Draft date: 2/19/26

2026 Spring National Meeting
San Diego, California

RISK-BASED CAPITAL INVESTMENT RISK AND EVALUATION (E) WORKING GROUP

Monday, March 23, 2026
11:30 a.m. – 12:30 p.m.
Manchester Grand Hyatt—Grand Hall A—Level 1

ROLL CALL

Philip Barlow, Chair	District of Columbia	Tadd Wegner	Nebraska
Thomas Reedy, Vice Chair	California	Jennifer Li	New Hampshire
Wanchin Chou	Connecticut	Bob Kasinow/William B. Carmello	New York
Carolyn Morgan	Florida	Dale Bruggeman/Tom Botsko	Ohio
Matt Cheung	Illinois	Rachel Hemphill	Texas
Roy Eft	Indiana	Doug Stolte	Virginia
Carrie Mears/Kevin Clark	Iowa	Steve Drutz/Katy Bardsley	Washington
Fred Andersen	Minnesota	Amy Malm	Wisconsin
William Leung/Danielle Smith	Missouri		

NAIC Committee Support: Julie Gann/Maggie Chang

AGENDA

1. Consider Adoption of its March 2 Minutes—*Philip Barlow (DC*) — Attachment A

2. Receive Updates from the Invested Assets (E) Task Force and the Statutory Accounting Principles (E) Working Group—*Philip Barlow (DC)*

3. Hear an Update from the American Academy of Actuaries (Academy) on the Collateralized Loan Obligation (CLO) Risk-Based Capital (RBC) Project —*Philip Barlow (DC)* — Attachment B

4. Receive Comments on Proposal 2025-22-IRE CLO RBC Structure–*Philip Barlow (DC)* — Attachment C
   A. American Council of Life Insurers (ACLI) — Attachment D

5. Consider Exposure of Modified Proposal 2025-22-IRE MOD: CLO RBC Structure—*Philip Barlow (DC)* — Attachment E

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

7. Adjournment

Draft: 3/10/26

Risk-Based Capital Investment Risk and Evaluation (E) Working Group
Virtual Meeting
March 2, 2026

The Risk-Based Capital Investment Risk and Evaluation (E) Working Group of the Capital Adequacy (E) Task Force met March 2, 2026. The following Working Group members participated: Philip Barlow, Chair (DC); Thomas Reedy, Vice Chair (CA); Wanchin Chou (CT); Carolyn Morgan (FL); Carrie Mears and Kevin Clark (IA); Matt Cheung (IL); Fred Andersen (MN); William Leung and Danielle Smith (MO); Tadd Wegner (NE); Jennifer Li (NH); Bob Kasinow and William B. Carmello (NY); Judith L. French, Dale Bruggeman, and Tom Botsko (OH); Jamie Walker and Rachel Hemphill (TX); Doug Stolte and Dan Bumpus (VA); Steve Drutz and Katy Bardsley (WA); and Amy Malm (WI).

1. Adopted its Dec. 15, 2025, Minutes

The Working Group met Dec. 15, 2025, and took the following action: 1) adopted its Nov. 4 minutes; 2) heard an update from the American Academy of Actuaries (Academy) on the collateralized loan obligation (CLO) risk-based capital (RBC) project; and 3) exposed proposal 2024-22-IRE (CLO RBC Structure) for a 45-day public comment period ending Jan 29, 2026.

Reedy made a motion, seconded by Malm, to adopt the Working Group's Dec. 15 minutes (Attachment XX). The motion passed unanimously.

2. Received Comments on the Academy's Dec. 15, 2025, Presentation

Marc Altschull (American Council of Life Insurers—ACLI) spoke on the ACLI's comment letter (Attachment XX) and reiterated the ACLI's support of the Academy's ongoing effort to modernize and rationalize the capital framework applied to structured securities, including CLOs. He said the ACLI understands the interim nature of the results presented and requests that the Academy provide robust documentation once the results are finalized, such that the model can be assessed and validated. He said the ACLI expects similar documentation should the NAIC opt for financial modeling of CLOs by the Structured Securities Group (SSG).

Daren Moreira (American Investment Council—AIC) spoke on the AIC's comment letter (Attachment XX) and reiterated that: 1) the AIC supports the development of new C-1 factors without requiring individual modeling of CLOs; and 2) the AIC recommends that the Academy take time to refine model assumptions around CLO recovery rate, prepayments, and collateral reinvestment discounts. Barlow asked if the AIC has done an analysis to quantify the impact of the suggested refinement. Moreira said the AIC deferred to the Academy to perform drill down and analysis.

Joe Engelhard (Alternative Credit Council—ACC) presented a joint comment letter from ACC, AIC and Loan Syndications and Trading Association(Attachment XX). He said the ACC commends the Academy's work and believes it provides a much clearer picture of the economic risks and benefits of CLOs. That said, the ACC identified areas for further calibration, namely prepayment reinvestments and probability-of-default assumptions.

3. Heard an Update from the Academy on the CLO RBC Project

Stephen Smith (Academy) presented a CLO C-1 factors modeling update (Attachment XX). Smith said that since the Academy's Dec 15, 2025, presentation, it has broadened the scope of work by modeling all U.S. broadly syndicated loan (BSL) CLOs issued. At a very high level, the Academy has found that ratings include substantial

information on tail risk so that ratings can serve as a comparable attribute when appropriate adjustments are made for horizon and tranche thickness. Smith then walked through the "Appendix 3 – Alternative Models Considered" page, illustrating the various regressions performed by the Academy in search of comparable attribute(s) with satisfactory predictive power for C-1 risk. Based on the results of regressions performed, ratings are valuable comparable attributes, outperforming various variables tested. He said the only way to improve the predictive power is to layer in detachment point, at the expense of making the model much more complex.

Smith then explained key definitions for terms such as "raw C-1 factors" versus "modeled C-1 factors" and "tranche thickness," etc. Smith stated that the attachment point is the level of collateral losses at which a particular tranche begins to experience principal losses. The detachment point is the level of collateral losses at which the principal of a particular tranche is completely wiped out. As an example, for a typical BBB- tranche, it could be 12% and 18%, respectively. Tranche thickness is defined as the difference between the two.

Barlow asked whether the tranche thickness is easily identifiable. Smith said that while tranche thickness is not disclosed in statutory filings, it is fairly straightforward to identify. Smith said the Academy observed that CLOs rated BBB- or lower have a meaningful difference in risk between those with thicker and thinner tranches, even within the same rating bucket. A 4% tranche thickness is used to draw the line between thicker and thinner tranches. Modeled C-1 factors summarized in the "Option 2 – Rating & Tranche Thickness (After-Tax Factors)" page have two sets of factors for BBB- and below tranches as a result of the observation. Modeled C-1 factors, summarized in the "Option 1 – Rating Only (After-Tax Factors)" page, do not delineate tranche thickness, as thin tranche CLOs are removed from the dataset. Smith used the scatter plots in the presentation to explain how the Academy arrived at a 4% tranche thickness as the watershed.

Smith also noted that, for the BBB- tranche alone, rating agencies like Fitch Ratings (Fitch) and S&P Global rated more thin-tranche CLOs than Moody's Ratings (Moody's) and KBRA. The C-1 factors modeled for Fitch and S&P Global-rated CLOs tend to be meaningfully higher than those rated by Moody's and KBRA. Smith attributed this observation to differences in the rating methodologies used. Both Fitch and S&P Global are rating to the first dollar of loss, and henceforth, only the attachment point matters. On the other hand, both Moody's and KBRA incorporate loss given default to their ratings, and henceforth, detachment point also matters, and thin tranche CLOs likely will not get a BBB- rating under their methodology.

Smith then explained that the reinvestment horizon is another attribute that needs to be adjusted to produce C-1 factors. Like bond C-1 factors, CLO C-1 factors are calibrated to be horizon neutral, and the reinvestment horizon is used as a proxy for the horizon for CLOs. Smith highlighted the value of reinvestment horizon adjustment as he discussed the "Reinvestment Horizon" pages in the presentation, highlighting the fact that after the adjustment was made, C-1 factors increased as ratings became less favorable, which is more intuitive.

Smith said isotonic regression was applied to CLO tranches rated A3 or higher. This methodology allows the Academy to assign greater weight to buckets with greater credibility due to larger sample sizes, and helps smooth C-1 factors. Smith also pointed out that the bar chart in the "Isotonic Regression – Applied to A3/ above CLO C-1 Factors" page provides a visual for the cliff risk inherent in CLOs.

Barlow sought clarification as to whether only BSL CLOs are modeled. Smith confirmed that they are, but clarified that the modeled C-1 factors for BSL CLOs are likely a better estimate of middle-market (MM) CLOs than if bond C-1 factors are used. He further clarified that the factors proposed in the second option should not be used for MM CLOs, as more information is needed to define the tranche thickness threshold, and 4% may not be the right answer.

Andersen observed that the recommended C-1 charges for CLOs with NAIC 2.C versus NAIC 3.B demonstrated significant cliff risk. He said he would like to understand the details/characteristics of those two types of CLOs to help explain how the differences in charges are justified. Smith responded that the modeling was performed with the conditional tail expectation (CTE) 90 metric on a weighted average of 17 tail scenarios. The cliff risk manifested itself in the modeled factors as expected. Andersen also commented that it would be helpful to discuss the accuracy of CLO ratings. He foresaw insurers' motivation to improve/engineer the ratings.

Andersen said he wondered if there is potential for unmodeled risk, especially among the tranches with higher credit ratings. Smith responded that he cannot rule out the possibility of having unmodeled risk, but emphasized that the Academy strives for consistency between modeling for bond C-1 versus CLO C-1.

Andersen also wondered whether the second option would incentivize gamesmanship, such as engineering CLO tranches to a 4.01% tranche thickness to obtain more favorable RBC treatment. Smith acknowledged the possibility and noted that structuring already exists, though it is not prevalent. He explained that, without using the second option, theoretically, the simple average of a BBB- CLO tranche is about 5%, which, in his view, is too high for the majority of BBB- CLOs owned by insurers. Smith also pointed out that tranche thickness is somewhat dynamic and changes as the CLO pays down. He thought structuring a tranche at 4.01% would not give enough cushion to prevent the CLO tranche thickness from eventually shrinking and falling into the thin tranche bucket. Mears also expressed concern about the dynamic tranche thickness that may produce counterintuitive RBC results. Smith understood the concern but pointed out that there are also rating upgrade associated with paydown that may mitigate the risk.

Stolte expressed concerns with private equity-owned insurers and their investment in MM CLOs. Smith responded that MM CLOs are rated, but the underlying loans/collaterals are not typically rated. Since the Academy's current methodology relies on collateral ratings as the basis of generating default vectors, further study is needed to understand the credit modeling of loans/collaterals backing the MM CLOs. Smith said that this can be done through partnering with credit agencies and would require additional time and corroboration.

Mears asked if the SSG can review and monitor CLOs on an ongoing basis to make sure the assumptions the Academy used remain fit for the purpose in the future. Hankook Lee (NAIC) responded that the SSG has modeling capabilities to monitor CLOs in the future and has been tracking them since 2018.

Bumpus sought clarification as to whether only four rating agencies (Fitch Ratings, KBRA, Moody's, and S&P Global) rate CLOs. Smith clarified that DBRS also rates CLOs. DBRS is not listed in the presentation, as the CLO tranches rated by DBRS are not BBB-.

Bumpus asked whether the ratings are public. Smith confirmed that both the CLO tranche ratings and the collateral ratings are public.

Richard Cantor (Moody's) said he thought there are privately rated CLO tranches and suggested a way to identify them by running the unrated CLO tranches against the nationally recognized statistical rating organization (NRSRO) designation database. Cantor also said he expects that the distinction of thickness matters not just for BBB- or below, but that it has an even more profound impact as one goes up the rating scale. Smith responded that the scatter plot on the "Tranche Thickness 4% Cut-Off Baa1/Baa2" page supported Cantor's expectation.

Dan Castaline (Apollo) agreed with the Academy's observations about tranche thickness. He said that based on what he observed in the current market practice, thin BBB- tranches are effectively senior parts of the traditional BB tranches. S&P Global rating methodology allows those to be rated as BBB- but, in substance, applying BB tranche factors to them is justifiable. Castaline said he also believed that using the original tranche thickness is

better than the current thickness because CLOs amortize sequentially, and the tranche thickness increases in non-senior tranches that are yet to take their turn in amortization. Smith clarified that the Academy model uses current thickness, and additional analysis is needed to prove whether original thickness may work better.

Barlow led the discussion on the Working Group's next steps. He noted that neither the Working Group nor any interested parties raised objections to the Academy presentation being exposed for a 45-day public comment period ending April 16. He requested interim comments during the Spring National Meeting, specifically regarding the structural proposal, as the NAIC plans to re-expose it during the meeting or shortly thereafter.

In light of the lack of readily available tranche thickness data in the annual statement, Barlow expressed his preference to move forward with a rating-only proposal (i.e., Option 1) for 2026 and revisit tranche thickness as a comparable attribute the following year. Stolte expressed reservations about not addressing tranche thickness. Carmello suggested getting tranche thickness into the RBC structure without deploying the bifurcated factors for the first year, so as to facilitate data collection. Clark said he believed information such as holdings of thin tranches by insurers, materiality assessment, etc., should help the Working Group members. Smith pointed to the "Distribution by Tranche Thickness" page of the presentation, highlighting that only Baa3 and Ba3 are meaningful for consideration, given how CLOs are structured and the life insurers' ownership. He said the page provides data for materiality assessment, as it shows allocation between high and low thickness within each rating category, by count and by dollar balance.

4. Discussed Other Matters

Barlow said that for the sake of time, the Working Group plans to receive comments from the ACLI regarding proposal 2025-22-IRE (CLO RBC Structure) at the Spring National Meeting.

Barlow said the Working Group sponsored the blanks proposal 2025-27BWG to effectuate changes to the asset valuation reserve (AVR) schedule to facilitate RBC blanks proposal 2025-22-IRE. The Blanks (E) Working Group plans to meet March 5 to receive comments and discuss modifications to proposal 2025-27BWG.

Having no further business, the Risk-Based Capital Investment Risk and Evaluation (E) Working Group adjourned.

SharePoint/NAIC Support Staff Hub/Committees/E CMTE/CADTF/2026-1-Spring/IRE/RBCIREWG 03-02-26 Minutes TPR'd.docx

Attachment B

C-1 Subcommittee Update on CLO C-1 Factors Modeling—Technical Follow-up

March 23, 2026

Stephen Smith, MAAA, FSA, CFA

Chairperson, Academy C-1 Subcommittee

American Academy of Actuaries

About the Academy

Mission:
To serve the public and the U.S. actuarial profession

Community:
Serving over 20K MAAAs & public stakeholders for 60 years

Standards:
Setting qualification, practice, and professionalism standards

Impact:
Delivering over 300 insight-driven publications & resources annually

Visit www.actuary.org to learn more.

American Academy of Actuaries

Introduction

- This presentation will address questions raised by regulators and interested parties in response to the Academy's March 2 presentation to RBCIRE focused on sensitivities to the choice of 4% tranche thickness as a cutoff point and on the distribution of risk within the tail
- Additional information on these points is provided
- Work is ongoing to provide thorough model documentation across the full model, in addition to the data and analytics provided herein

Regression Results—Interpretation


```
Residuals:
     Min       1Q   Median       3Q      Max
-0.70926 -0.00145 -0.00037  0.00031  0.84095

Coefficients:
                      Estimate Std. Error t value Pr(>|t|)
Aaa                  6.039e-04  1.788e-03   0.338   0.7356
Aa1                  3.094e-03  4.138e-03   0.748   0.4547
Aa2                  4.661e-04  2.672e-03   0.174   0.8615
Aa3                 -3.794e-05  8.282e-03  -0.005   0.9963
A1                   3.657e-03  4.713e-03   0.776   0.4378
A2                   6.176e-04  2.863e-03   0.216   0.8292
A3                  -2.676e-03  1.069e-02  -0.250   0.8024
Baa1                 9.042e-04  6.104e-03   0.148   0.8822
Baa2                 9.849e-03  5.556e-03   1.773   0.0763 .
Baa3                -1.735e-02  2.705e-03  -6.416 1.45e-10 ***
Ba1                  8.131e-02  6.768e-03  12.014  < 2e-16 ***
Ba2                  1.647e-01  7.998e-03  20.588  < 2e-16 ***
Ba3                  1.286e-01  2.845e-03  45.206  < 2e-16 ***
B1                   1.562e-01  5.507e-03  28.356  < 2e-16 ***
B2                   2.477e-01  1.342e-02  18.461  < 2e-16 ***
B3                   4.999e-01  7.064e-03  70.771  < 2e-16 ***
Caa1                 5.079e-01  9.850e-03  51.564  < 2e-16 ***
Caa2                 5.787e-01  9.871e-03  58.624  < 2e-16 ***
Caa3                 7.349e-01  9.033e-03  81.356  < 2e-16 ***
REINV_END_DATE      -1.115e-02  2.000e-03  -5.575 2.53e-08 ***
REINV_END_DATE_1     1.102e-02  2.087e-03   5.281 1.31e-07 ***
REINV_END_DATE_2     1.097e-02  2.169e-03   5.055 4.37e-07 ***
REINV_END_DATE_3     1.132e-02  2.191e-03   5.168 2.40e-07 ***
REINV_END_DATE_4     1.832e-02  2.491e-03   7.354 2.04e-13 ***
REINV_END_DATE_5     2.977e-02  2.170e-03  13.721  < 2e-16 ***
REINV_END_DATE_6     5.467e-02  2.251e-03  24.282  < 2e-16 ***
LOW_QUAL_LOW_THICK   9.795e-02  2.780e-03  35.233  < 2e-16 ***
---
Signif. codes:  0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 0.06828 on 12859 degrees of freedom
Multiple R-squared:  0.8618,    Adjusted R-squared:  0.8615
F-statistic:  2970 on 27 and 12859 DF,  p-value: < 2.2e-16
```

Security rating

Reinv horizon

Interaction terms

Quality and thickness

- **Example:** Baa3 security with tranche thickness ≤ 4% has a factor:

$$-1.735\% + 2.395 \times [-1.115\% + 2.977\%] + 9.795\% = 12.52\%$$

Baa3 Coefficient | Average Reinvestment Horizon (yrs) | Reinvestment Coefficient | Bucket 5 Reinvestment Interaction | Low Quality[1] / Low Thickness[2] Premium | MODELED C-1

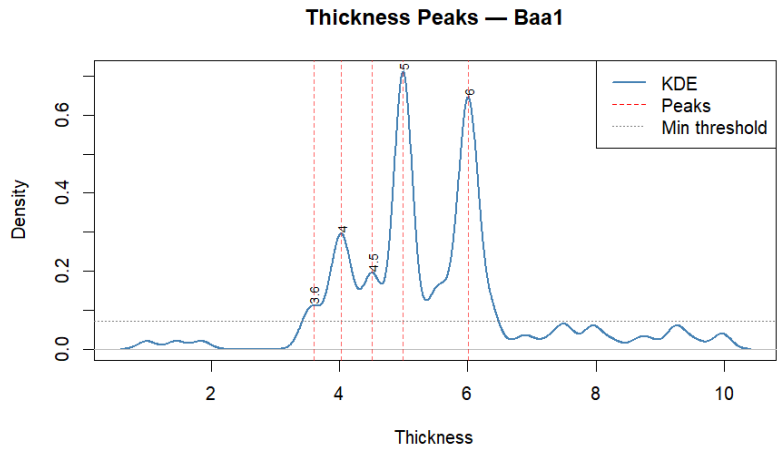
- C1 factors are regressed against
  - Security rating
  - Reinvestment horizon (number of years until reinvestments end)
  - Reinvestment horizon × rating bucket
  - Indicator for low-quality (Baa3/below) and low-thickness (≤4%)
- The rating buckets for the interaction terms—chosen to increase credibility—are:
  1. AAA
  2. Aa1 / Aa2
  3. Aa3 / A1 / A2
  4. A3 / Baa1 / Baa2
  5. Baa3 / Ba1 / Ba2
  6. Ba3 / B1 / B2

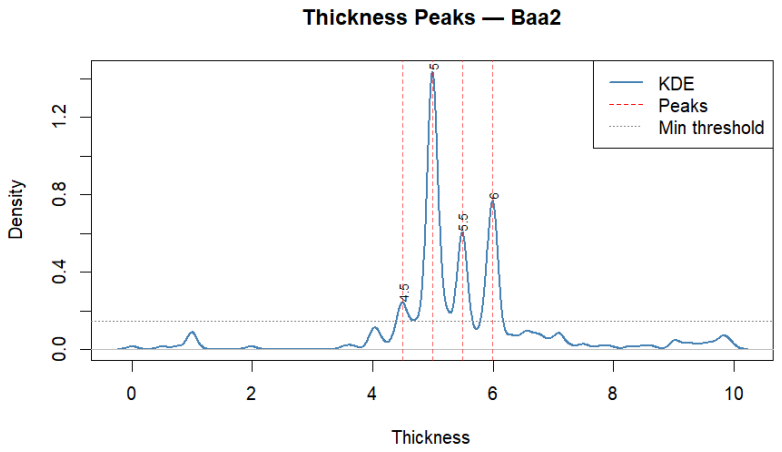
American Academy of Actuaries

Thickness Concentrations, by Rating

- Baa3 concentrates around 6% thickness with a second peak at 1.9%
- Baa3 has no observations with thickness in the range [3.68%, 4.29%]
- The Academy heuristically chose 4% as the cut off between “low thickness” and “high thickness” to divide these two types of Baa3 tranches. Ba3 has peaks at 4%, 3% and 3.5% with smaller peaks at 4.5% and 2.5%
- Setting the thickness cut-off at 4% interrupts the 4% peak that’s observed in ratings Ba1, Ba2, Ba3, B1 and B2
- In the following pages, kernel density estimates are shown to help visualize the distribution of tranche thicknesses for each rating—these charts translate discrete data into estimates of a smooth distribution of multiple overlapping normal distributions centered around clusters of observed tranche thickness

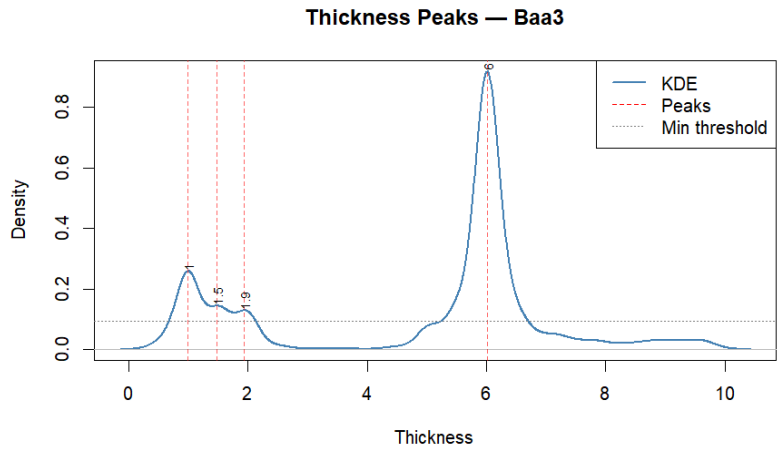
Kernel Density Estimation—Baa1/Baa2

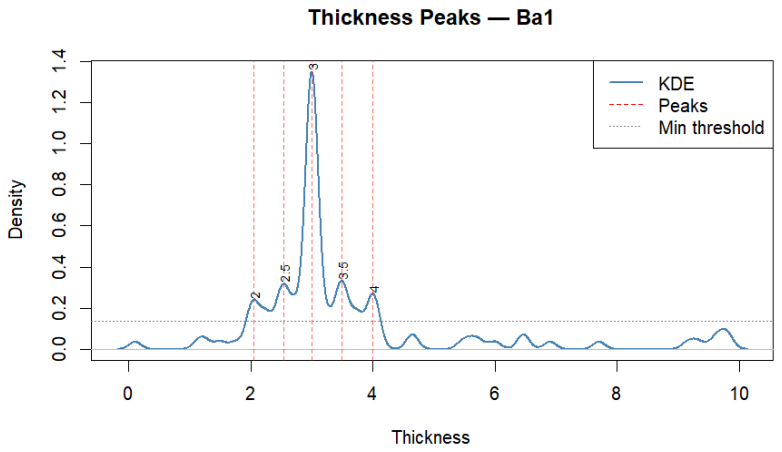




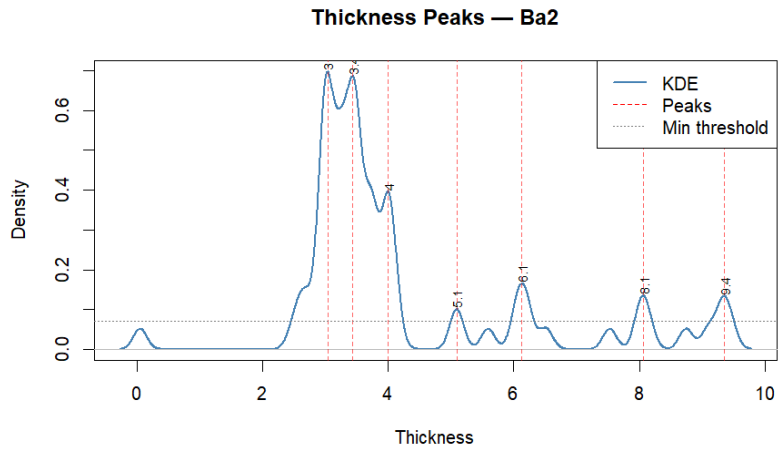
American Academy of Actuaries

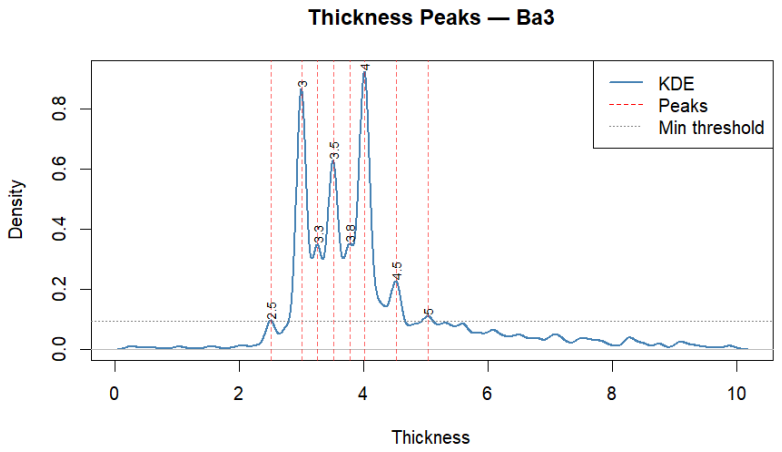
Kernel Density Estimation—Baa3/Ba1





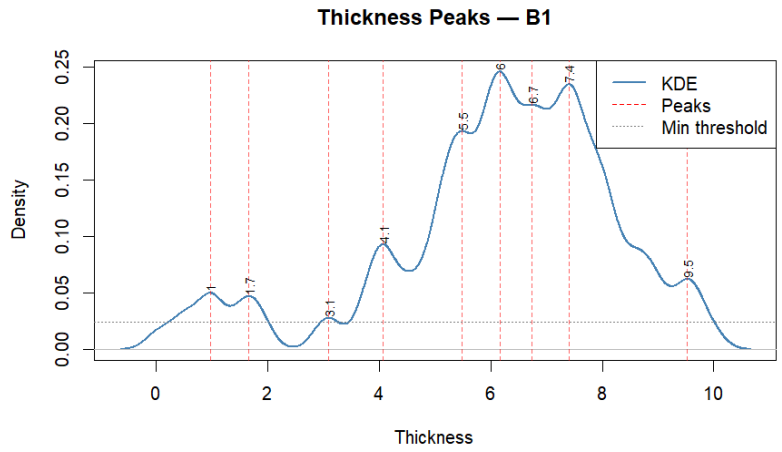
Kernel Density Estimation—Ba2/Ba3

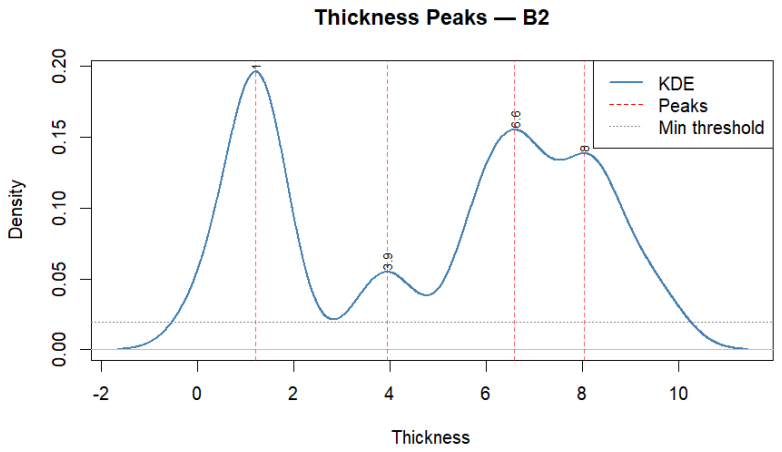




American Academy of Actuaries

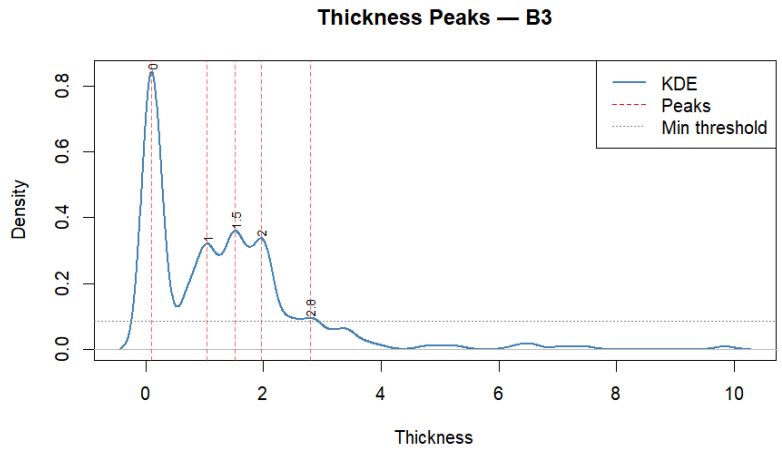
Kernel Density Estimation—B1/B2

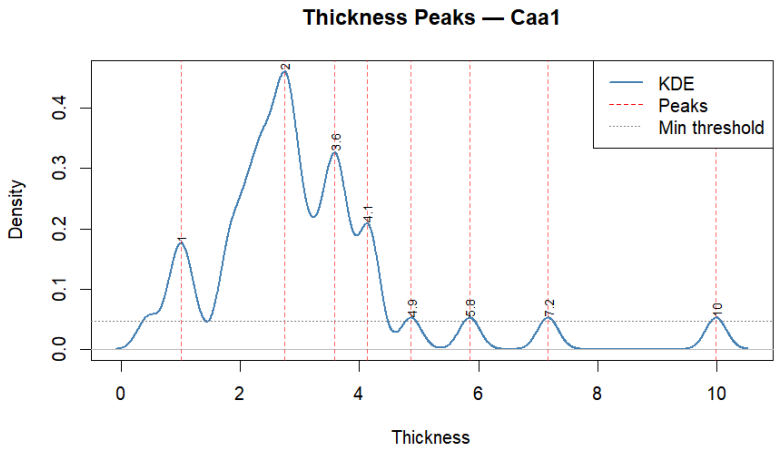




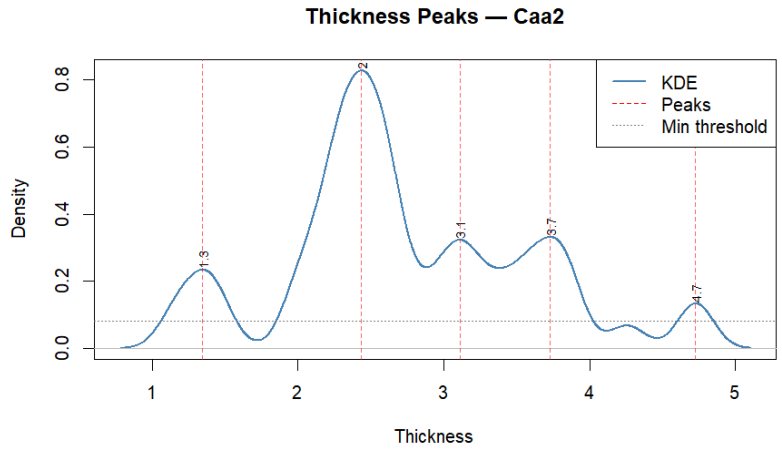
American Academy of Actuaries

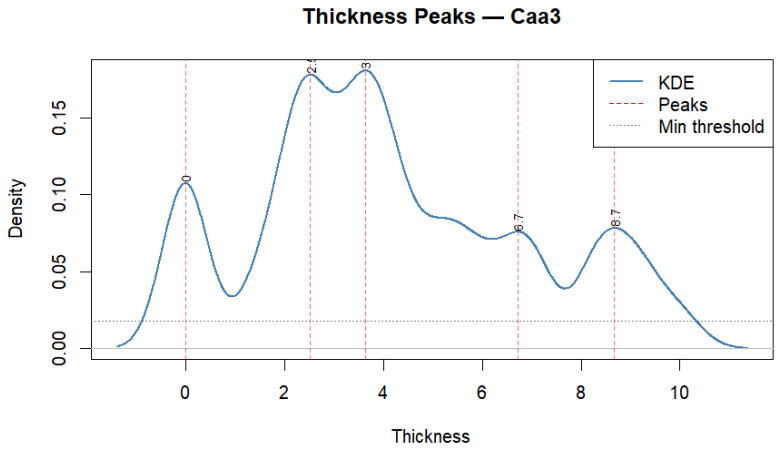
Kernel Density Estimation—B3/Caa1





Kernel Density Estimation—Caa2/Caa3





American Academy of Actuaries

Thickness Concentrations, by Rating

- Increasing the cut-off to >4.25% may reduce thick Baa3 charges by 39 basis points (bps) but increase the thin tranche charge by 153 bps
- The 4% cut-off has been selected based on observing the distribution of tranche thickness for Baa3 (insurance holdings of Baa3 and below are concentrated in Baa3), but a slightly higher cut-off point may be appropriate if the lower-rated tranches were also considered when choosing the cut-off
- For illustrative purposes, the Academy shows 4.25% as an alternative cutoff for thickness as it is:
    1. The mid point of 4% and 4.5% (two peaks in Ba3 tranches)
    2. In the range [3.68%, 4.29%], where there are no Baa3 observations

Regression Results—4% Thickness Cutoff


```
Residuals:
     Min       1Q   Median       3Q      Max
-0.70926 -0.00145 -0.00037  0.00031  0.84095

Coefficients:
                      Estimate Std. Error t value Pr(>|t|)
Aaa                  6.039e-04  1.788e-03   0.338   0.7356
Aa1                  3.094e-03  4.138e-03   0.748   0.4547
Aa2                  4.661e-04  2.672e-03   0.174   0.8615
Aa3                 -3.794e-05  8.282e-03  -0.005   0.9963
A1                   3.657e-03  4.713e-03   0.776   0.4378
A2                   6.176e-04  2.863e-03   0.216   0.8292
A3                  -2.676e-03  1.069e-02  -0.250   0.8024
Baa1                 9.042e-04  6.104e-03   0.148   0.8822
Baa2                 9.849e-03  5.556e-03   1.773   0.0763 .
Baa3                -1.735e-02  2.705e-03  -6.416 1.45e-10 ***
Ba1                  8.131e-02  6.768e-03  12.014  < 2e-16 ***
Ba2                  1.647e-01  7.998e-03  20.588  < 2e-16 ***
Ba3                  1.286e-01  2.845e-03  45.206  < 2e-16 ***
B1                   1.562e-01  5.507e-03  28.356  < 2e-16 ***
B2                   2.477e-01  1.342e-02  18.461  < 2e-16 ***
B3                   4.999e-01  7.064e-03  70.771  < 2e-16 ***
Caa1                 5.079e-01  9.850e-03  51.564  < 2e-16 ***
Caa2                 5.787e-01  9.871e-03  58.624  < 2e-16 ***
Caa3                 7.349e-01  9.033e-03  81.356  < 2e-16 ***
REINV_END_DATE      -1.115e-02  2.000e-03  -5.575 2.53e-08 ***
REINV_END_DATE_1     1.102e-02  2.087e-03   5.281 1.31e-07 ***
REINV_END_DATE_2     1.097e-02  2.169e-03   5.055 4.37e-07 ***
REINV_END_DATE_3     1.132e-02  2.191e-03   5.168 2.40e-07 ***
REINV_END_DATE_4     1.832e-02  2.491e-03   7.354 2.04e-13 ***
REINV_END_DATE_5     2.977e-02  2.170e-03  13.721  < 2e-16 ***
REINV_END_DATE_6     5.467e-02  2.251e-03  24.282  < 2e-16 ***
LOW_QUAL_LOW_THICK   9.795e-02  2.780e-03  35.233  < 2e-16 ***
---
Signif. codes:  0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1

Residual standard error: 0.06828 on 12859 degrees of freedom
Multiple R-squared:  0.8618,    Adjusted R-squared:  0.8615
F-statistic:  2970 on 27 and 12859 DF,  p-value: < 2.2e-16
```

Implied Factors

Rating	Modeled C-1	
	Thickness > 4%	Thickness ≤ 4%
Aaa	0.03%	
Aa1	0.04%	
Aa2	0.04%	
Aa3	0.04%	
A1	0.14%	
A2	0.14%	
A3	1.45%	
Baa1	1.81%	
Baa2	2.70%	
Baa3	2.73%	12.52%

Rating	Modeled C-1	
	Thickness > 4%	Thickness ≤ 4%
Ba1	12.59%	22.39%
Ba2	20.93%	30.72%
Ba3	23.28%	33.08%
B1	26.04%	35.84%
B2	35.20%	44.99%
B3	47.32%	57.12%
Caa1	48.12%	57.92%
Caa2	55.20%	64.99%
Caa3	70.82%	80.61%

American Academy of Actuaries

Regression Results—4.25% Thickness Cutoff


```
Residuals:
     Min       1Q   Median       3Q      Max
-0.69568 -0.00138 -0.00035  0.00031  0.84095

Coefficients:
                    Estimate Std. Error t value Pr(>|t|)
Aaa                6.039e-04  1.755e-03   0.344   0.7308
Aa1                3.094e-03  4.061e-03   0.762   0.4462
Aa2                4.661e-04  2.622e-03   0.178   0.8589
Aa3               -3.794e-05  8.128e-03  -0.005   0.9963
A1                 3.657e-03  4.626e-03   0.791   0.4292
A2                 6.176e-04  2.810e-03   0.220   0.8260
A3                -2.676e-03  1.050e-02  -0.255   0.7987
Baa1               9.042e-04  5.991e-03   0.151   0.8800
Baa2               9.849e-03  5.452e-03   1.806   0.0709 .
Baa3              -1.648e-02  2.654e-03  -6.212 5.38e-10 ***
Ba1                6.834e-02  6.667e-03  10.251  < 2e-16 ***
Ba2                1.518e-01  7.871e-03  19.290  < 2e-16 ***
Ba3                9.658e-02  2.971e-03  32.514  < 2e-16 ***
B1                 1.497e-01  5.410e-03  27.670  < 2e-16 ***
B2                 2.361e-01  1.318e-02  17.915  < 2e-16 ***
B3                 4.827e-01  6.948e-03  69.472  < 2e-16 ***
Caa1               4.846e-01  9.724e-03  49.838  < 2e-16 ***
Caa2               5.588e-01  9.716e-03  57.516  < 2e-16 ***
Caa3               7.230e-01  8.881e-03  81.408  < 2e-16 ***
REINV_END_DATE    -1.187e-02  1.963e-03  -6.046 1.53e-09 ***
REINV_END_DATE_1   1.174e-02  2.048e-03   5.731 1.02e-08 ***
REINV_END_DATE_2   1.169e-02  2.129e-03   5.488 4.15e-08 ***
REINV_END_DATE_3   1.204e-02  2.151e-03   5.600 2.19e-08 ***
REINV_END_DATE_4   1.904e-02  2.445e-03   7.787 7.41e-15 ***
REINV_END_DATE_5   2.823e-02  2.129e-03  13.256  < 2e-16 ***
REINV_END_DATE_6   5.571e-02  2.194e-03  25.387  < 2e-16 ***
LOW_QUAL_LOW_THICK 1.178e-01  2.793e-03  42.196  < 2e-16 ***
---
Signif. codes:  0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 0.06701 on 12859 degrees of freedom
Multiple R-squared:  0.8669,    Adjusted R-squared:  0.8666
F-statistic:  3102 on 27 and 12859 DF,  p-value: < 2.2e-16
```

Implied Factors

Rating	Modeled C-1	
	Thickness > 4.25%	Thickness ≤ 4.25%
Aaa	0.03%	
Aa1	0.04%	
Aa2	0.04%	
Aa3	0.04%	
A1	0.14%	
A2	0.14%	
A3	1.45%	
Baa1	1.81%	
Baa2	2.34%	
Baa3	2.34%	14.05%

Rating	Modeled C-1	
	Thickness > 4.25%	Thickness ≤ 4.25%
Ba1	10.75%	22.54%
Ba2	19.10%	30.89%
Ba3	20.16%	31.94%
B1	25.47%	37.26%
B2	34.11%	45.90%
B3	45.43%	57.21%
Caa1	45.62%	57.40%
Caa2	53.04%	64.82%
Caa3	69.45%	81.24%

Interaction Terms for Reinvestment Horizon

- A3 has a lower average reinvestment horizon than the full universe (0.55 years vs. 2.40 years), leading to a lower C1 factor than adjacent ratings
- When regressing against reinvestment horizon, we need interaction terms (with rating) to account for the non-linear impact of horizon (greater impact on lower ratings)
- If A3 is grouped with Baa1/Baa2 for interaction terms, its C1 factor is 1.45%
- If A3 is grouped with Aa3/A1/A2 for interaction terms, its C1 factor is 0.16%
- The outlier reinvestment horizon and poor credibility for A3 makes its C1 factor sensitive to model assumptions and setup

Regression Results—A3 with Baa1/Baa2


```
Residuals:
     Min       1Q   Median       3Q      Max
-0.70926 -0.00145 -0.00037  0.00031  0.84095

Coefficients:
                      Estimate Std. Error t value Pr(>|t|)
Aaa                  6.039e-04  1.788e-03   0.338   0.7356
Aa1                  3.094e-03  4.138e-03   0.748   0.4547
Aa2                  4.661e-04  2.672e-03   0.174   0.8615
Aa3                 -3.794e-05  8.282e-03  -0.005   0.9963
A1                   3.657e-03  4.713e-03   0.776   0.4378
A2                   6.176e-04  2.863e-03   0.216   0.8292
A3                  -2.676e-03  1.069e-02  -0.250   0.8024
Baa1                 9.042e-04  6.104e-03   0.148   0.8822
Baa2                 9.849e-03  5.556e-03   1.773   0.0763 .
Baa3                -1.735e-02  2.705e-03  -6.416 1.45e-10 ***
Ba1                  8.131e-02  6.768e-03  12.014  < 2e-16 ***
Ba2                  1.647e-01  7.998e-03  20.588  < 2e-16 ***
Ba3                  1.286e-01  2.845e-03  45.206  < 2e-16 ***
B1                   1.562e-01  5.507e-03  28.356  < 2e-16 ***
B2                   2.477e-01  1.342e-02  18.461  < 2e-16 ***
B3                   4.999e-01  7.064e-03  70.771  < 2e-16 ***
Caa1                 5.079e-01  9.850e-03  51.564  < 2e-16 ***
Caa2                 5.787e-01  9.871e-03  58.624  < 2e-16 ***
Caa3                 7.349e-01  9.033e-03  81.356  < 2e-16 ***
REINV_END_DATE      -1.115e-02  2.000e-03  -5.575 2.53e-08 ***
REINV_END_DATE_1     1.102e-02  2.087e-03   5.281 1.31e-07 ***
REINV_END_DATE_2     1.097e-02  2.169e-03   5.055 4.37e-07 ***
REINV_END_DATE_3     1.132e-02  2.191e-03   5.168 2.40e-07 ***
REINV_END_DATE_4     1.832e-02  2.491e-03   7.354 2.04e-13 ***
REINV_END_DATE_5     2.977e-02  2.170e-03  13.721  < 2e-16 ***
REINV_END_DATE_6     5.467e-02  2.251e-03  24.282  < 2e-16 ***
LOW_QUAL_LOW_THICK   9.795e-02  2.780e-03  35.233  < 2e-16 ***
---
Signif. codes:  0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 0.06828 on 12859 degrees of freedom
Multiple R-squared:  0.8618,    Adjusted R-squared:  0.8615
F-statistic:  2970 on 27 and 12859 DF,  p-value: < 2.2e-16
```

Implied Factors

Rating	Modeled C-1	
	Thickness > 4%	Thickness ≤ 4%
Aaa	0.03%	
Aa1	0.04%	
Aa2	0.04%	
Aa3	0.04%	
A1	0.14%	
A2	0.14%	
A3	1.45%	
Baa1	1.81%	
Baa2	2.70%	
Baa3	2.73%	12.52%

Rating	Modeled C-1	
	Thickness > 4%	Thickness ≤ 4%
Ba1	12.59%	22.39%
Ba2	20.93%	30.72%
Ba3	23.28%	33.08%
B1	26.04%	35.84%
B2	35.20%	44.99%
B3	47.32%	57.12%
Caa1	48.12%	57.92%
Caa2	55.20%	64.99%
Caa3	70.82%	80.61%

American Academy of Actuaries

Regression Results—A3 with Aa3/A1/A2


```
Residuals:
     Min       1Q   Median       3Q      Max
-0.70926 -0.00142 -0.00038  0.00027  0.84094

Coefficients:
                      Estimate Std. Error t value Pr(>|t|)
Aaa                 6.039e-04  1.788e-03   0.338    0.736
Aa1                 3.094e-03  4.138e-03   0.748    0.455
Aa2                 4.661e-04  2.672e-03   0.174    0.862
Aa3                -3.707e-05  8.282e-03  -0.004    0.996
A1                  3.665e-03  4.711e-03   0.778    0.437
A2                  6.281e-04  2.856e-03   0.220    0.826
A3                  1.147e-03  1.067e-02   0.107    0.914
Baa1                5.879e-04  6.120e-03   0.096    0.923
Baa2                9.417e-03  5.588e-03   1.685    0.092 .
Baa3               -1.735e-02  2.704e-03  -6.416 1.45e-10 ***
Ba1                 8.131e-02  6.768e-03  12.014  < 2e-16 ***
Ba2                 1.647e-01  7.998e-03  20.589  < 2e-16 ***
Ba3                 1.286e-01  2.845e-03  45.207  < 2e-16 ***
B1                  1.562e-01  5.507e-03  28.356  < 2e-16 ***
B2                  2.477e-01  1.342e-02  18.461  < 2e-16 ***
B3                  4.999e-01  7.064e-03  70.772  < 2e-16 ***
Caa1                5.079e-01  9.850e-03  51.565  < 2e-16 ***
Caa2                5.787e-01  9.871e-03  58.626  < 2e-16 ***
Caa3                7.349e-01  9.033e-03  81.357  < 2e-16 ***
REINV_END_DATE     -1.115e-02  2.000e-03  -5.575 2.53e-08 ***
REINV_END_DATE_1    1.102e-02  2.087e-03   5.281 1.31e-07 ***
REINV_END_DATE_2    1.097e-02  2.169e-03   5.055 4.37e-07 ***
REINV_END_DATE_3    1.132e-02  2.190e-03   5.170 2.38e-07 ***
REINV_END_DATE_4    1.847e-02  2.500e-03   7.389 1.57e-13 ***
REINV_END_DATE_5    2.977e-02  2.170e-03  13.721  < 2e-16 ***
REINV_END_DATE_6    5.467e-02  2.251e-03  24.283  < 2e-16 ***
LOW_QUAL_LOW_THICK  9.795e-02  2.780e-03  35.233  < 2e-16 ***
---
Signif. codes:  0 ‘***’ 0.001 ‘**’ 0.01 ‘*’ 0.05 ‘.’ 0.1 ‘ ’ 1

Residual standard error: 0.06828 on 12859 degrees of freedom
Multiple R-squared:  0.8618,    Adjusted R-squared:  0.8615
F-statistic:  2970 on 27 and 12859 DF,  p-value: < 2.2e-16
```

Implied Factors

Rating	Modeled C-1	
	Thickness > 4%	Thickness ≤ 4%
Aaa	0.03%	
Aa1	0.04%	
Aa2	0.04%	
Aa3	0.04%	
A1	0.14%	
A2	0.14%	
A3	0.16%	
Baa1	1.81%	
Baa2	2.70%	
Baa3	2.73%	12.52%

Rating	Modeled C-1	
	Thickness > 4%	Thickness ≤ 4%
Ba1	12.59%	22.39%
Ba2	20.93%	30.72%
Ba3	23.28%	33.08%
B1	26.04%	35.84%
B2	35.20%	44.99%
B3	47.32%	57.12%
Caa1	48.12%	57.92%
Caa2	55.20%	64.99%
Caa3	70.82%	80.61%

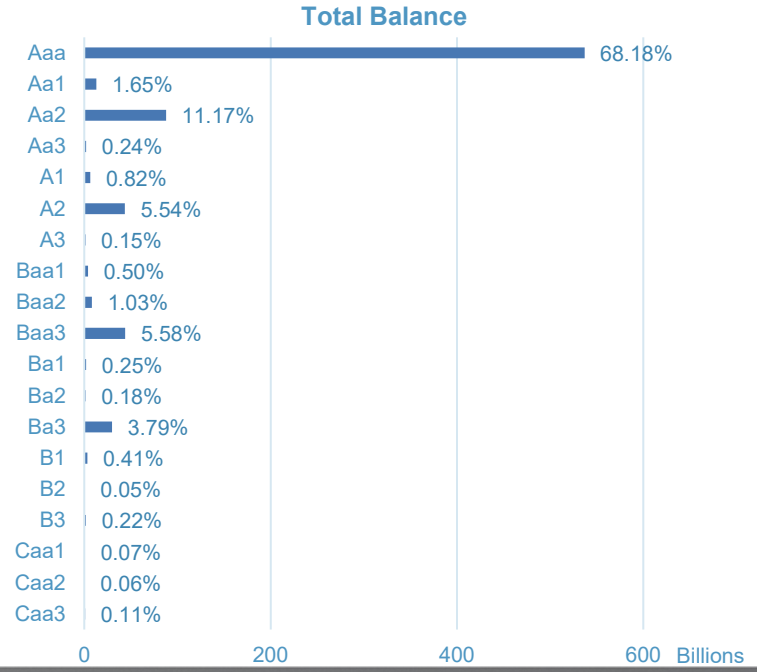
American Academy of Actuaries

Value-at-Risk Analysis, by Rating and Percentile

- The Academy observes that most A/above CLOs do not experience losses until past the 99th percentile
- Baa CLOs, with thickness > 4%, have average C1 factors <1% (less than Baa bond factors) until the 99th percentile
- All below-IG ratings experience losses at the 90th percentile

Dataset Summary

Rating	Count	Total Balance	Average Balance
Aaa	3,701	536,990,530,454	145,093,361
Aa1	297	12,977,362,056	43,694,822
Aa2	1,879	87,971,730,271	46,818,377
Aa3	68	1,892,554,504	27,831,684
A1	246	6,464,462,500	26,278,303
A2	1,642	43,609,160,095	26,558,563
A3	41	1,161,995,000	28,341,341
Baa1	168	3,962,136,650	23,584,147
Baa2	356	8,114,555,000	22,793,694
Baa3	1,980	43,986,588,439	22,215,449
Ba1	118	1,940,755,600	16,447,081
Ba2	79	1,412,324,566	17,877,526
Ba3	1,642	29,832,733,348	18,168,534
B1	154	3,261,262,126	21,177,027
B2	26	422,194,200	16,238,238
B3	330	1,729,679,579	5,241,453
Caa1	50	570,093,651	11,401,873
Caa2	51	479,412,947	9,400,254
Caa3	58	860,837,767	14,842,030



American Academy of Actuaries

Value-at-Risk, by Rating and Percentile

Rating	CTE90	VAR_70	VAR_90	VAR_91	VAR_92	VAR_93	VAR_94	VAR_95	VAR_96	VAR_97	VAR_98	VAR_98.5	VAR_99	VAR_99.25	VAR_99.5	VAR_99.75	VAR_99.9	VAR_99.95	VAR_99.99
Aaa	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%
Aa1	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%
Aa2	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Aa3	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
A1	0.4%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.4%	0.4%	0.4%	4.7%	0.6%	4.3%
A2	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.5%	6.2%	0.8%	9.2%
A3	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.8%	0.0%	0.6%	1.8%	1.5%	1.7%	2.1%
Baa1	1.6%	0.0%	0.3%	1.3%	0.0%	0.0%	0.1%	0.0%	0.6%	0.2%	0.9%	0.5%	3.6%	4.9%	1.4%	19.1%	34.3%	21.6%	42.9%
Baa2	3.0%	0.2%	1.2%	3.5%	0.3%	0.2%	0.4%	0.3%	2.2%	0.8%	3.6%	1.4%	7.1%	13.0%	2.7%	24.2%	46.2%	28.9%	50.8%
Baa3	5.9%	0.2%	3.8%	10.3%	0.1%	0.1%	1.3%	0.1%	7.3%	2.6%	7.5%	4.0%	15.7%	21.6%	6.0%	35.0%	50.9%	45.3%	63.0%
Ba1	20.7%	4.1%	18.1%	33.6%	1.0%	0.5%	14.8%	1.4%	28.9%	20.7%	29.6%	23.9%	47.6%	55.2%	34.2%	59.6%	63.7%	68.1%	70.4%
Ba2	27.4%	8.8%	28.4%	33.2%	3.3%	2.5%	24.9%	8.9%	40.0%	28.8%	42.8%	37.4%	52.0%	55.7%	50.7%	59.5%	59.1%	68.1%	66.0%
Ba3	28.9%	8.4%	33.0%	27.6%	6.3%	7.0%	26.0%	12.0%	33.5%	33.6%	43.1%	41.2%	56.6%	63.4%	56.1%	71.5%	70.5%	77.6%	78.2%
B1	17.3%	3.7%	11.3%	4.9%	10.8%	16.4%	12.3%	20.6%	8.9%	22.6%	20.1%	20.3%	28.0%	26.6%	44.9%	49.4%	45.4%	63.6%	61.0%
B2	30.8%	17.6%	28.5%	18.7%	20.8%	26.3%	30.2%	30.8%	23.4%	38.1%	35.8%	35.2%	44.7%	39.3%	52.7%	56.0%	54.3%	64.3%	66.7%
B3	56.4%	34.9%	61.2%	54.0%	31.5%	37.9%	61.8%	38.3%	64.3%	67.1%	70.8%	70.9%	79.0%	76.8%	77.3%	77.2%	72.3%	80.4%	80.6%
Caa1	57.6%	9.4%	43.8%	30.9%	58.6%	67.1%	58.2%	62.5%	45.7%	60.0%	64.1%	60.6%	74.2%	70.2%	75.9%	76.3%	62.8%	77.6%	78.3%
Caa2	66.5%	19.5%	50.0%	41.6%	68.8%	75.6%	67.4%	74.3%	56.3%	64.7%	74.1%	70.7%	80.0%	77.3%	80.2%	82.3%	65.8%	80.3%	81.6%
Caa3	77.3%	55.2%	67.6%	67.0%	81.9%	80.4%	78.3%	81.0%	73.7%	76.5%	78.1%	78.3%	82.3%	82.2%	83.7%	83.9%	74.9%	85.3%	86.1%

Value-at-Risk, by Rating and Percentile—Thickness > 4%

Rating	CTE90	VAR_70	VAR_90	VAR_91	VAR_92	VAR_93	VAR_94	VAR_95	VAR_96	VAR_97	VAR_98	VAR_98.5	VAR_99	VAR_99.25	VAR_99.5	VAR_99.75	VAR_99.9	VAR_99.95	VAR_99.99
Aaa	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Aa1	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Aa2	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Aa3	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
A1	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	3.9%	0.3%	4.2%
A2	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.4%	5.8%	0.7%	8.9%
A3	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.3%	0.8%	0.0%	0.6%	1.9%	1.5%	1.8%	1.8%
Baa1	1.3%	0.0%	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%	0.3%	0.0%	0.5%	0.3%	2.5%	3.7%	1.3%	18.0%	33.5%	19.0%	40.8%
Baa2	2.7%	0.0%	1.0%	3.1%	0.0%	0.0%	0.1%	0.0%	1.9%	0.6%	3.5%	1.3%	6.6%	12.4%	2.5%	22.9%	45.3%	27.7%	49.7%
Baa3	2.3%	0.0%	0.6%	1.8%	0.0%	0.0%	0.2%	0.0%	1.8%	0.4%	1.7%	1.1%	5.5%	10.6%	2.6%	22.4%	42.2%	35.2%	56.6%
Ba1	3.4%	0.0%	2.6%	2.0%	0.0%	0.0%	2.9%	1.1%	2.6%	1.4%	6.0%	8.2%	4.7%	11.0%	7.4%	19.1%	20.6%	27.2%	29.4%
Ba2	8.8%	1.7%	9.2%	3.0%	3.0%	2.4%	5.3%	8.3%	7.5%	9.3%	13.8%	14.8%	15.0%	17.9%	27.8%	28.8%	28.1%	42.4%	39.3%
Ba3	19.9%	2.4%	22.0%	6.7%	6.4%	7.1%	16.9%	12.7%	15.5%	23.7%	27.6%	32.6%	38.3%	46.1%	51.3%	63.7%	62.0%	72.0%	73.0%
B1	13.7%	0.2%	6.7%	0.7%	8.6%	15.1%	8.6%	17.5%	3.9%	18.2%	15.0%	15.6%	23.5%	21.8%	41.2%	46.3%	42.1%	61.5%	58.7%
B2	12.7%	1.9%	4.9%	0.6%	9.1%	14.8%	8.1%	15.2%	2.6%	17.3%	14.7%	11.5%	25.1%	16.2%	37.0%	43.1%	43.2%	54.1%	58.3%
B3	31.1%	9.8%	18.3%	14.1%	34.9%	37.8%	29.3%	41.7%	22.4%	21.3%	36.0%	34.7%	45.0%	32.2%	51.0%	57.5%	50.1%	56.5%	60.7%
Caa1	35.5%	8.6%	21.5%	22.6%	39.0%	43.2%	30.7%	37.7%	25.4%	35.2%	36.4%	35.5%	48.7%	47.9%	57.3%	57.7%	43.0%	63.0%	64.2%
Caa2	39.1%	22.0%	24.3%	34.8%	44.0%	50.4%	29.4%	44.8%	32.4%	32.9%	41.9%	33.8%	44.1%	42.8%	44.6%	56.6%	39.6%	49.5%	57.1%
Caa3	74.6%	58.6%	64.9%	67.9%	77.6%	76.4%	76.4%	77.7%	73.5%	73.0%	75.3%	74.5%	76.8%	76.5%	79.9%	80.0%	73.4%	81.7%	83.3%

Value-at-Risk, by Rating and Percentile—Thickness ≤ 4%

Rating	CTE90	VAR_70	VAR_90	VAR_91	VAR_92	VAR_93	VAR_94	VAR_95	VAR_96	VAR_97	VAR_98	VAR_98.5	VAR_99	VAR_99.25	VAR_99.5	VAR_99.75	VAR_99.9	VAR_99.95	VAR_99.99
Aaa	0.1%	0.0%	0.1%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
Aa1	21.1%	21.1%	21.1%	21.1%	21.1%	21.1%	21.1%	21.1%	21.1%	21.1%	21.1%	21.1%	21.1%	21.1%	21.1%	21.1%	21.1%	21.1%	21.1%
Aa2	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
A1	5.1%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	15.8%	5.0%	5.2%
A2	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.5%	31.3%	1.8%	27.0%
A3	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	13.8%
Baa1	4.6%	0.0%	3.2%	7.2%	0.1%	0.0%	1.1%	0.0%	3.8%	2.4%	4.6%	2.2%	14.0%	16.1%	2.9%	30.1%	41.6%	46.3%	62.8%
Baa2	10.5%	6.1%	6.3%	14.5%	6.1%	6.1%	6.1%	6.1%	11.2%	6.1%	6.1%	6.1%	19.1%	28.0%	7.3%	54.7%	68.5%	58.0%	78.8%
Baa3	16.3%	0.7%	13.1%	34.6%	0.2%	0.2%	4.5%	0.3%	23.3%	8.9%	24.1%	12.4%	45.0%	53.0%	15.7%	71.1%	75.9%	74.4%	81.4%
Ba1	26.1%	5.4%	23.0%	43.4%	1.3%	0.6%	18.4%	1.5%	37.1%	26.7%	37.0%	28.8%	60.9%	68.9%	42.5%	72.2%	77.1%	80.8%	83.2%
Ba2	38.1%	12.9%	39.6%	50.8%	3.4%	2.5%	36.3%	9.2%	58.9%	40.1%	59.6%	50.6%	73.4%	77.7%	64.0%	77.3%	77.0%	83.1%	81.5%
Ba3	35.6%	12.9%	41.1%	43.1%	6.1%	6.9%	32.7%	11.4%	46.8%	40.9%	54.5%	47.5%	70.2%	76.2%	59.7%	77.3%	76.8%	81.7%	81.9%
B1	54.0%	38.5%	57.6%	47.0%	33.3%	29.6%	49.1%	52.2%	59.7%	66.7%	71.1%	67.3%	73.3%	74.2%	81.5%	80.8%	77.6%	83.8%	83.5%
B2	65.0%	47.2%	73.2%	52.8%	42.8%	48.0%	72.1%	60.3%	62.6%	77.4%	75.8%	80.0%	81.9%	83.0%	82.2%	80.6%	75.5%	83.5%	82.8%
B3	57.3%	35.8%	62.8%	55.5%	31.4%	37.9%	63.0%	38.1%	65.9%	68.8%	72.1%	72.3%	80.3%	78.5%	78.3%	77.9%	73.1%	81.3%	81.4%
Caa1	67.1%	9.7%	53.4%	34.4%	67.0%	77.4%	70.0%	73.2%	54.4%	70.6%	76.0%	71.4%	85.1%	79.7%	83.9%	84.3%	71.3%	83.9%	84.3%
Caa2	70.2%	19.2%	53.4%	42.5%	72.2%	78.9%	72.5%	78.3%	59.5%	69.0%	78.4%	75.6%	84.8%	81.9%	85.0%	85.8%	69.2%	84.4%	84.8%
Caa3	81.5%	50.1%	71.6%	65.7%	88.3%	86.4%	81.2%	86.0%	74.1%	81.8%	82.4%	84.0%	90.5%	91.1%	89.5%	89.9%	77.2%	90.6%	90.3%
Caa3	77.3%	55.2%	67.6%	67.0%	81.9%	80.4%	78.3%	81.0%	73.7%	76.5%	78.1%	78.3%	82.3%	82.2%	83.7%	83.9%	74.9%	85.3%	86.1%

Questions?

For more information, please contact

Amanda Barry-Moilanen,

the Academy's Policy Project Manager, Life at
barrymoilanen@actuary.org

Capital Adequacy (E) Task Force

RBC Proposal Form

☐ Capital Adequacy (E) Task Force
☐ Catastrophe Risk (E) Subgroup
☐ Variable Annuities Capital. & Reserve (E/A) Subgroup
☐ Health RBC (E) Working Group
☐ P/C RBC (E) Working Group
☐ Economic Scenarios (E/A) Subgroup
☐ Life RBC (E) Working Group
☐ Longevity Risk (A/E) Subgroup
☒ RBC Investment Risk & Evaluation (E) Working Group

DATE:	**11/11/2025**
CONTACT PERSON:	**Maggie Chang**
TELEPHONE:	**816-783-8976**
EMAIL ADDRESS:	**mchang@naic.org**
ON BEHALF OF:	**Risk-Based Capital Investment Risk and Evaluation (E) Working Group**
NAME:	**Philip Barlow, Chair**
TITLE:	**Associate Commissioner of Insurance**
AFFILIATION:	**District of Columbia**
ADDRESS:	**1050 First Street, NE Suite 801**
	Washington, DC 20002

FOR NAIC USE ONLY

Agenda Item # 2025-22-IRE
Year 2026 or later

DISPOSITION

ADOPTED:
☐ TASK FORCE (TF) _____
☐ WORKING GROUP (WG) _____
☐ SUBGROUP (SG) _____

EXPOSED:
☐ TASK FORCE (TF) _____
☐ WORKING GROUP (WG) _____
☐ SUBGROUP (SG) _____

REJECTED:
☐ TF ☐ WG ☐ SG _____

OTHER:
☐ DEFERRED TO _____
☐ REFERRED TO OTHER NAIC GROUP
☐ (SPECIFY) _____

IDENTIFICATION OF SOURCE AND FORM(S)/INSTRUCTIONS TO BE CHANGED

☐ Health RBC Blanks
☐ Health RBC Instructions
☐ Health RBC Formula
☐ Property/Casualty RBC Blanks
☐ Property/Casualty RBC Instructions
☐ Property/Casualty RBC Formula
☒ Life and Fraternal RBC Blanks
☒ Life and Fraternal RBC Instructions
☒ Life and Fraternal RBC Formula
☐ OTHER _____

DESCRIPTION/REASON OR JUSTIFICATION OF CHANGE(S)

This proposal incorporates a more granular reporting of Long-Term Bonds into two buckets: i) collateralized loan obligations (CLOs) and ii) all other Long-Term Bonds on the LR002 Bonds page. The expanded presentation of bonds is a result of the work of Risk-Based Capital Investment Risk and Evaluation (E) Working Group under Working Agenda item: 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).

Please note that this proposal does not contemplate any changes to factors. Any changes of factors, if deemed necessary, will be dealt with by a separate proposal. Likewise, residual tranche structural changes, if any, are to be contemplated in separate proposal form.

The accompanying changes proposed to the instructions and blanks of the AVR – Default Component & Equity and Other Invested Asset Component tables are under purview of NAIC Blanks (E) Working Group. As such, the proposed changes to "Annual Statement Source" in LR002 are contingent on the adoption of such Blanks proposal.

Additional Staff Comments:

** **This section must be completed on all forms.** **Revised 2-2023**

BONDS

LR002

Basis of Factors

The bond factors are based on cash flow modeling using historically adjusted default rates for each bond category. For each of 2,000 trials, annual economic conditions were generated for the 10-year modeling period. Each bond of a 400-bond portfolio was annually tested for default (based on a "roll of the dice") where the default probability varies by designation category and that year's economic environment. When a default takes place, the actual loss considers the expected principal loss by category, the time until the sale actually occurs and the assumed tax consequences.

Actual surplus needs are reduced by incorporating anticipated annual contributions to the asset valuation reserve (AVR) as offsetting cash flow. Required surplus for a given trial is calculated as the amount of initial surplus funds needed so that the accumulation with interest of this initial amount and subsequent cash flows will not become negative at any point throughout the modeling period. The factors chosen for the proposed formula produce a level of surplus at least as much as needed in 92% of the trials by category and a 96% level for the entire bond portfolio.

The factor for NAIC 6 bonds recognizes that the book/adjusted carrying value of these bonds reflects a loss of value upon default by being marked to market.

Specific Instructions for Application of the Formula

Lines (1) through (7)

The book/adjusted carrying value of all bonds, excluding collateralized loan obligations ~~and related fixed income investments~~ should be reported in Column (1). The bonds are split into seven different risk classifications. For long-term bonds, these classifications are found on Lines A1 through A7 of the Asset Valuation Reserve Default Component~~, Page 30~~ of the annual statement.

The book/adjusted carrying value of all collateralized loan obligations should be reported in Column 2. The collateralized loan obligations are split into six different risk classifications. These classifications are found on Lines A9.1 through A14 of the Asset Valuation Reserve Default Component~~, Page 30~~ of the annual statement.

Line (8)

The total should equal long-term bonds ~~and other fixed income instruments~~ reported on Page 2, Column 3, Line 1 plus Schedule DL Part 1, Column 6, Line 2009999999 of the annual statement.

Lines (9) through (15)

The book/adjusted carrying value of all short-term and cash equivalent bonds ~~and related fixed income investments~~ should be reported in Column (1). The bonds are split into seven different risk classifications. For short-term bonds, these classifications are found on Lines ~~18~~ C1 through ~~24~~ C7 of the Asset Valuation Reserve Default Component, ~~Page 30~~ of the annual statement. For cash equivalent bonds, these classifications are found in Footnotes to Schedule E, Part 2.

Line (16)

The total should equal short-term bonds reported on Schedule DA, Part 1, Column 6 Line 0509999999 plus Schedule DL Part 1, Column 6, Line 9509999999 plus Schedule E, Part 2, Column 7, Line 0509999999.

Line (22)

Class 1 bonds (highest quality) issued by a U.S. government agency that are not backed by the full faith and credit of the U.S. government should be reported on this line. The loan-backed securities of the Federal National Mortgage Association (FNMA) and the Federal Home Loan Mortgage Corporation (FHLMC) would be examples of the securities reported on this line. Line (22) should not be larger than the sum of Lines (2) and (10). Exempt obligations should not be included on this line.

Line (24)

Bonds should be aggregated by issuer (the first six digits of the CUSIP number can be used). Exempt U.S. government bonds and bonds reported on Line (22) are not counted in determining the size factor. The RBC for those bonds will

not be included in the base to which the size factor is applied. If this field is left blank, the maximum size factor adjustment of 2.40 will be used.

Line (25)
The size factor reflects the higher risk of a bond portfolio that contains relatively fewer bonds. The overall factor decreases as the portfolio size increases. The size factor is based on the weighted number of issuers. (The calculation shown below will not appear on the RBC filing software but will be calculated automatically.)

Line (25)	Source	(a) Number of Issuers (for bonds, excluding CLOs)				(b) Weighted Issuers (for bonds, excluding CLOs)
First 50	Company Records		X	2.40	=	
Next 50	Company Records		X	1.53	=	
Next 100	Company Records		X	0.85	=	
Next 300	Company Records		X	0.85	=	
Over 500	Company Records		X	0.82	=	
(i) Total Numbers of Issuers from Line (23) Column (1)						
(ii) Total Weighted Issuers (for bonds, excluding CLOs)						

	Source	(a) Number of Issuers (for CLOs)				(b) Weighted Issuers (for CLOs)
First XX*	Company Records		X	TBD	=	
Next XX*	Company Records		X	TBD	=	
Next XXX*	Company Records		X	TBD	=	
Next XXX*	Company Records		X	TBD	=	
Over XXX*	Company Records		X	TBD	=	
(iii) Total Number of Issuers from Line (23) Column (2)						
(iv) Total Weighted Issuers (for CLOs)						
Size Factor = Total Weighted Issuers (ii)+(iv) Divided by Total Number of Issuers (i) + (iii)						

* Total number of breakpoints, as well as weights assigned to each, are subject to American Academy of Actuaries' recommendation and Working Group's review.

BONDS

Company Name

Cocode: 00000

BONDS

	SVO Bond Designation Category	Annual Statement Source	(1) Non-CLOs Book / Adjusted Carrying Value	Factor	(2) CLOs Book / Adjusted Carrying Value	Factor		(3) RBC Requirement
	Long Term Bonds							
(1)	Exempt Obligations	C(1) AVR Default Component Column 1 Line A1	$0	0.00000	XXX	XXX	=	$0
		C(1) AVR Default Component Column 1 Line A2.1						
(2.1)	NAIC Designation Category 1.A	C(2) AVR Default Component Column 1 Line A9.1	$0	0.00158	$0	TBD	=	$0
		C(1) AVR Default Component Column 1 Line A2.2						
(2.2)	NAIC Designation Category 1.B	C(2) AVR Default Component Column 1 Line A9.2	$0	0.00271	$0	TBD	=	$0
		C(1) AVR Default Component Column 1 Line A2.3						
(2.3)	NAIC Designation Category 1.C	C(2) AVR Default Component Column 1 Line A9.3	$0	0.00419	$0	TBD	=	$0
		C(1) AVR Default Component Column 1 Line A2.4						
(2.4)	NAIC Designation Category 1.D	C(2) AVR Default Component Column 1 Line A9.4	$0	0.00523	$0	TBD	=	$0
		C(1) AVR Default Component Column 1 Line A2.5						
(2.5)	NAIC Designation Category 1.E	C(2) AVR Default Component Column 1 Line A9.5	$0	0.00657	$0	TBD	=	$0
		C(1) AVR Default Component Column 1 Line A2.6						
(2.6)	NAIC Designation Category 1.F	C(2) AVR Default Component Column 1 Line A9.6	$0	0.00816	$0	TBD	=	$0
		C(1) AVR Default Component Column 1 Line A2.7						
(2.7)	NAIC Designation Category 1.G	C(2) AVR Default Component Column 1 Line A9.7	$0	0.01016	$0	TBD	=	$0
(2.8)	Subtotal NAIC 1	Sum of Lines (2.1) through (2.7)	$0		$0			$0
		C(1) AVR Default Component Column 1 Line A3.1						
(3.1)	NAIC Designation Category 2.A	C(2) AVR Default Component Column 1 Line A10.1	$0	0.01261	$0	TBD	=	$0
		C(1) AVR Default Component Column 1 Line A3.2						
(3.2)	NAIC Designation Category 2.B	C(2) AVR Default Component Column 1 Line A10.2	$0	0.01523	$0	TBD	=	$0
		C(1) AVR Default Component Column 1 Line A3.3						
(3.3)	NAIC Designation Category 2.C	C(2) AVR Default Component Column 1 Line A10.3	$0	0.02168	$0	TBD	=	$0
(3.4)	Subtotal NAIC 2	Sum of Lines (3.1) through (3.3)	$0		$0			$0
		C(1) AVR Default Component Column 1 Line A4.1						
(4.1)	NAIC Designation Category 3.A	C(2) AVR Default Component Column 1 Line A11.1	$0	0.03151	$0	TBD	=	$0
		C(1) AVR Default Component Column 1 Line A4.2						
(4.2)	NAIC Designation Category 3.B	C(2) AVR Default Component Column 1 Line A11.2	$0	0.04537	$0	TBD	=	$0
		C(1) AVR Default Component Column 1 Line A4.3						
(4.3)	NAIC Designation Category 3.C	C(2) AVR Default Component Column 1 Line A11.3	$0	0.06017	$0	TBD	=	$0
(4.4)	Subtotal NAIC 3	Sum of Lines (4.1) through (4.3)	$0		$0			$0
		C(1) AVR Default Component Column 1 Line A5.1						
(5.1)	NAIC Designation Category 4.A	C(2) AVR Default Component Column 1 Line A12.1	$0	0.07386	$0	TBD	=	$0
		C(1) AVR Default Component Column 1 Line A5.2						
(5.2)	NAIC Designation Category 4.B	C(2) AVR Default Component Column 1 Line A12.2	$0	0.09535	$0	TBD	=	$0
		C(1) AVR Default Component Column 1 Line A5.3						
(5.3)	NAIC Designation Category 4.C	C(2) AVR Default Component Column 1 Line A12.3	$0	0.12428	$0	TBD	=	$0
(5.4)	Subtotal NAIC 4	Sum of Lines (5.1) through (5.3)	$0		$0			$0
		C(1) AVR Default Component Column 1 Line A6.1						
(6.1)	NAIC Designation Category 5.A	C(2) AVR Default Component Column 1 Line A13.1	$0	0.16942	$0	TBD	=	$0
		C(1) AVR Default Component Column 1 Line A6.2						
(6.2)	NAIC Designation Category 5.B	C(2) AVR Default Component Column 1 Line A13.2	$0	0.23798	$0	TBD	=	$0
		C(1) AVR Default Component Column 1 Line A6.3						
(6.3)	NAIC Designation Category 5.C	C(2) AVR Default Component Column 1 Line A13.3	$0	0.30000	$0	TBD	=	$0
(6.4)	Subtotal NAIC 5	Sum of Lines (6.1) through (6.3)	$0		$0			$0
		C(1) AVR Default Component Column 1 Line A7						
(7)	NAIC 6	C(2) AVR Default Component Column 1 Line A14	$0	0.30000	$0	TBD	=	$0
(8)	Total Long-Term Bonds	Sum of Lines (1) + (2.8) + (3.4) + (4.4) + (5.4) + (6.4) + (7)	$0		$0			$0
	(Column (1) + Column (2) should equal Page 2 Column 3 Line 1 + Schedule DL Part 1 Column 6 Line 2009999999)							
	Short Term and Cash Equivalent Bonds							
(9)	Exempt Obligations	AVR Default Component Column 1 Line C1 + Schedule E, Part 2, Column 7, Line 0019999999	$0	0.000	XXX	XXX	=	$0
(10.1)	NAIC Designation Category 1.A	AVR Default Component Column 1 Line C2.1 + Schedule E, Part 2, Footnote L000001A, Amount 1 - Schedule E, Part 2, Column 7, Line 0019999999	$0	0.00158	XXX	XXX	=	$0

=ROUND(MAX(0,D10)*F10 + MAX(0,G10)*I10,0)

		AVR Default Component Column 1 Line C2.2 +						
(10.2)	NAIC Designation Category 1.B	Schedule E, Part 2, Footnote L000001A, Amount 2	$0	X	0.00271	XXX	XXX =	$0
		AVR Default Component Column 1 Line C2.3 +						
(10.3)	NAIC Designation Category 1.C	Schedule E, Part 2, Footnote L000001A, Amount 3	$0	X	0.00419	XXX	XXX =	$0
		AVR Default Component Column 1 Line C2.4 +						
(10.4)	NAIC Designation Category 1.D	Schedule E, Part 2, Footnote L000001A, Amount 4	$0	X	0.00523	XXX	XXX =	$0
		AVR Default Component Column 1 Line C2.5 +						
(10.5)	NAIC Designation Category 1.E	Schedule E, Part 2, Footnote L000001A, Amount 5	$0	X	0.00657	XXX	XXX =	$0
		AVR Default Component Column 1 Line C2.6 +						
(10.6)	NAIC Designation Category 1.F	Schedule E, Part 2, Footnote L000001A, Amount 6	$0	X	0.00816	XXX	XXX =	$0
		AVR Default Component Column 1 Line C2.7 +						
(10.7)	NAIC Designation Category 1.G	Schedule E, Part 2, Footnote L000001A, Amount 7	$0	X	0.01016	XXX	XXX =	$0
(10.8)	Subtotal NAIC 1	Sum of Lines (10.1) through (10.7)	$0					$0
		AVR Default Component Column 1 Line C3.1 +						
(11.1)	NAIC Designation Category 2.A	Schedule E, Part 2, Footnote L000001B, Amount 1	$0	X	0.01261	XXX	XXX =	$0
		AVR Default Component Column 1 Line C3.2 +						
(11.2)	NAIC Designation Category 2.B	Schedule E, Part 2, Footnote L000001B, Amount 2	$0	X	0.01523	XXX	XXX =	$0
		AVR Default Component Column 1 Line C3.3 +						
(11.3)	NAIC Designation Category 2.C	Schedule E, Part 2, Footnote L000001B, Amount 3	$0	X	0.02168	XXX	XXX =	$0
(11.4)	Subtotal NAIC 2	Sum of Lines (11.1) through (11.3)	$0					$0
		AVR Default Component Column 1 Line C4.1 +						
(12.1)	NAIC Designation Category 3.A	Schedule E, Part 2, Footnote L000001C, Amount 1	$0	X	0.03151	XXX	XXX =	$0
		AVR Default Component Column 1 Line C4.2 +						
(12.2)	NAIC Designation Category 3.B	Schedule E, Part 2, Footnote L000001C, Amount 2	$0	X	0.04537	XXX	XXX =	$0
		AVR Default Component Column 1 Line C4.3 +						
(12.3)	NAIC Designation Category 3.C	Schedule E, Part 2, Footnote L000001C, Amount 3	$0	X	0.06017	XXX	XXX =	$0
(12.4)	Subtotal NAIC 3	Sum of Lines (12.1) through (12.3)	$0					$0
		AVR Default Component Column 1 Line C5.1 +						
(13.1)	NAIC Designation Category 4.A	Schedule E, Part 2, Footnote L000001D, Amount 1	$0	X	0.07386	XXX	XXX =	$0
		AVR Default Component Column 1 Line C5.2 +						
(13.2)	NAIC Designation Category 4.B	Schedule E, Part 2, Footnote L000001D, Amount 2	$0	X	0.09535	XXX	XXX =	$0
		AVR Default Component Column 1 Line C5.3 +						
(13.3)	NAIC Designation Category 4.C	Schedule E, Part 2, Footnote L000001D, Amount 3	$0	X	0.12428	XXX	XXX =	$0
(13.4)	Subtotal NAIC 4	Sum of Lines (13.1) through (13.3)	$0					$0
		AVR Default Component Column 1 Line C6.1 +						
(14.1)	NAIC Designation Category 5.A	Schedule E, Part 2, Footnote L000001E, Amount 1	$0	X	0.16942	XXX	XXX =	$0
		AVR Default Component Column 1 Line C6.2 +						
(14.2)	NAIC Designation Category 5.B	Schedule E, Part 2, Footnote L000001E, Amount 2	$0	X	0.23798	XXX	XXX =	$0
		AVR Default Component Column 1 Line C6.3 +						
(14.3)	NAIC Designation Category 5.C	Schedule E, Part 2, Footnote L000001E, Amount 3	$0	X	0.30000	XXX	XXX =	$0
(14.4)	Subtotal NAIC 5	Sum of Lines (14.1) through (14.3)	$0					$0
		AVR Default Component Column 1 Line C7						
(15)	NAIC 6	Schedule E, Part 2, Footnote L000001F, Amount 1	$0	X	0.300	XXX	XXX =	$0
(16)	Total Short-Term and Cash Equivalent Bonds	Sum of Lines (9) + (10.8) + (11.4) + (12.4) + (13.4) + (14.4) + (15)	$0					$0
	(Column (1) should equal Schedule DA Part 1 Column 6 Line 0509999999 + Schedule DL Part 1 Column 6 Line 9509999999 + Schedule E Part 2 Column 7 Line 0509999999)							
(17)	Total Long-Term and Short-Term Bonds (pre-MODCO/Funds Withheld)	Line (8) + (16)	$0			$0		$0
(18)	Credit for Hedging	LR014 Hedged Asset Bond Schedule Column (13) Line (0399999)						$0
(19)	Reduction in RBC for MODCO/Funds Withheld Reinsurance Ceded Agreements	LR045 Modco or Funds Withheld Reinsurance Ceded - Bonds C-1o Column (4) Line (9999999)						$0
(20)	Increase in RBC for MODCO/Funds Withheld Reinsurance Assumed Agreements	LR046 Modco or Funds Withheld Reinsurance Assumed - Bonds C-1o Column (4) Line (9999999)						$0
(21)	Total Long-Term and Short-Term Bonds (including MODCO/FundsWithheld and Credit for Hedging adjustments.)	Lines (17) - (18) - (19) + (20)	$0			$0		$0
(22)	Non-exempt U.S. Government Agency Bonds	Schedule D Part 1 Section 1 and Section 2, Schedule DA Part 1 and Schedule E Part 2, in part†	$0	X	0.00158		=	$0
(23)	Bonds Subject to Size Factor	Line (21) - Line (1) - Line (9) - Line (22)	$0			$0		$0
(24)	Number of Issuers	Company Records	$0			$0		
(25)	Size Factor for Bonds							2.4
(26)	Bonds Subject to Size Factor after the Size	Line (23) x Line (25)						$0

Formula subjects to change once breakpoints & weights are finalized

	Factor is Applied		
(27)	Total Bonds	Line (22) + Line (26)	$0

† Only investments in-U.S. Government agency bonds previously reported in Lines (2.8) and (10.8), net of those included on Line (19), plus the portion of Line (20) attributable to ceding companies' Lines (2.8) and (10.8) should be included on Line (22). No other bonds should be included on this line. Exempt U.S. Government bonds shown on Lines (1) and (9) should not be included on Line (22). Refer to the bond section of the risk-based capital instructions for more clarification.

CALCULATION OF TAX EFFECT FOR LIFE AND FRATERNAL RISK-BASED CAPITAL

Company Name

Cocode: 00000

CALCULATION OF TAX EFFECT FOR LIFE AND FRATERNAL RISK-BASED CAPITAL

		Source	(1) RBC Amount		Tax Factor		(2) RBC Tax Effect	
	ASSET RISKS							
	Bonds							
(001)	Long-term Bonds – NAIC 1	LR002 Bonds Column (3) Line (2.8) + LR018 Off-Balance Sheet Collateral Column (3) Line (2.8)	$0	X	0.1680	=	$0	
(002)	Long-term Bonds – NAIC 2	LR002 Bonds Column (3) Line (3.4) + LR018 Off-Balance Sheet Collateral Column (3) Line (3.4)	$0	X	0.1680	=	$0	
(003)	Long-term Bonds – NAIC 3	LR002 Bonds Column (3) Line (4.4) + LR018 Off-Balance Sheet Collateral Column (3) Line (4.4)	$0	X	0.1680	=	$0	
(004)	Long-term Bonds – NAIC 4	LR002 Bonds Column (3) Line (5.4) + LR018 Off-Balance Sheet Collateral Column (3) Line (5.4)	$0	X	0.1680	=	$0	
(005)	Long-term Bonds – NAIC 5	LR002 Bonds Column (3) Line (6.4) + LR018 Off-Balance Sheet Collateral Column (3) Line (6.4)	$0	X	0.1680	=	$0	
(006)	Long-term Bonds – NAIC 6	LR002 Bonds Column (3) Line (7) + LR018 Off-Balance Sheet Collateral Column (3) Line (7)	$0	X	0.2100	=	$0	
(007)	Short-term Bonds – NAIC 1	LR002 Bonds Column (3) Line (10.8)	$0	X	0.1680	=	$0	
(008)	Short-term Bonds – NAIC 2	LR002 Bonds Column (3) Line (11.4)	$0	X	0.1680	=	$0	
(009)	Short-term Bonds – NAIC 3	LR002 Bonds Column (3) Line (12.4)	$0	X	0.1680	=	$0	
(010)	Short-term Bonds – NAIC 4	LR002 Bonds Column (3) Line (13.4)	$0	X	0.1680	=	$0	
(011)	Short-term Bonds – NAIC 5	LR002 Bonds Column (3) Line (14.4)	$0	X	0.1680	=	$0	
(012)	Short-term Bonds – NAIC 6	LR002 Bonds Column (3) Line (15)	$0	X	0.2100	=	$0	
(013)	Credit for Hedging - NAIC 1 Through 5 Bonds	LR014 Hedged Asset Bond Schedule Column (13) Line (0199999)	$0	X	0.1680	=	$0	†
(014)	Credit for Hedging - NAIC 6 Bonds	LR014 Hedged Asset Bond Schedule Column (13) Line (0299999)	$0	X	0.2100	=	$0	†
(015)	Bond Reduction - Reinsurance	LR002 Bonds Column (3) Line (19)	$0	X	0.2100	=	$0	†
(016)	Bond Increase - Reinsurance	LR002 Bonds Column (3) Line (20)	$0	X	0.2100	=	$0	
(017)	Non-Exempt NAIC 1 U.S. Government Agency	LR002 Bonds Column (3) Line (22)	$0	X	0.1680	=	$0	
(018)	Bonds Size Factor	LR002 Bonds Column (3) Line (26) - LR002 Bonds Column (3) Line (21)	$0	X	0.1680	=	$0	

Company Name | Cocode: 00000

CALCULATION OF AUTHORIZED CONTROL LEVEL RISK-BASED CAPITAL

		Source	(1) RBC Requirement
	Insurance Affiliates and Misc. Other Amounts (C-0)		
(1)	Directly Owned Health Insurance Companies or Health Entities	LR042 Summary for Affiliated/Subsidiary Stocks Column (4) Line (1)	$0
(2)	Directly Owned Property and Casualty Insurance Affiliates	LR042 Summary for Affiliated/Subsidiary Stocks Column (4) Line (2)	$0
(3)	Directly Owned Life Insurance Affiliates	LR042 Summary for Affiliated/Subsidiary Stocks Column (4) Line (3)	$0
(4)	Indirectly Owned Health Insurance Companies or Health Entities	LR042 Summary for Affiliated/Subsidiary Stocks Column (4) Line (4)	$0
(5)	Indirectly Owned Property and Casualty Insurance Affiliates	LR042 Summary for Affiliated/Subsidiary Stocks Column (4) Line (5)	$0
(6)	Indirectly Owned Life Insurance Affiliates	LR042 Summary for Affiliated/Subsidiary Stocks Column (4) Line (6)	$0
(7)	Affiliated Alien Insurers - Directly Owned	LR042 Summary for Affiliated/Subsidiary Stocks Column (4) Lines (9) + (10) + (11)	$0
(8)	Affiliated Alien Insurers - Indirectly Owned	LR042 Summary for Affiliated/Subsidiary Stocks Column (4) Lines (12) + (13) + (14)	$0
(9)	Off-Balance Sheet and Other Items	LR017 Off-Balance Sheet and Other Items Column (5) Line (34)	$0
(10)	Total (C-0) - Pre-Tax	Sum of Lines (1) through (9)	$0
(11)	(C-0) Tax Effect	LR030 Calculation of Tax Effect for Life and Fraternal Risk-Based Capital Column (2) Line (122)	$0
(12)	Net (C-0) - Post-Tax	Line (10) - Line (11)	$0
	Asset Risk – Unaffiliated Common Stock and Affiliated Non-Insurance Stock (C-1cs)		
(13)	Schedule D Unaffiliated Common Stock	LR005 Unaffiliated Common Stock Column (5) Line (21) + LR018 Off-Balance Sheet Collateral Column (3) Line (16)	$0
	Schedule BA Unaffiliated Common Stock/ Equity Interests and Affiliated Non-Insurance Stock (C1-cs), excluding		
(14)	Residual Tranches or Interests	LR008 Other Long-Term Assets Column (5) line (49) - (45)	$0
(15)	Total Residual Tranches or Interests	LR008 Other Long-Term Assets Column (5) line (45)	$0
(16)	Common Stock Concentration Factor	LR011 Common Stock Concentration Factor Column (6) Line (6)	$0
(17)	Holding Company in Excess of Indirect Subs	LR042 Summary for Affiliated/Subsidiary Stocks Column (4) Line (7)	$0
(18)	Affiliated Non-Insurers	LR042 Summary for Affiliated/Subsidiary Stocks Column (4) Lines (19) + (20) + (21)	$0
(19)	Total (C-1cs) - Pre-Tax	Sum of Lines (13) through (18)	$0
(20)	(C-1cs) Tax Effect	LR030 Calculation of Tax Effect for Life and Fraternal Risk-Based Capital Column (2) Line (134)	$0
(21)	Net (C-1cs) - Post-Tax	Line (19) - Line (20)	$0
	Asset Risk - All Other (C-1o)		
(22)	Bonds after Size Factor	LR002 Bonds Column (3) Line (27) + LR018 Off-Balance Sheet Collateral Column (3) Line (8)	$0
(23)	Mortgages (including past due and unpaid taxes)	LR004 Mortgages Column (6) Line (31)	$0
(24)	Unaffiliated Preferred Stock	LR005 Unaffiliated Preferred and Common Stock Column (5) Line (10) + LR018 Off-Balance Sheet Collateral Column (3) Line (15)	$0
(25)	Investment Affiliates	LR042 Summary for Affiliated/Subsidiary Stocks Column (4) Line (8)	$0
(26)	Investment in Upstream Affiliate (Parent)	LR042 Summary for Affiliated/Subsidiary Stocks Column (4) Line (15)	$0
(27)	Directly Owned Health Insurance Companies or Health Entities Not Subject to RBC	LR042 Summary for Affiliated/Subsidiary Stocks Column (4) Line (16)	$0
(28)	Directly Owned Property and Casualty Insurance Companies Not Subject to RBC	LR042 Summary for Affiliated/Subsidiary Stocks Column (4) Line (17)	$0
(29)	Directly Owned Life Insurance Companies Not Subject to RBC	LR042 Summary for Affiliated/Subsidiary Stocks Column (4) Line (18)	$0
(30)	Publicly Traded Insurance Affiliates	LR042 Summary for Affiliated/Subsidiary Stocks Column (4) Line (22)	$0
(31)	Separate Accounts with Guarantees	LR006 Separate Accounts Column (3) Line (7)	$0
(32)	Synthetic GIC's (C-1o)	LR006 Separate Accounts Column (3) Line (8)	$0
(33)	Surplus in Non-Guaranteed Separate Accounts	LR006 Separate Accounts Column (3) Line (13)	$0
(34)	Real Estate (gross of encumbrances)	LR007 Real Estate Column (3) Line (13)	$0
(35)	Schedule BA Real Estate (gross of encumbrances)	LR007 Real Estate Column (3) Line (25)	$0
(36)	Other Long-Term Assets	LR008 Other Long-Term Assets Column (5) Line (57) + LR018 Off-Balance Sheet Collateral Column (3) Line (17) + Line (18)	$0

Detail Eliminated to Conserve Space

January 29, 2026

Mr. Philip Barlow, Chair
Risk-Based Capital Investment Risk and Evaluation (E) Working Group
National Association of Insurance Commissioners
1100 Walnut Street, Suite 1500
Kansas City, MO 64106-2197

Re: RBC Formula structure changes to accommodate proposed revised factors for CLOs

Submitted Electronically

Dear Chair Barlow:

The American Council of Life Insurers (ACLI) appreciates the opportunity to comment on the exposed item from the Risk-Based Capital Investment Risk and Evaluation (E) Working Group (RBC IRE WG) on more granular reporting of Collateralized Loan Obligations (CLO) on the LR002 – Bonds page of the Life and Fraternal RBC Blank and related Instructions.

In order to support the changes to the Life RBC Blank, the Blanks (E) Working Group (BWG) exposed item #2025-27BWG concurrently to modify the Asset Valuation Reserve (AVR) pages. The BWG exposure highlights that all CLOs (as reported in Schedule D–Part 1–Section 2 – Asset-Backed Securities) would be included in the data being fed to the Life RBC Blank. Based on that assumption, ACLI is interpreting that any changes in the factors for the CLOs would apply to all types of CLOs (e.g., BSL, MML), CBOs and CDOs.

As stated in the RBC IRE WG exposure to modify the LR002 – Bonds page, the proposed changes to the 'Annual Statement Source' are contingent on the adoption of the related BWG proposal. After reviewing both exposures, the 'Line Number' column was changed for all sections in the AVR pages. ACLI suggests revising all lines in the Life RBC Blank that are sourced from the AVR pages upon adoption of the exposed BWG proposal.

We welcome the opportunity to discuss our comments further and to support RBC IRE WG's continued work in this area.

Sincerely,

Tip Tipton, CPA
Vice President – Accounting Policy
TipTipton@acli.com
202-624-2015

Marc Altschull, CFA, FSA, MAAA
Senior Actuary
MarcAltschull@acli.com
202-624-2089

Capital Adequacy (E) Task Force
RBC Proposal Form

☐ Capital Adequacy (E) Task Force
☐ Catastrophe Risk (E) Subgroup
☐ Variable Annuities Capital. & Reserve (E/A) Subgroup
☐ Health RBC (E) Working Group
☐ P/C RBC (E) Working Group
☐ Economic Scenarios (E/A) Subgroup
☐ Life RBC (E) Working Group
☐ Longevity Risk (A/E) Subgroup
☒ RBC Investment Risk & Evaluation (E) Working Group

DATE: 11/11/2025

CONTACT PERSON: Maggie Chang
TELEPHONE: 816-783-8976
EMAIL ADDRESS: mchang@naic.org
ON BEHALF OF: Risk-Based Capital Investment Risk and Evaluation (E) Working Group
NAME: Philip Barlow, Chair
TITLE: Associate Commissioner of Insurance
AFFILIATION: District of Columbia
ADDRESS: 1050 First Street, NE Suite 801
Washington, DC 20002

FOR NAIC USE ONLY

Agenda Item # 2025-22-IRE MOD
Year 2026 or later

DISPOSITION

ADOPTED:
☐ TASK FORCE (TF) _____
☐ WORKING GROUP (WG) _____
☐ SUBGROUP (SG) _____

EXPOSED:
☐ TASK FORCE (TF) _____
☒ WORKING GROUP (WG) 12/15/25
☐ SUBGROUP (SG) _____

REJECTED:
☐ TF ☐ WG ☐ SG _____

OTHER:
☐ DEFERRED TO _____
☐ REFERRED TO OTHER NAIC GROUP
☐ (SPECIFY) _____

IDENTIFICATION OF SOURCE AND FORM(S)/INSTRUCTIONS TO BE CHANGED

☐ Health RBC Blanks
☐ Health RBC Instructions
☐ Health RBC Formula
☐ Property/Casualty RBC Blanks
☐ Property/Casualty RBC Instructions
☐ Property/Casualty RBC Formula
☒ Life and Fraternal RBC Blanks
☒ Life and Fraternal RBC Instructions
☒ Life and Fraternal RBC Formula
☐ OTHER _____

DESCRIPTION/REASON OR JUSTIFICATION OF CHANGE(S)

This proposal incorporates a more granular reporting of Long-Term Bonds into two buckets: i) collateralized loan obligations (CLOs) and ii) all other Long-Term Bonds on the LR002 Bonds page. The expanded presentation of bonds is a result of the work of Risk-Based Capital Investment Risk and Evaluation (E) Working Group under Working Agenda item: 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).

Please note that this proposal does not contemplate any changes to factors. Any changes of factors, if deemed necessary, will be dealt with by a separate proposal. Likewise, residual tranche structural changes, if any, are to be contemplated in separate proposal form.

The accompanying changes proposed to the instructions and blanks of the AVR – Default Component & Equity and Other Invested Asset Component tables are under purview of NAIC Blanks (E) Working Group. As such, the proposed changes to "Annual Statement Source" in LR002 are contingent on the adoption of such Blanks proposal.

Additional Staff Comments:

12/15/25 – exposed by Working Group (mkc)
3/23/26 – modified to incorporate tranche thickness as comparable attributes (mkc). All modifications are highlighted in yellow

** **This section must be completed on all forms.** **Revised 2-2023**

BONDS

LR002

Basis of Factors

The bond factors are based on cash flow modeling using historically adjusted default rates for each bond category. For each of 2,000 trials, annual economic conditions were generated for the 10-year modeling period. Each bond of a 400-bond portfolio was annually tested for default (based on a "roll of the dice") where the default probability varies by designation category and that year's economic environment. When a default takes place, the actual loss considers the expected principal loss by category, the time until the sale actually occurs and the assumed tax consequences.

Actual surplus needs are reduced by incorporating anticipated annual contributions to the asset valuation reserve (AVR) as offsetting cash flow. Required surplus for a given trial is calculated as the amount of initial surplus funds needed so that the accumulation with interest of this initial amount and subsequent cash flows will not become negative at any point throughout the modeling period. The factors chosen for the proposed formula produce a level of surplus at least as much as needed in 92% of the trials by category and a 96% level for the entire bond portfolio.

The factor for NAIC 6 bonds recognizes that the book/adjusted carrying value of these bonds reflects a loss of value upon default by being marked to market.

Specific Instructions for Application of the Formula

Lines (1) through (7)

The book/adjusted carrying value of all bonds, excluding collateralized loan obligations (CLOs), Collateralized Bond Obligations (CBOs), and Collateralized Debt Obligations (CDOs) ~~and related fixed income investments~~ should be reported in Column (1). The bonds are split into seven different risk classifications. For long-term bonds, these classifications are found on Lines A1 through A7 of the Asset Valuation Reserve Default Component~~, Page 30~~ of the annual statement.

The book/adjusted carrying value of all ~~collateralized loan obligations~~CLOs/CBOs/CDOs should be reported in Column 2. The ~~collateralized loan obligations~~ CLOs/CBOs/CDOs are split into six different risk classifications. These classifications are found on Lines A9.1 through A14 of the Asset Valuation Reserve Default Component~~, Page 30~~ of the annual statement.

Line (7.2)

Amounts reported in Column (2) line (3.3), (4.1), (4.2), (4.3), (5.1), (5.2), (5.3), (6.1), (6.2), (6.3) should exclude book/adjusted carrying value of Broadly Syndicated Bank Loans (BSL) CLO tranches (as defined below) with [current] tranche thickness less than or equal to [4%] (as defined below). Such balances should be reported in Column (2) Line (7.2).

BSL are typically syndicated corporate loans distributed to a broad base of institutional investors and rated by credit rating agencies. BSL CLOs are primarily backed by syndicated corporate loans.

[Current] Tranche thickness is defined as the difference between the attachment point (AP) and the detachment point (DP) of a CLO tranche. AP refers to tranche's subordination percentage, and DP is the percentage of total par amount of the underlying portfolio including principal proceeds, that will completely write off the tranche. The current tranche thickness is to be measured using the most recent periodic report available, without being stale, as of the investment reporting date.

Report the Subtotal RBC Requirement in Column (4), Line (7.2) based on the following calculations:

NAIC Designation Categories of the thin tranche CLOs	Book/Adjusted Carrying Value		Factors		RBC Requirement
NAIC Designation Category 2.C	Company Record	X	TBD	=	
NAIC Designation Category 3.A	Company Record	X	TBD	=	

NAIC Designation Category 3.B	Company Record	X	TBD	=	
NAIC Designation Category 3.C	Company Record	X	TBD	=	
NAIC Designation Category 4.A	Company Record	X	TBD	=	
NAIC Designation Category 4.B	Company Record	X	TBD	=	
NAIC Designation Category 4.C	Company Record	X	TBD	=	
NAIC Designation Category 5.A	Company Record	X	TBD	=	
NAIC Designation Category 5.B	Company Record	X	TBD	=	
NAIC Designation Category 5.C	Company Record	X	TBD	=	
			Subtotal		==========

The total of Column (2) Lines (3.3), (4.1), (4.2), (4.3), (5.1), (5.2), (5.3) (6.1), (6.2) and (6.3) should agree to the total of AVR Default Component Column 1 Line A10.3, Line A11.1, Line A11.2, Line A11.3, Line A12.1, Line A12.2, Line A12.3, Line A13.1, Line A13.2, Line A13.3.

Line (8)
The total should equal long-term bonds ~~and other fixed income instruments~~ reported on Page 2, Column 3, Line 1 plus Schedule DL Part 1, Column 6, Line 2009999999 of the annual statement.

Lines (9) through (15)
The book/adjusted carrying value of all short-term and cash equivalent bonds ~~and related fixed income investments~~ should be reported in Column (1). The bonds are split into seven different risk classifications. For short-term bonds, these classifications are found on Lines ~~18~~ C1 through ~~24~~ C7 of the Asset Valuation Reserve Default Component, ~~Page 30~~ of the annual statement. For cash equivalent bonds, these classifications are found in Footnotes to Schedule E, Part 2.

Line (16)
The total should equal short-term bonds reported on Schedule DA, Part 1, Column 6 Line 0509999999 plus Schedule DL Part 1, Column 6, Line 9509999999 plus Schedule E, Part 2, Column 7, Line 0509999999.

Line (22)
Class 1 bonds (highest quality) issued by a U.S. government agency that are not backed by the full faith and credit of the U.S. government should be reported on this line. The loan-backed securities of the Federal National Mortgage Association (FNMA) and the Federal Home Loan Mortgage Corporation (FHLMC) would be examples of the securities reported on this line. Line (22) should not be larger than the sum of Lines (2) and (10). Exempt obligations should not be included on this line.

Line (24)
Bonds should be aggregated by issuer (the first six digits of the CUSIP number can be used). Exempt U.S. government bonds and bonds reported on Line (22) are not counted in determining the size factor. The RBC for those bonds will not be included in the base to which the size factor is applied. If this field is left blank, the maximum size factor adjustment of 2.40 will be used.

Line (25)
The size factor reflects the higher risk of a bond portfolio that contains relatively fewer bonds. The overall factor decreases as the portfolio size increases. The size factor is based on the weighted number of issuers. (The calculation shown below will not appear on the RBC filing software but will be calculated automatically.)

Line (25)	Source	(a) Number of Issuers (for bonds,	(b) Weighted Issuers (for bonds, excluding CLOs/CBOs/CDOs)

		excluding CLOs/CBOs/CDOs)				
First 50	Company Records		X	2.40	=	
Next 50	Company Records		X	1.53	=	
Next 100	Company Records		X	0.85	=	
Next 300	Company Records		X	0.85	=	
Over 500	Company Records		X	0.82	=	
(i) Total Number of Issuers from Line (23) Column (1)						
(ii) Total Weighted Issuers (for bonds, excluding CLOs/CBOs/CDOs)						

	Source	(a) Number of Issuers (for CLOs/CBOs/CDOs)				(b) Weighted Issuers (for CLOs/CBOs/CDOs)
First XX*	Company Records		X	TBD	=	
Next XX*	Company Records		X	TBD	=	
Next XXX*	Company Records		X	TBD	=	
Next XXX*	Company Records		X	TBD	=	
Over XXX*	Company Records		X	TBD	=	
(iii) Total Number of Issuers from Line (23) Column (2)						
(iv) Total Weighted Issuers (for CLOs/CBOs/CDOs)						
Size Factor = Total Weighted Issuers (ii)+(iv) Divided by Total Number of Issuers (i)+(iii)						

* Total number of breakpoints, as well as weights assigned to each, is subject to American Academy of Actuaries' recommendation and Working Group's review.

BONDS

Company Name

Cocode: 00000

BONDS

	SVO Bond Designation Category	Annual Statement Source	(1) Non-CLOs/CBOs/CDOs Book / Adjusted Carrying Value		Factor	(2) CLOs/CBOs/CDOs Book / Adjusted Carrying Value		(3) Factor		(4) RBC Requirement
	Long Term Bonds									
(1)	Exempt Obligations	C(1) AVR Default Component Column 1 Line A1 C(1) AVR Default Component Column 1 Line A2.1	$0	X	0.00000	XXX		XXX	=	$0
(2.1)	NAIC Designation Category 1.A	C(2) AVR Default Component Column 1 Line A9.1 C(1) AVR Default Component Column 1 Line A2.2	$0	X	0.00158	$0	X	TBD	=	$0
(2.2)	NAIC Designation Category 1.B	C(2) AVR Default Component Column 1 Line A9.2 C(1) AVR Default Component Column 1 Line A2.3	$0	X	0.00271	$0	X	TBD	=	$0
(2.3)	NAIC Designation Category 1.C	C(2) AVR Default Component Column 1 Line A9.3 C(1) AVR Default Component Column 1 Line A2.4	$0	X	0.00419	$0	X	TBD	=	$0
(2.4)	NAIC Designation Category 1.D	C(2) AVR Default Component Column 1 Line A9.4 C(1) AVR Default Component Column 1 Line A2.5	$0	X	0.00523	$0	X	TBD	=	$0
(2.5)	NAIC Designation Category 1.E	C(2) AVR Default Component Column 1 Line A9.5 C(1) AVR Default Component Column 1 Line A2.6	$0	X	0.00657	$0	X	TBD	=	$0
(2.6)	NAIC Designation Category 1.F	C(2) AVR Default Component Column 1 Line A9.6 C(1) AVR Default Component Column 1 Line A2.7	$0	X	0.00816	$0	X	TBD	=	$0
(2.7)	NAIC Designation Category 1.G	C(2) AVR Default Component Column 1 Line A9.7	$0	X	0.01016	$0	X	TBD	=	$0
(2.8)	Subtotal NAIC 1	Sum of Lines (2.1) through (2.7)	$0			$0				$0
(3.1)	NAIC Designation Category 2.A	C(1) AVR Default Component Column 1 Line A3.1 C(2) AVR Default Component Column 1 Line A10.1 C(1) AVR Default Component Column 1 Line A3.2	$0	X	0.01261	$0	X	TBD	=	$0
(3.2)	NAIC Designation Category 2.B	C(2) AVR Default Component Column 1 Line A10.2	$0	X	0.01523	$0	X	TBD	=	$0
(3.3)	NAIC Designation Category 2.C	C(1) AVR Default Component Column 1 Line A3.3 C(2) AVR Default Component Column 1 Line A10.3, in part	$0	X	0.02168	$0 ‡	X	TBD	=	$0
(3.4)	Subtotal NAIC 2	Sum of Lines (3.1) through (3.3)	$0			$0				$0
(4.1)	NAIC Designation Category 3.A	C(1) AVR Default Component Column 1 Line A4.1 C(2) AVR Default Component Column 1 Line A11.1, in part C(1) AVR Default Component Column 1 Line A4.2	$0	X	0.03151	$0 ‡	X	TBD	=	$0
(4.2)	NAIC Designation Category 3.B	C(2) AVR Default Component Column 1 Line A11.2, in part C(1) AVR Default Component Column 1 Line A4.3	$0	X	0.04537	$0 ‡	X	TBD	=	$0
(4.3)	NAIC Designation Category 3.C	C(2) AVR Default Component Column 1 Line A11.3, in part	$0	X	0.06017	$0 ‡	X	TBD	=	$0
(4.4)	Subtotal NAIC 3	Sum of Lines (4.1) through (4.3)	$0			$0				$0
(5.1)	NAIC Designation Category 4.A	C(1) AVR Default Component Column 1 Line A5.1 C(2) AVR Default Component Column 1 Line A12.1, in part C(1) AVR Default Component Column 1 Line A5.2	$0	X	0.07386	$0 ‡	X	TBD	=	$0
(5.2)	NAIC Designation Category 4.B	C(2) AVR Default Component Column 1 Line A12.2, in part C(1) AVR Default Component Column 1 Line A5.3	$0	X	0.09535	$0 ‡	X	TBD	=	$0
(5.3)	NAIC Designation Category 4.C	C(2) AVR Default Component Column 1 Line A12.3, in part	$0	X	0.12428	$0 ‡	X	TBD	=	$0
(5.4)	Subtotal NAIC 4	Sum of Lines (5.1) through (5.3)	$0			$0				$0
(6.1)	NAIC Designation Category 5.A	C(1) AVR Default Component Column 1 Line A6.1 C(2) AVR Default Component Column 1 Line A13.1, in part C(1) AVR Default Component Column 1 Line A6.2	$0	X	0.16942	$0 ‡	X	TBD	=	$0
(6.2)	NAIC Designation Category 5.B	C(2) AVR Default Component Column 1 Line A13.2, in part C(1) AVR Default Component Column 1 Line A6.3	$0	X	0.23798	$0 ‡	X	TBD	=	$0
(6.3)	NAIC Designation Category 5.C	C(2) AVR Default Component Column 1 Line A13.3, in part	$0	X	0.30000	$0 ‡	X	TBD	=	$0
(6.4)	Subtotal NAIC 5	Sum of Lines (6.1) through (6.3)	$0			$0				$0
(7.1)	NAIC 6	C(1) AVR Default Component Column 1 Line A7 C(2) AVR Default Component Column 1 Line A14	$0	X	0.30000	$0	X	TBD	=	$0
(7.2)	CLO in NAIC Designation Category 2.C or below, with thin tranches (See Instruction)	C(2) AVR Default Component Column 1 Line A10.3, in part + Line A11.1, in part + Line A11.2, in part + Line A11.3, in part + Line A12.1, in part + Line A12.2, in part + Line A12.3, in part + Line A13.1, in part + Line A13.2, in part + Line A13.3, in part	XXX		XXX		X	Composite Factor '§	=	
(8)	Total Long-Term Bonds (Column (1) + Column (2) should equal Page 2 Column 3 Line 1 + Schedule DL Part 1 Column 6 Line 2009999999)	Sum of Lines (1) + (2.8) + (3.4) + (4.4) + (5.4) + (6.4) + (7.1) + (7.2)	$0			$0				$0
	Short Term and Cash Equivalent Bonds									
(9)	Exempt Obligations	AVR Default Component Column 1 Line C1 + Schedule E, Part 2, Column 7, Line 0019999999	$0	X	0.000	XXX		XXX	=	$0
(10.1)	NAIC Designation Category 1.A	AVR Default Component Column 1 Line C2.1 + Schedule E, Part 2, Footnote L000001A, Amount 1 - Schedule E, Part 2, Column 7, Line 0019999999	$0	X	0.00158	XXX		XXX	=	$0
(10.2)	NAIC Designation Category 1.B	AVR Default Component Column 1 Line C2.2 + Schedule E, Part 2, Footnote L000001A, Amount 2	$0	X	0.00271	XXX		XXX	=	$0
(10.3)	NAIC Designation Category 1.C	AVR Default Component Column 1 Line C2.3 + Schedule E, Part 2, Footnote L000001A, Amount 3	$0	X	0.00419	XXX		XXX	=	$0
(10.4)	NAIC Designation Category 1.D	AVR Default Component Column 1 Line C2.4 + Schedule E, Part 2, Footnote L000001A, Amount 4	$0	X	0.00523	XXX		XXX	=	$0
(10.5)	NAIC Designation Category 1.E	AVR Default Component Column 1 Line C2.5 + Schedule E, Part 2, Footnote L000001A, Amount 5	$0	X	0.00657	XXX		XXX	=	$0
(10.6)	NAIC Designation Category 1.F	AVR Default Component Column 1 Line C2.6 + Schedule E, Part 2, Footnote L000001A, Amount 6	$0	X	0.00816	XXX		XXX	=	$0
(10.7)	NAIC Designation Category 1.G	AVR Default Component Column 1 Line C2.7 + Schedule E, Part 2, Footnote L000001A, Amount 7	$0	X	0.01016	XXX		XXX	=	$0
(10.8)	Subtotal NAIC 1	Sum of Lines (10.1) through (10.7)	$0							$0

=ROUND(MAX(0,D10)*F10 + MAX(0,G10)*I10,0)

		AVR Default Component Column 1 Line C3.1 +						
(11.1)	NAIC Designation Category 2.A	Schedule E, Part 2, Footnote L000001B, Amount 1	$0	X	0.01261	XXX	XXX =	$0
		AVR Default Component Column 1 Line C3.2 +						
(11.2)	NAIC Designation Category 2.B	Schedule E, Part 2, Footnote L000001B, Amount 2	$0	X	0.01523	XXX	XXX =	$0
		AVR Default Component Column 1 Line C3.3 +						
(11.3)	NAIC Designation Category 2.C	Schedule E, Part 2, Footnote L000001B, Amount 3	$0	X	0.02168	XXX	XXX =	$0
(11.4)	Subtotal NAIC 2	Sum of Lines (11.1) through (11.3)	$0					$0
		AVR Default Component Column 1 Line C4.1 +						
(12.1)	NAIC Designation Category 3.A	Schedule E, Part 2, Footnote L000001C, Amount 1	$0	X	0.03151	XXX	XXX =	$0
		AVR Default Component Column 1 Line C4.2 +						
(12.2)	NAIC Designation Category 3.B	Schedule E, Part 2, Footnote L000001C, Amount 2	$0	X	0.04537	XXX	XXX =	$0
		AVR Default Component Column 1 Line C4.3 +						
(12.3)	NAIC Designation Category 3.C	Schedule E, Part 2, Footnote L000001C, Amount 3	$0	X	0.06017	XXX	XXX =	$0
(12.4)	Subtotal NAIC 3	Sum of Lines (12.1) through (12.3)	$0					$0
		AVR Default Component Column 1 Line C5.1 +						
(13.1)	NAIC Designation Category 4.A	Schedule E, Part 2, Footnote L000001D, Amount 1	$0	X	0.07386	XXX	XXX =	$0
		AVR Default Component Column 1 Line C5.2 +						
(13.2)	NAIC Designation Category 4.B	Schedule E, Part 2, Footnote L000001D, Amount 2	$0	X	0.09535	XXX	XXX =	$0
		AVR Default Component Column 1 Line C5.3 +						
(13.3)	NAIC Designation Category 4.C	Schedule E, Part 2, Footnote L000001D, Amount 3	$0	X	0.12428	XXX	XXX =	$0
(13.4)	Subtotal NAIC 4	Sum of Lines (13.1) through (13.3)	$0					$0
		AVR Default Component Column 1 Line C6.1 +						
(14.1)	NAIC Designation Category 5.A	Schedule E, Part 2, Footnote L000001E, Amount 1	$0	X	0.16942	XXX	XXX =	$0
		AVR Default Component Column 1 Line C6.2 +						
(14.2)	NAIC Designation Category 5.B	Schedule E, Part 2, Footnote L000001E, Amount 2	$0	X	0.23798	XXX	XXX =	$0
		AVR Default Component Column 1 Line C6.3 +						
(14.3)	NAIC Designation Category 5.C	Schedule E, Part 2, Footnote L000001E, Amount 3	$0	X	0.30000	XXX	XXX =	$0
(14.4)	Subtotal NAIC 5	Sum of Lines (14.1) through (14.3)	$0					$0
		AVR Default Component Column 1 Line C7						
(15)	NAIC 6	Schedule E, Part 2, Footnote L000001F, Amount 1	$0	X	0.300	XXX	XXX =	$0
(16)	Total Short-Term and Cash Equivalent Bonds (Column (1) should equal Schedule DA Part 1 Column 6 Line 0509999999 + Schedule DL Part 1 Column 6 Line 9509999999 +	Sum of Lines (9) + (10.8) + (11.4) + (12.4) + (13.4) + (14.4) + (15) Schedule E Part 2 Column 7 Line 0509999999)	$0					$0
(17)	Total Long-Term and Short-Term Bonds (pre-MODCO/Funds Withheld)	Line (8) + (16)	$0		$0			$0
(18)	Credit for Hedging	LR014 Hedged Asset Bond Schedule Column (13) Line (0399999)						$0
(19)	Reduction in RBC for MODCO/Funds Withheld Reinsurance Ceded Agreements	LR045 Modco or Funds Withheld Reinsurance Ceded - Bonds C-1o Column (4) Line (9999999)						$0
(20)	Increase in RBC for MODCO/Funds Withheld Reinsurance Assumed Agreements	LR046 Modco or Funds Withheld Reinsurance Assumed - Bonds C-1o Column (4) Line (9999999)						$0
(21)	Total Long-Term and Short-Term Bonds (including MODCO/FundsWithheld and Credit for Hedging adjustments.)	Lines (17) - (18) - (19) + (20)	$0		$0			$0
(22)	Non-exempt U.S. Government Agency Bonds	Schedule D Part 1 Section 1 and Section 2, Schedule DA Part 1 and Schedule E Part 2, in part†	$0	X	0.00158		=	$0
(23)	Bonds Subject to Size Factor	Line (21) - Line (1) - Line (9) - Line (22)	$0		$0			$0
(24)	Number of Issuers	Company Records	$0		$0			
(25)	Size Factor for Bonds							2.4 **Formula subjects to change once breakpoints & weights are finalized**
(26)	Bonds Subject to Size Factor after the Size Factor is Applied	Line (23) x Line (25)						$0
(27)	Total Bonds	Line (22) + Line (26)						$0

† Only investments in-U.S. Government agency bonds previously reported in Lines (2.8) and (10.8), net of those included on Line (19), plus the portion of Line (20) attributable to ceding companies' Lines (2.8) and (10.8) should be included on Line (22). No other bonds should be included on this line. Exempt U.S. Government bonds shown on Lines (1) and (9) should not be included on Line (22). Refer to the bond section of the risk-based capital instructions for more clarification.

‡ Exclude BSL CLO tranches with current tranche thickness less than or equal to 4% . Refer to Instruction for details.

§ Column (3) is calculated as Column (4) divided by Column (2).

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

CALCULATION OF TAX EFFECT FOR LIFE AND FRATERNAL RISK-BASED CAPITAL

Company Name

Cocode: 00000

CALCULATION OF TAX EFFECT FOR LIFE AND FRATERNAL RISK-BASED CAPITAL

		Source	(1) RBC Amount		Tax Factor		(2) RBC Tax Effect	
	ASSET RISKS							
	Bonds							
(001)	Long-term Bonds – NAIC 1	LR002 Bonds Column (4) Line (2.8) + LR018 Off-Balance Sheet Collateral Column (3) Line (2.8)	$0	X	0.1680	=	$0	
(002)	Long-term Bonds – NAIC 2	LR002 Bonds Column (4) Line (3.4) + LR018 Off-Balance Sheet Collateral Column (3) Line (3.4)	$0	X	0.1680	=	$0	
(003)	Long-term Bonds – NAIC 3	LR002 Bonds Column (4) Line (4.4) + LR018 Off-Balance Sheet Collateral Column (3) Line (4.4)	$0	X	0.1680	=	$0	
(004)	Long-term Bonds – NAIC 4	LR002 Bonds Column (4) Line (5.4) + LR018 Off-Balance Sheet Collateral Column (3) Line (5.4)	$0	X	0.1680	=	$0	
(005)	Long-term Bonds – NAIC 5 & Others	LR002 Bonds Column (4) Line (6.4) & (7.2) + LR018 Off-Balance Sheet Collateral Column (3) Line (6.4)	$0	X	0.1680	=	$0	
(006)	Long-term Bonds – NAIC 6	LR002 Bonds Column (4) Line (7.1) + LR018 Off-Balance Sheet Collateral Column (3) Line (7)	$0	X	0.2100	=	$0	
(007)	Short-term Bonds – NAIC 1	LR002 Bonds Column (4) Line (10.8)	$0	X	0.1680	=	$0	
(008)	Short-term Bonds – NAIC 2	LR002 Bonds Column (4) Line (11.4)	$0	X	0.1680	=	$0	
(009)	Short-term Bonds – NAIC 3	LR002 Bonds Column (4) Line (12.4)	$0	X	0.1680	=	$0	
(010)	Short-term Bonds – NAIC 4	LR002 Bonds Column (4) Line (13.4)	$0	X	0.1680	=	$0	
(011)	Short-term Bonds – NAIC 5	LR002 Bonds Column (4) Line (14.4)	$0	X	0.1680	=	$0	
(012)	Short-term Bonds – NAIC 6	LR002 Bonds Column (4) Line (15)	$0	X	0.2100	=	$0	
(013)	Credit for Hedging - NAIC 1 Through 5 Bonds	LR014 Hedged Asset Bond Schedule Column (13) Line (0199999)	$0	X	0.1680	=	$0	†
(014)	Credit for Hedging - NAIC 6 Bonds	LR014 Hedged Asset Bond Schedule Column (13) Line (0299999)	$0	X	0.2100	=	$0	†
(015)	Bond Reduction - Reinsurance	LR002 Bonds Column (4) Line (19)	$0	X	0.2100	=	$0	†
(016)	Bond Increase - Reinsurance	LR002 Bonds Column (4) Line (20)	$0	X	0.2100	=	$0	
(017)	Non-Exempt NAIC 1 U.S. Government Agency	LR002 Bonds Column (4) Line (22)	$0	X	0.1680	=	$0	
(018)	Bonds Size Factor	LR002 Bonds Column (4) Line (26) - LR002 Bonds Column (4) Line (21)	$0	X	0.1680	=	$0	
	Mortgages							
	In Good Standing							
(019)	Residential Mortgages - Insured	Detail Eliminated to Conserve Space	$0	X	0.1575	=	$0	
(020)	Residential Mortgages - Other	LR004 Mortgages Column (6) Line (2)	$0	X	0.1575	=	$0	
(021)	Commercial Mortgages - Insured	LR004 Mortgages Column (6) Line (3)	$0	X	0.1575	=	$0	

Company Name | Cocode: 00000

CALCULATION OF AUTHORIZED CONTROL LEVEL RISK-BASED CAPITAL

		Source	(1) RBC Requirement
	Insurance Affiliates and Misc. Other Amounts (C-0)		
(1)	Directly Owned Health Insurance Companies or Health Entities	LR042 Summary for Affiliated/Subsidiary Stocks Column (4) Line (1)	$0
(2)	Directly Owned Property and Casualty Insurance Affiliates	LR042 Summary for Affiliated/Subsidiary Stocks Column (4) Line (2)	$0
(3)	Directly Owned Life Insurance Affiliates	LR042 Summary for Affiliated/Subsidiary Stocks Column (4) Line (3)	$0
(4)	Indirectly Owned Health Insurance Companies or Health Entities	LR042 Summary for Affiliated/Subsidiary Stocks Column (4) Line (4)	$0
(5)	Indirectly Owned Property and Casualty Insurance Affiliates	LR042 Summary for Affiliated/Subsidiary Stocks Column (4) Line (5)	$0
(6)	Indirectly Owned Life Insurance Affiliates	LR042 Summary for Affiliated/Subsidiary Stocks Column (4) Line (6)	$0
(7)	Affiliated Alien Insurers - Directly Owned	LR042 Summary for Affiliated/Subsidiary Stocks Column (4) Lines (9) + (10) + (11)	$0
(8)	Affiliated Alien Insurers - Indirectly Owned	LR042 Summary for Affiliated/Subsidiary Stocks Column (4) Lines (12) + (13) + (14)	$0
(9)	Off-Balance Sheet and Other Items	LR017 Off-Balance Sheet and Other Items Column (5) Line (34)	$0
(10)	Total (C-0) - Pre-Tax	Sum of Lines (1) through (9)	$0
(11)	(C-0) Tax Effect	LR030 Calculation of Tax Effect for Life and Fraternal Risk-Based Capital Column (2) Line (122)	$0
(12)	Net (C-0) - Post-Tax	Line (10) - Line (11)	$0
	Asset Risk – Unaffiliated Common Stock and Affiliated Non-Insurance Stock (C-1cs)		
(13)	Schedule D Unaffiliated Common Stock	LR005 Unaffiliated Common Stock Column (5) Line (21) + LR018 Off-Balance Sheet Collateral Column (3) Line (16)	$0
	Schedule BA Unaffiliated Common Stock/ Equity Interests and Affiliated Non-Insurance Stock (C1-cs), excluding		
(14)	Residual Tranches or Interests	LR008 Other Long-Term Assets Column (5) line (49) - (45)	$0
(15)	Total Residual Tranches or Interests	LR008 Other Long-Term Assets Column (5) line (45)	$0
(16)	Common Stock Concentration Factor	LR011 Common Stock Concentration Factor Column (6) Line (6)	$0
(17)	Holding Company in Excess of Indirect Subs	LR042 Summary for Affiliated/Subsidiary Stocks Column (4) Line (7)	$0
(18)	Affiliated Non-Insurers	LR042 Summary for Affiliated/Subsidiary Stocks Column (4) Lines (19) + (20) + (21)	$0
(19)	Total (C-1cs) - Pre-Tax	Sum of Lines (13) through (18)	$0
(20)	(C-1cs) Tax Effect	LR030 Calculation of Tax Effect for Life and Fraternal Risk-Based Capital Column (2) Line (134)	$0
(21)	Net (C-1cs) - Post-Tax	Line (19) - Line (20)	$0
	Asset Risk - All Other (C-1o)		
(22)	Bonds after Size Factor	LR002 Bonds Column (4) Line (27) + LR018 Off-Balance Sheet Collateral Column (3) Line (8)	$0
(23)	Mortgages (including past due and unpaid taxes)	LR004 Mortgages Column (6) Line (31)	$0
(24)	Unaffiliated Preferred Stock	LR005 Unaffiliated Preferred and Common Stock Column (5) Line (10) + LR018 Off-Balance Sheet Collateral Column (3) Line (15)	$0
(25)	Investment Affiliates	LR042 Summary for Affiliated/Subsidiary Stocks Column (4) Line (8)	$0
(26)	Investment in Upstream Affiliate (Parent)	LR042 Summary for Affiliated/Subsidiary Stocks Column (4) Line (15)	$0
(27)	Directly Owned Health Insurance Companies or Health Entities Not Subject to RBC	LR042 Summary for Affiliated/Subsidiary Stocks Column (4) Line (16)	$0
(28)	Directly Owned Property and Casualty Insurance Companies Not Subject to RBC	LR042 Summary for Affiliated/Subsidiary Stocks Column (4) Line (17)	$0
(29)	Directly Owned Life Insurance Companies Not Subject to RBC	LR042 Summary for Affiliated/Subsidiary Stocks Column (4) Line (18)	$0
(30)	Publicly Traded Insurance Affiliates	LR042 Summary for Affiliated/Subsidiary Stocks Column (4) Line (22)	$0
(31)	Separate Accounts with Guarantees	LR006 Separate Accounts Column (3) Line (7)	$0
(32)	Synthetic GIC's (C-1o)	LR006 Separate Accounts Column (3) Line (8)	$0
(33)	Surplus in Non-Guaranteed Separate Accounts	LR006 Separate Accounts Column (3) Line (13)	$0
(34)	Real Estate (gross of encumbrances)	LR007 Real Estate Column (3) Line (13)	$0
(35)	Schedule BA Real Estate (gross of encumbrances)	LR007 Real Estate Column (3) Line (25)	$0
(36)	Other Long-Term Assets	LR008 Other Long-Term Assets Column (5) Line (57) + LR018 Off-Balance Sheet Collateral Column (3) Line (17) + Line (18)	$0