

A Review of the Framework for the Regulation of Insurer Investments

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Over the past three years, the Capital Adequacy Task force has been working with the NAIC Investment Risk and Evaluation Working Group and the American Academy of Actuaries to study potential changes in Risk Based Capital factors for Collateralized Loan Obligations and Asset-Backed securities, specifically speculative grade tranches. The NAIC is concerned there has been too much reliance on Credit Rating Providers (CRP) issuing a rating that is then translated into a Risk Based Capital factor which was originally calculated off the loss experience in corporate securities: “There currently is a blind reliance on the CRP rating with no mechanism for overall due diligence around CRP usage, nor an ability to challenge an individual rating for not conforming to regulator expectations of how it was determined¹”. The use of a CRP rating with an NAIC model override is the analytic goal as equal capital for equal risk is the new objective. Currently, the NAIC believes these asset classes may have more risk than capital reserved against potential losses. The NAIC Investment Risk and Evaluation Working Group studies have focused on two risks: Tail Risk for subordinated tranches, and Concentration Risk for similar underlying asset classes across different issuers. The NAIC Investment Risk and Evaluation Working Group has proposed a “model” based approach while the American Academy of Actuaries is not in favor. They would like a halt to the current work until a final framework is completed. Likewise, the American Investment Council would like to see the NAIC’s Structured Securities Group Modeling Workstream stopped until further analysis is provided. In response to these comments, the NAIC has stated that its work is “ongoing and will continue without delay or pause².”

¹ NAIC: Framework for the Regulation of Insurer Investments – A Holistic Review

² NAIC: Framework for the Regulation of Insurer Investments – A Holistic Review

Tail Risk

The NAIC has been focused on the Speculative Grade tranches of CLO and Asset Backed security structures, specifically BB rated securities, residual tranches, and, structure dependent, BBB's. The work has concentrated on developing a model that better defines default risk within these tranches, then applying appropriate RBC factors. One of the goals of these working groups is to eliminate, or at least minimize, the "regulatory rating arbitrage" between the underlying asset and the structured security. That is, currently in CLO's and some Asset Backed structures, owning an equally weighted piece of each tranche has a lower "Blended RBC Charge" than holding the underlying assets. This implies the security has less default risk than the underlying asset. Although subordination generally adds sufficient protection for investment grade tranches, it may not be the case for speculative grade tranches. The weighted average of Investment and Speculative Grade RBC charges should be somewhat equal to the charge given to the underlying asset. Generally, for P&C insurers, the average of the structure's "Blended" RBC charge is approximately 1/3 that of the underlying assets. In order to bring this relationship closer to parity, the NAIC is studying which tranches should employ higher RBC factors. If RBC factors are increased the new charges may disproportionately fall on the Speculative Grade tranches including residual and, or, subordinated tranches. Simply put, the greater the potential for losses in an individual tranche that mimics equity risk, the higher the corresponding Risk Based Capital charge. And, since the residual or subordinated tranches can be the first loss piece, the loss, like an equity, could be absolute. Currently, the goal is to have an approved working model and updated set of Risk Based Capital Charges for all CLO's and Asset Backed securities held by insurers by the end of 2025. Below, we look at an example of a "rating arbitrage."

Rating Arbitrage - Which is more favorable, owning a percentage of each tranche or owning the underlying asset (Senior Bank Loans)?

In Exhibit One, we find the Weighted Average Risk Based Capital charges for P&C and Life insurers. These factors are measured against owning a group of underlying Senior Bank Loans with their corresponding RBC charge.

Exhibit 1: Collateralized Loan Obligation Example

Description	Par	Weight	Quality	P&C RBC Factors	P&C Weighted Average RBC	Life RBC Factors	Life Weighted Average RBC
Sample - 2014-7A AR3	129,000,000	17.60%	AAA	0.0020	0.04%	0.0016	0.03%
Sample - 2014-7A AL	305,000,000	41.61%	AAA	0.0020	0.08%	0.0016	0.07%
Sample - 2014-7A BR3	28,000,000	3.82%	AA	0.0060	0.02%	0.0042	0.02%
Sample - 2014-7A BL	70,000,000	9.55%	AA	0.0060	0.06%	0.0042	0.04%
Sample - 2014-7A CR3	42,000,000	5.73%	A	0.0130	0.07%	0.0082	0.05%
Sample - 2014-7A D1R3	35,000,000	4.78%	BBB-	0.0250	0.12%	0.0217	0.10%
Sample - 2014-7A D2R3	10,500,000	1.43%	BBB-	0.0250	0.04%	0.0217	0.03%
Sample - 2014-7A ER3	22,750,000	3.10%	BB-	0.0660	0.20%	0.0602	0.19%
Sample - 2014-7A SUB	90,700,000	12.37%	CCC	0.1090	1.35%	0.2379	2.94%
Totals	732,950,000	100%		Weighted Average	1.98%		3.46%
						Underlying Asset Senior Bank Loan: BB Risk Factor	6.00%
						Security as a Percent of Asset Weighted Average RBC Charge	33.03%
							76.29%

Sources: Bloomberg, American Association of Actuaries, AAM. For illustrative purposes only.

We assume the non-securitized Senior Bank Loans have a BB rating. In this exhibit we find the Weighted Average RBC charge for a P&C insurance company owning a percentage in each tranche of this structure is 1.98%. This is significantly lower than the RBC charge for holding the underlying asset, Senior Bank Loans, at 6%. To continue, given the lower securitized RBC charges, if the security begins to take losses the Subordinated Tranche is at risk (Sample -2014-7A Sub), and the P&C RBC factor of 10.9% may not be enough to cover the potential loss. In this case, the NAIC would argue the Risk Based Capital factor may need to be increased (subject to the model they adopt and historical loss assumptions applied³) and look more like the current Life Insurance RBC Factors found in NAIC Designation Category 5.B, corresponding to CCC Rated securities, at 23.79%. A significant increase in RBC factors like this may begin to achieve the equal capital for equal risk goal of the NAIC Framework for the Regulation of Insurer Investments and approach parity between a security’s weighted average RBC factor and that of the underlying asset.

In the next example of Tail Risk, we look at a Sample Asset Backed Structure. Below, in Exhibit Two, we focus on the BBB rated “Subordinate Tranche” having a 7.06% weighting within the structure. It is not Speculative Grade, and because of its CRP rating, also has a modest RBC factor, 2.1%. This structure is supported by a 5% Equity piece⁴. As such, total subordination for the BBB tranche is 5%, and 12.06% for the A rated tranche. As seen in this and the CLO example above, subordination can come in different qualities, weightings, and RBC factors, structure dependent. The NAIC’s reliance on CRP ratings, in this case a subordinated security with a BBB rating translated into RBC charges, may not appropriately define risk across qualities and cover potential losses.

Exhibit 2: Asset Backed Security Example

Description	Par	Weight	Quality	P&C RBC Factors	P&C Weighted Average RBC	Life RBC Factors	Life Weighted Average RBC
Sample 2021-2A A	605,200,000	92.94%	A	0.0130	1.21%	0.0082	0.76%
Sample 2021-2A B	<u>46,000,000</u>	<u>7.06%</u>	BBB	0.0210	<u>0.15%</u>	0.0152	<u>0.11%</u>
Totals	651,200,000	100%	Weighted Average		1.36%		0.87%

Sources: Bloomberg Analytics, NAIC, AAM. For illustrative purposes only.

Concentration Risk

An insurer may not want to hold a substantial portion of their investments in a single type of underlying assets, like Equipment Loans. They may be better off with well diversified weightings from multiple underlying asset types. The NAIC Investment Risk and Evaluation Working Group is studying the “Concentration Risk” of similar underlying assets across different issuers. The NAIC is considering a separate Concentration Risk - Risk Based Capital charge - for CLO’s and Asset Backed securities. Currently, this issuance is treated as non-correlated individual securities having systematic risk. However, if price changes across an underlying asset class are highly correlated, then holding these assets across multiple issuers/securities, cumulatively, may harbor idiosyncratic risk. The NAIC is concerned this type of sector/underlying asset risk is similar to the risk that was present in the mortgage market causing the 2008 Financial Crisis.

³ However, if we assumed a 50% recovery, it would take a 21.8% loss to default 100% of the “Sample 2014-7A Sub”. Given this assumption, the rest of the structure, even the BB-tranche, would receive all of their principal at maturity. To state again, the principal of “Equal Capital for Equal Risk” may need to be applied to all speculative grade tranches, and even some BBB rated tranches, security structure dependent, as structures differ from security type to security type.

⁴ When the issuer owns a 5% piece of each tranche across a security structure, it is said to have “Vertical Exposure”. This exposure is a shared loss experience between the issuer and the bond holder, and not subordination or protection from a first loss. This is also assumed in Concentration Risk - Correlated Loss Matrix 1. However, when the issuer owns the equity piece in a security structure it is called “Horizontal Exposure”. This exposure is a first loss piece supporting the whole structure. This is assumed in Concentration Risk - Correlated Loss Matrix 2.

Below, in Exhibit Three, we display the size of the Asset-Backed and Collateralized Loan Obligation markets. These sectors and corresponding sub-sectors aren't nearly as large as the Mortgage market, however, large concentrations of subordinated tranches in a single sub-sector, aggregated across a portfolio in a distressed market, may cause significant losses. Furthermore, it is important to note, subordinated tranches generally make up less than 20% of a structured security, and, in a distressed market, would become illiquid.

Exhibit 3: Estimated CLO and Asset Backed Outstanding

Estimated CLO's Outstanding (\$ billions)	
	Q2 2023
Collateralized Loan Obligations	971
Estimated ABS Outstanding (\$ billions)	
Sub-Sector	Q3 2024
Credit Cards	82
Bank/Charge	75
Retail	6.5
Autos	289
Prime Loan	139
Non-prime Loan	74
Lease	38
Fleet/Other	39
Student Loans	116
FFELP	54
Private Credit	62
Equipment	45
Floorplan	11
Unsecured Consumer	40
Other	165
Franchise/Whole Bus.	49
Aircraft	22
Device Payment	16
Containers	11
Timeshare	7
Solar	18
Insurance	6
Stranded Assets	37
Total	748

Sources: JP Morgan ABS Research, Intex, SIFMA, NAIC, Bank of America

Concentration Risk - Correlated Loss Matrices, Hypothetical Examples

In Exhibit Four, Concentration Risk - Correlated Loss Matrix 1, we review how concentrations in a correlated underlying asset class can lead to losses. Below, we assume the underlying assets are highly correlated, there is a 2.1% RBC charge, the issuer holds 5% of the Single A and BBB tranches (this is referred to as Vertical Exposure), the insurance company has a 5% cumulative holding of an underlying

asset class, and the underlying asset class experiences a 50% loss⁵, then in this example, realized losses may overwhelm RBC charges: -.4% (Green). In this case, as well as all of the highlighted cells, the RBC charge of 2.1% may not appropriately define risk, and an increase in the RBC factor would result in a decrease in the Risk Based Capital Ratio.

Exhibit 4: Concentration Risk - Correlated Loss Matrix 1
P&C Example: Issuer Owns 5% of Tranches Vertically Across the Structure

Cumulative Portfolio Holdings	Concentration Risk: Gain/Loss Percent									
	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
1%	2.00%	1.90%	1.80%	1.70%	1.60%	1.50%	1.40%	1.30%	1.20%	1.10%
2%	1.90%	1.70%	1.50%	1.30%	1.10%	0.90%	0.70%	0.50%	0.30%	0.10%
3%	1.80%	1.50%	1.20%	0.90%	0.60%	0.30%	0.00%	-0.30%	-0.60%	-0.90%
4%	1.70%	1.30%	0.90%	0.50%	0.10%	-0.30%	-0.70%	-1.10%	-1.50%	-1.90%
5%	1.60%	1.10%	0.60%	0.10%	-0.40%	-0.90%	-1.40%	-1.90%	-2.40%	-2.90%
10%	1.10%	0.10%	-0.90%	-1.90%	-2.90%	-3.90%	-4.90%	-5.90%	-6.90%	-7.90%
15%	0.60%	-0.90%	-2.40%	-3.90%	-5.40%	-6.90%	-8.40%	-9.90%	-11.40%	-12.90%
BBB Rated Subordinate Tranche		Support: Equity Piece		0.00%		Risk Based Capital Factor: P&C				2.10%

Sources: NAIC, AAM, Gain/loss assumptions are hypothetical in nature. For illustrative purposes only.

Below in Exhibit Five, assuming the underlying asset classes are highly correlated, there is a 2.1% RBC charge, the issuer holds a 5% equity piece (this is referred to as Horizontal Subordination), the insurance company has a 15% cumulative holding of an underlying asset class, and the underlying asset class experiences a 50% loss, then realized losses once again may overwhelm RBC charges -.4% (Green). In this example, it is important to note, the equity piece, subordinate to the all tranches in the structure, provided additional protection from losses. Finally, in a further distressed market, with a 15% cumulative holding across multiple issuers in an underlying asset class experiencing an absolute loss of 100%, the 2.1% RBC charge and 5% equity subordination, may not appropriately define risk given the resulting -7.9% loss (Red). And, an increase in the factor, to better match the equal capital for equal risk goal, would result in a decrease in the Risk Based Capital Ratio.

⁵ Recoveries from losses are not estimated in this exhibit.

Exhibit 5: Concentration Risk - Correlated Loss Matrix 2
P&C Example: Issuer Owns 5% Equity Piece

Cumulative Portfolio Holdings	Concentration Risk: Gain/Loss Percent									
	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
1%	7.00%	6.90%	6.80%	6.70%	6.60%	6.50%	6.40%	6.30%	6.20%	6.10%
2%	6.90%	6.70%	6.50%	6.30%	6.10%	5.90%	5.70%	5.50%	5.30%	5.10%
3%	6.80%	6.50%	6.20%	5.90%	5.60%	5.30%	5.00%	4.70%	4.40%	4.10%
4%	6.70%	6.30%	5.90%	5.50%	5.10%	4.70%	4.30%	3.90%	3.50%	3.10%
5%	6.60%	6.10%	5.60%	5.10%	4.60%	4.10%	3.60%	3.10%	2.60%	2.10%
10%	6.10%	5.10%	4.10%	3.10%	2.10%	1.10%	0.10%	-0.90%	-1.90%	-2.90%
15%	5.60%	4.10%	2.60%	1.10%	-0.40%	-1.90%	-3.40%	-4.90%	-6.40%	-7.90%
BBB Rated Subordinate Tranche			Support: Equity Piece		5.00%		Risk Based Capital Factor: P&C			2.10%

Sources: NAIC, AAM, Gain/loss assumptions are hypothetical in nature. For illustrative purposes only.

As demonstrated above, security structure matters. That is, correlated assets and differing security structures will have different outcomes. In the new NAIC guidance, if the RBC charges are not increased enough to cover losses to ensure insurer solvency, many in the insurance industry are advocating “capping” the amount an insurer can hold in a given underlying asset class. For example, some are proposing a 2% to 3% underlying asset “cap”. They believe this may be sufficient, after recovery, to minimize losses and stop an undercapitalized insurer from failing. Still others are also proposing a “cap” for underlying assets, not as a holding limit, but as a place to begin applying a higher RBC factor.

Interim Residual Tranche Charges

This year, the NAIC has adopted “Interim” changes for residual tranches. Effective January 1, 2024, the Risk Based Capital charges for residual tranches for Life Insurers was increased from 30% to 45%, while P&C and Health Insurers were increased from 15% to 20%. This was implemented in recognition of the residual tranche equity like characteristics and loss potential. These securities will be moved to Schedule BA and will have their own separate section. As this is an interim charge, it will be updated or modified by year end 2025 when the final RBC model and resulting charges are determined and approved. It is important to note this change was substantive. And, if RBC factors are increased, approved, and applied to non-investment grade CLO’s and subordinated Asset Backed tranches, various asset classes may experience a repricing as market participants move to tranches with lower RBC factors. We will keep you apprised of any additional updates as they become available.

Closing Notes

In closing, with respect to Tail and Concentration Risk, no final decisions have been made on methodology or changes to Risk Based Capital factors for CLO's and Asset Backed securities. These topics will continue to be discussed in the upcoming NAIC 2025 spring meeting with final guidance expected by year-end 2025; stay tuned.

Dirck Davis is a Senior Portfolio Manager at AAM with 32 years of investment experience. Dirck is responsible for managing client relationships and investment performance, while also assisting in creating insurance strategy and quantitative modeling work. Prior to joining AAM, he worked at McDonnell Investment Management as a Senior Portfolio Manager, managing client portfolios and relationships. Dirck earned both a BA and an MBA from the University of Chicago.



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