrage and potential financial solvency risk.

https://naiconline.sharepoint.com/teams/SVOVOSTaskForce/Shared Documents/Meetings/2022/Referrals/To CATF and RBCIRE/VOSTF_to_CATF_and_RBCIRE_Risk_Assessment_Strctrd_Sec-CLOs v2.docx
### OTHER LONG-TERM ASSETS (CONTINUED)

<table>
<thead>
<tr>
<th>(1)</th>
<th>(2)</th>
<th>(3)</th>
<th>(4)</th>
<th>(5)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Book / Adjusted Carrying Value</td>
<td>Unrated Items †</td>
<td>RBC Subtotal †</td>
<td>Factor</td>
<td>RBC Requirement</td>
</tr>
</tbody>
</table>

#### Schedule BA - Unaffiliated Common Stock

- **Schedule BA Unaffiliated Common Stock - Public**
  - AVR Equity Component Column 1 Line 65
- **Schedule BA Unaffiliated Common Stock - Private**
  - AVR Equity Component Column 1 Line 66

#### Total Schedule BA Unaffiliated Common Stock (pre-MODCO/Funds Withheld)

- Line (42) + (43)

#### Reduction in RBC for MODCO/Funds Withheld

- Reinsurance Ceded Agreements
  - Company Records (enter a pre-tax amount)
- Reinsurance Assumed Agreements
  - Company Records (enter a pre-tax amount)
- Total Schedule BA Unaffiliated Common Stock (including MODCO/Funds Withheld)
  - Lines (44) - (45) + (46)

#### Schedule BA - All Other

- **BA Affiliated Common Stock - Life with AVR**
  - AVR Equity Component Column 1 Line 67
- **BA Affiliated Common Stock - Certain Other**
  - AVR Equity Component Column 1 Line 68
- **Total Schedule BA Affiliated Common Stock - C-1o**
  - Line (48.1) + (48.2)
- **BA Affiliated Common Stock - All Other**
  - AVR Equity Component Column 1 Line 69
- **Total Sch. BA Affiliated Common Stock - C-1cs**
  - Line (49.1) + (49.2)

#### Total Schedule BA Assets (pre-MODCO/Funds Withheld)

- Lines (11) + (21) + (31) + (41) + (48.3) + (50) + (51.1) + (51.5)

#### Reduction in RBC for MODCO/Funds Withheld

- Reinsurance Ceded Agreements
  - Company Records (enter a pre-tax amount)
- Reinsurance Assumed Agreements
  - Company Records (enter a pre-tax amount)
- Total Schedule BA Assets (including MODCO/Funds Withheld)
  - Lines (54) - (55) + (56)

### Notes and Capital Notes

- Line (33) through (37)

### Denotes items that must be manually entered on the filing software.

† Fixed income instruments and surplus notes designated by the NAIC Capital Markets and Investment Analysis Office or considered exempt from filing as specified in the [Purposes and Procedures Manual of the NAIC](https://www.ffc.org/PDFs/PurposesProceduresManual.pdf)

‡ Column (2) is calculated as Column (1) less Column (3) for Lines (1) through (17). Column (2) equals Column (3) - Column (1) for Line (53.3).

§ The factor for Schedule BA publicly traded common stock should equal 30 percent adjusted up or down by the weighted average beta for the Schedule BA publicly traded common stock portfolio subject to a minimum of 22.5 percent and a maximum of 45 percent in the same manner that the similar 15.8 percent factor for Schedule BA publicly traded common stock in the Asset Valuation Reserve (AVR) calculation is adjusted up or down. The rules for calculating the beta adjustment are set forth in the AVR section of the annual statement instructions.

**Attachment E**