Proposed CLO C-1 Factors

June 23, 2026

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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

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Post-Tax Factors

The Academy proposed factors of 1.45% and 0.16% for A3 under two methods; the average is recommended

Investment Grade

Rating	Simple Average Raw C-1	Modeled C-1	
		Thickness > 4%	Thickness ≤ 4%
Aaa	0.03%	**0.03%**	
Aa1	0.28%	**0.04%**	
Aa2	0.00%	**0.04%**	
Aa3	0.00%	**0.04%**	
A1	0.40%	**0.14%**	
A2	0.11%	**0.14%**	
A3	0.12%	**0.80%**	
Baa1	1.58%	**1.81%**	
Baa2	3.02%	**2.70%**	
Baa3	5.94%	**2.73%**	**12.52%**

Below Investment Grade

Rating	Simple Average Raw C-1	Modeled C-1	
		Thickness > 4%	Thickness ≤ 4%
Ba1	20.70%	**12.59%**	**22.39%**
Ba2	27.37%	**20.93%**	**30.72%**
Ba3	28.92%	**23.28%**	**33.08%**
B1	17.34%	**26.04%**	**35.84%**
B2	30.81%	**35.20%**	**44.99%**
B3	56.39%	**47.32%**	**57.12%**
Caa1	57.60%	**48.12%**	**57.92%**
Caa2	66.51%	**55.20%**	**64.99%**
Caa3	77.33%	**70.82%**	**80.61%**
Residual[1]	33.98%	**35.55%**	

1. Under practical expedient accounting

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Pre-Tax Factors

The Academy applies a tax rate of 21% with the assumption of 80% tax recovery

Investment Grade

Rating	Simple Average Raw C-1	Modeled C-1	
		Thickness > 4%	Thickness ≤ 4%
Aaa	0.04%	**0.04%**	
Aa1	0.34%	**0.05%**	
Aa2	0.00%	**0.05%**	
Aa3	0.00%	**0.05%**	
A1	0.48%	**0.17%**	
A2	0.13%	**0.17%**	
A3	0.14%	**0.97%**	
Baa1	1.90%	**2.18%**	
Baa2	3.63%	**3.24%**	
Baa3	7.14%	**3.28%**	**15.05%**

Below Investment Grade

Rating	Simple Average Raw C-1	Modeled C-1	
		Thickness > 4%	Thickness ≤ 4%
Ba1	24.88%	**15.14%**	**26.91%**
Ba2	32.90%	**25.15%**	**36.93%**
Ba3	34.76%	**27.99%**	**39.76%**
B1	20.84%	**31.30%**	**43.07%**
B2	37.03%	**42.31%**	**54.08%**
B3	67.78%	**56.88%**	**68.65%**
Caa1	69.23%	**57.84%**	**69.61%**
Caa2	79.94%	**66.34%**	**78.12%**
Caa3	92.94%	**85.12%**	**96.89%**
Residual[1]	43.01%	**45.00%**	

1. Under practical expedient accounting

Appendix—Background on A3 Factors from 2026 NAIC Spring National Meeting (Pages 15–17 from March 23, 2026 Presentation)

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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 ***
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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%	
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B3	47.32%	57.12%
Caa1	48.12%	57.92%
Caa2	55.20%	64.99%
Caa3	70.82%	80.61%

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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 ***
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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 ***
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Questions?

For more information, please contact

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