



NATIONAL ASSOCIATION OF INSURANCE COMMISSIONERS

Date: 4/19/21

LIFE RISK-BASED CAPITAL (E) WORKING GROUP

Thursday, April 22, 2021

12:00 – 1:00 p.m. ET / 11:00 a.m. – 12:00 p.m. CT / 10:00 – 11:00 a.m. MT / 9:00 – 10:00 a.m. PT

ROLL CALL

Philip Barlow, Chair	District of Columbia	William Leung	Missouri
Jennifer Li	Alabama	Rhonda Ahrens	Nebraska
Thomas Reedy	California	Seong-min Eom	New Jersey
Wanchin Chou	Connecticut	Bill Carmello	New York
Sean Collins	Florida	Andrew Schallhorn	Oklahoma
Vincent Tsang	Illinois	Mike Boerner/Rachel Hemphill	Texas
Mike Yanacheak/Carrie Mears	Iowa	Tomasz Serbinowski	Utah
John Robinson	Minnesota		

NAIC Support Staff: Dave Fleming

AGENDA

1. Continue Discussion of the Moody’s Analytics Updated Report on Bonds and the American Academy of Actuaries’ (Academy) Proposed Factors—*Philip Barlow (DC)* Attachment 1
2. Discussion of Estimated Impact of Bond Proposals—*Philip Barlow (DC)* Attachment 2
3. Consider Exposure of the Bond Proposal Factors—*Philip Barlow (DC)*
 - 2021-10-L Life Bond Factors (Academy) Attachment 3
 - 2021-11-L Life Bond Factors (American Council of Life Insurers) Attachment 4
4. Discuss Any Other Matters Brought Before the Working Group—*Philip Barlow (DC)*
5. Adjournment

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Preliminary Proposed Updates to RBC C1 Bond Factors
For Discussion with Life Risk-Based Capital (E) Working Group

April 22, 2021

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Moody's Investors Service (MIS) provides investors with a comprehensive view of global debt markets through credit ratings and research. Moody's Analytics (MA) provides data, analytics, and insights to equip leaders of financial, non-financial, and government organizations with effective tools to understand a range of risks.

Throughout this document, "MIS rating" refers to a MIS credit rating. And while references to MIS are made, the views and opinions in this document are solely of MA.

Agenda

1. Overview of Impactful Targeted Improvements
2. Economic State Model and the MA Proposed Correlation Model
3. Default Rates
4. Risk Premium
5. Discount Rate and Tax Rate
6. Recap

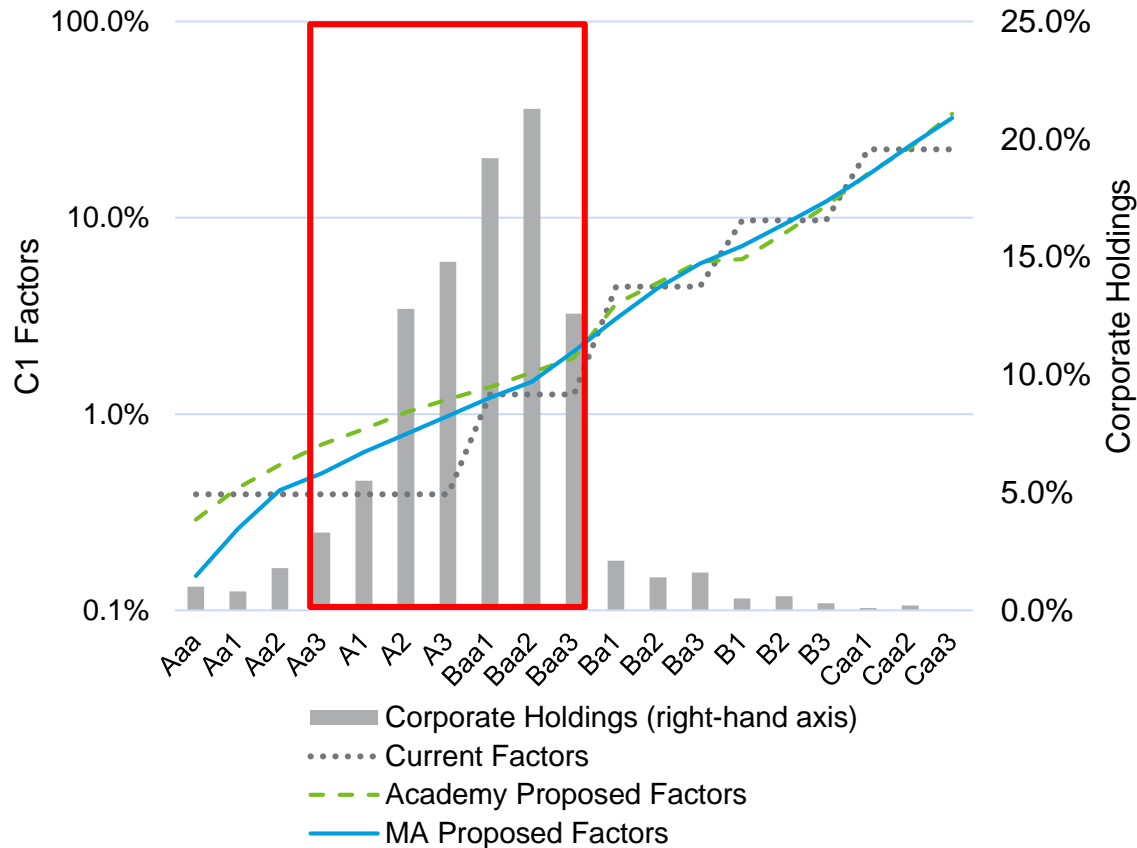
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Overview of Impactful Targeted Improvements

MA's Proposed C1 Factors

Targeted improvements with largest impact

C1 Base Factors (log scale) and Corporate Holdings



Economic state model, initially outside scope, limitations sufficiently material that MA recommends replacement

- » Economic state model understates default correlations and overstates diversification across issuers relative to that observed empirically, resulting in:
 - C1 base factors that potentially understate credit losses
 - PAFs that are overly punitive (lenient) to portfolios with a smaller (larger) number of issuers
- » Economic Scalars result in counterfactual increases and decreases to the C1 base factors across the NAIC designation categories. They lead to an overall flattening of high yield C1 base factors relative to investment grade, and under certain parameterizations C1 base factors that are non-monotonic.
- » MA proposed correlation model is calibrated to default correlations and diversification across issuers observed empirically. Resulting C1 base factors are more conservative and separated across MIS ratings compared with economic state model.

Corporate default rate term structures estimated to historical experience of life company holdings

- » Life company holdings differ from overall issuance; e.g., life company holdings have less weight on financial institutions that tend to issue shorter term debt.
- » MA proposed default rates tend to have a steeper slope (more separated across MIS ratings) than those proposed by the Academy, with separation more closely aligning with benchmarks.

Risk Premium set at expected loss plus 0.5 standard deviation recognizing variation in industry reserving standards and to closer align with PBR and reserving standards generally aiming to cover moderately adverse conditions. A higher Risk Premium lowers the C1 base factors and mildly increases the cross-sectional variation (or slope) and should be set to better identify of weakly capitalized firms identify and mitigate risk shifting incentives with new bond purchases.

Discount Rate & Tax rate set at 4.32% (1993-2020 window) and 21%. While an alternative window start date can be justified, the discount rate enters the RBC C1 framework as a single static rate and not as impactful as some other targeted improvements, reinforced by updated tax rate offset. Potentially important term structure dynamics that interplay with credit risk are not captured within the current framework

2

Economic State Model and the MA Proposed Correlation Model

Economic State Model Initially Outside Scope

Two material limitations

Economic state model is calibrated to default rates across contraction and expansion states, but it implies default correlations of ~0% for IG issuers, overstating diversification across issuers relative to that observed empirically, resulting in:

- » C1 base factors that potentially understate credit losses
- » PAFs that are overly punitive (lenient) to portfolios with a smaller (larger) number of issuers

Economic Scalars, that are applied to the default rate term structure in each simulated state (expansion and contraction) exhibit counterfactual increases and decreases across the NAIC designation categories.

- » They lead to an overall flattening of C1 base factors for high yield relative to those of investment grade
 - › Contraction Economic Scalars average **2.56** for investment grade and **1.75** for high yield (1)
- » Under certain parameterizations C1 base factors are non-monotonic, e.g., contraction scalar going from 1.9421 (Ba3) to 1.4958 (B1) (2).

Economic Scalars	Aaa	Aa1	Aa2	Aa3	A1	A2	A3	Baa1	Baa2	Baa3	Ba1	Ba2	Ba3	B1	B2	B3	Caa1	Caa2	Caa3		
Continued Expansion	NA	NA	NA	NA	NA	NA	NA	0.7381	0.7380	0.7392	0.8189	0.8192	0.8189	0.8617	0.8620	0.8617	0.8549	0.8542	0.8536		
Expansion	0.7365	0.7342	0.7361	0.7334	0.7309	0.7290	0.7300	1.1301	1.1299	1.1318	0.8381	0.8384	0.8381	1.1901	1.1905	1.1901	0.9100	0.9093	0.9087		
Contraction	(1)	2.7495	2.7409	2.7482	2.7378	2.7287	2.7214	2.7252	2.1479	2.1475	2.1511	(1)	1.9422	1.9429	1.9421	1.4958	1.4964	1.4958	1.8042	1.8028	1.8016
Continued Contraction	NA	NA	NA	NA	NA	NA	NA	3.2231	3.2224	3.2279	2.9728	2.9738	2.9727	2.2114	2.2122	2.2114	2.2388	2.2371	2.2356		

MA Proposed Correlation Model

Calibrated to default correlations observed empirically

The Academy's 10-year simulation model was adapted

- » Default rate Economic Scalars set to 1 (this effectively disables the economic state model)
- » Default correlations calibrated to empirically observed default correlations and issuer diversification benefits

Several benchmarks for default correlation

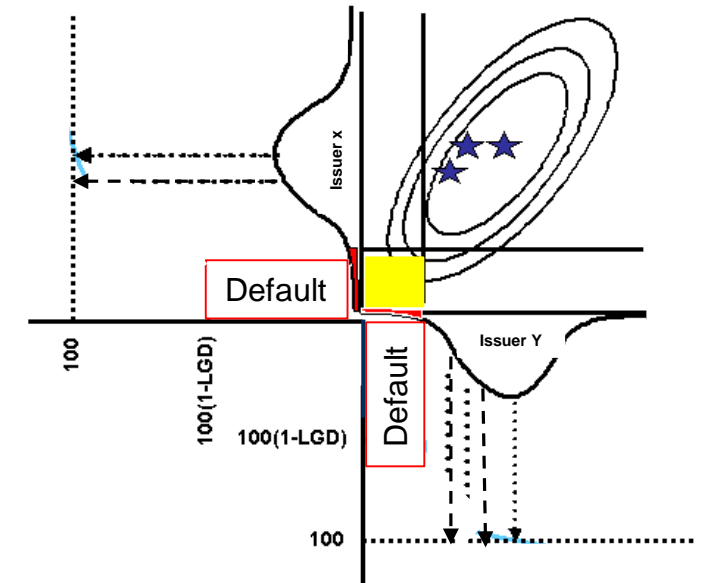
- » Joint default events
- » CDS implied
- » MIS ratings implied
- » Equity market and financial statement

MA proposed correlation model results in

- » C1 base factors that reflect empirical default correlations and are more conservative and more differentiated across MIS ratings than those implied by the economic state model; and
- » PAFs that more accurately reflect issuer diversification benefits, and that are less punitive (lenient) to portfolios with a smaller (larger) number of holdings, relative to those from Academy's proposal

MA proposed correlation model is calibrated to reflect empirically observed joint default events across MIS rating categories

- » In each period the likelihood of issuer x and y defaulting is determined by their default rates as depicted by the visualized distribution in red
- » The likelihood of a joint default, captured through a single factor model, is depicted in yellow and determined by the joint distribution represented by concentric circles
- » The model is continuous and not tied to 2 (or 4) discrete economic states, and generally results in higher 96 percentile loss



Proposed C1 Base Factors

Incremental effects of replacing the economic state model with MA's proposed correlation model

- » MA's proposed correlation model generally increases C1 base factors
- » (1) As part of the economic state model, Economic Scalars lead to overall flattening of high yield C1 base factors relative to investment grade. MA's proposed correlation model
 - increases high yield factors by 27%
 - Increases investment grade factors by 23%
- » (2) Economic Scalars lead to non-monotonic C1 base factors under some parameterizations, e.g., 4.794% for Ba3 to 4.778% for B1
- » (3) Economic Scalars lead to more differentiation (22%) between A3 and Baa1 C1 base factors, compared to the correlation model (11%)

MIS Rating	Current Factors	Academy's Proposed Factors [March 2021]	MA's Preliminary Proposed Base Factors with Economic State Model & Academy's Default Rates	MA's Preliminary Proposed Base Factors with Correlation Model & Academy's Default Rates
Aaa	0.390%	0.290%	(1) 0.245%	0.278%
Aa1	0.390%	0.420%	0.360%	0.397%
Aa2	0.390%	0.550%	0.460%	0.532%
Aa3	0.390%	0.700%	0.577%	0.695%
A1	0.390%	0.840%	0.674%	0.865%
A2	0.390%	1.020%	0.789%	1.015%
A3	0.390%	1.190%	(3) 0.896%	1.208%
Baa1	1.260%	1.370%	1.094%	1.343%
Baa2	1.260%	1.630%	1.250%	1.587%
Baa3	1.260%	1.940%	1.487%	1.891%
Ba1	4.460%	3.650%	(1) 2.738%	3.822%
Ba2	4.460%	4.660%	3.634%	4.681%
Ba3	4.460%	5.970%	(2) 4.794%	5.812%
B1	9.700%	6.150%	4.778%	7.672%
B2	9.700%	8.320%	6.412%	9.631%
B3	9.700%	11.480%	9.163%	12.329%
Caa1	22.310%	16.830%	13.180%	15.753%
Caa2	22.310%	22.800%	18.492%	19.535%
Caa3	22.310%	33.860%	31.140%	28.583%

Proposed PAF – MA’s Findings

Implications of MA’s proposed correlation model

- » PAFs calibrated to the economic state model overstate issuer diversification benefits.
- » MA’s proposed correlation model is calibrated to default correlations and issuer diversification benefits observed empirically.

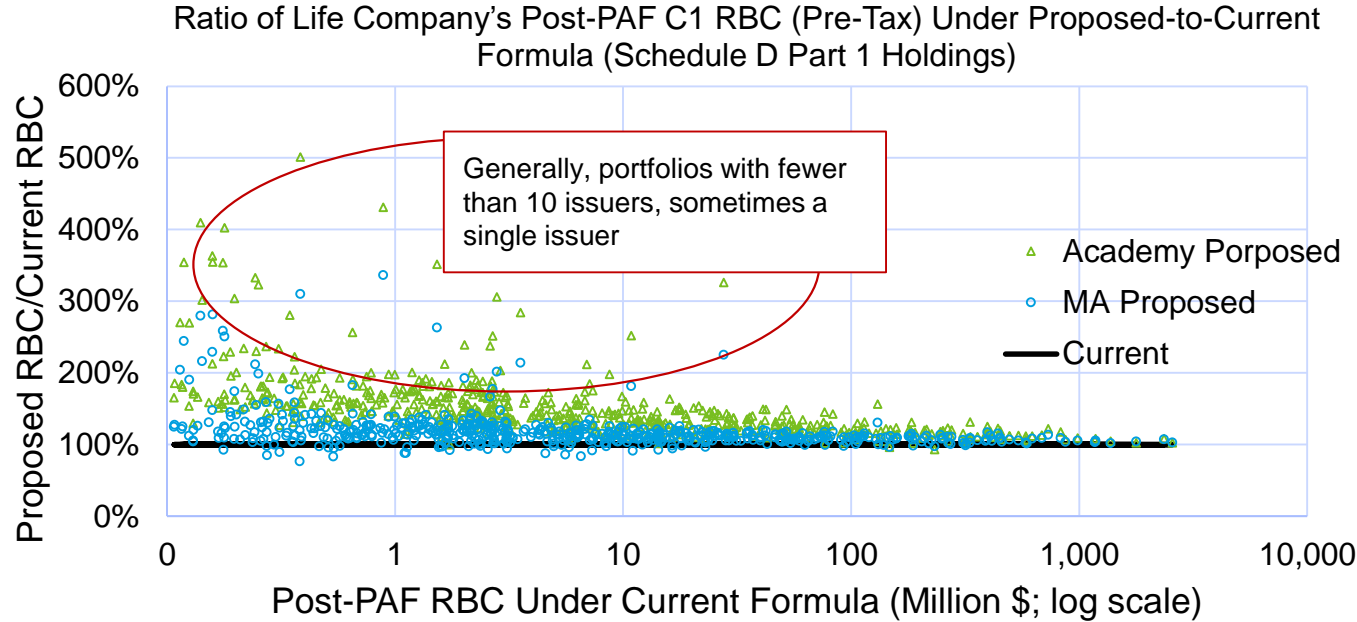
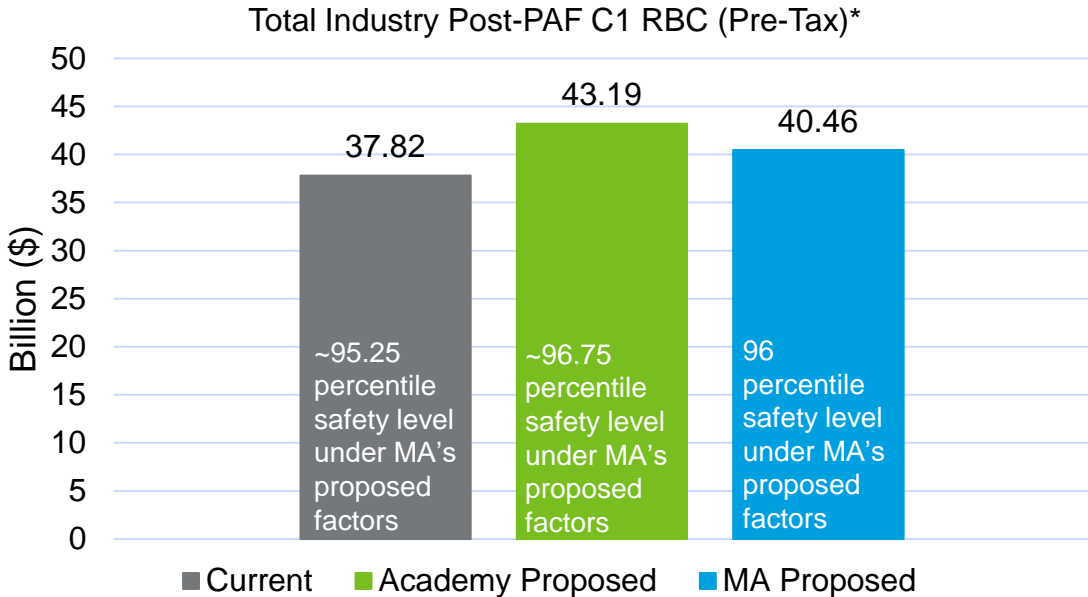
Thresholds*	Current*	Academy Proposed [March 2021]	MA Preliminary Proposed PAF
(Up to) 10	2.50	7.50	5.87
(Next) 90	1.83	1.75	1.54
(Next) 100	1.00	0.90	0.85
(Next) 300	0.97	0.85	0.85
(Above) 500	0.90	0.75	0.82

*Current PAF converted to Academy’s proposed thresholds for better comparison.

MA's Proposed Factors

Impact on Post-PAF C1 RBC

- » Resulting RBC under MA's proposal are generally more conservative than under the current formula, with an increase across life companies of different sizes.
- » Under the Academy's proposal, a disproportionate share of the C1 RBC increase is attributed to life companies with portfolios that have a small and medium number of issuers, driven largely by the economic state model implying more issuer diversification benefits (i.e., lower default correlations).



3

Default Rates

MA Proposed 10-Year Cumulative Default Rates

More closely reflect historical experience of life companies' corporate holdings

Raw default rates and benchmarks are subject to data challenges:

- » Non-monotonicity (1)
- » Few defaults in upper end of MIS ratings spectrum (2). 3 Aaa defaults in the US since 1970; 2 were debatable and experienced near full recovery (Texaco and Getty Oil).

Historical experience of life companies' corporate holdings differs from overall issuance (3), the resulting default rates tend to have a steeper slope (more differentiated across MIS ratings) than those proposed by the Academy.

MA proposed baseline default rates combine empirical data, anchoring, and smoothing to address data paucity and ensure conformity to economic logic.

- » **Anchoring:**
 - 10-year cumulative default rates for **Aa2, A2, Baa2, Ba2, B2, Caa** are anchored to Aa, A, Baa, Ba, B, Ca sector-weighted US corporate CDRs at 1- and 10-year, with curvature adjustment.
- » **Interpolation:**
 - Other alphanumeric ratings were interpolated geometrically between anchored ratings.

MIS Rating	Proposed by Academy	MIS IDR Rating Symbols and Definitions	MIS Annual Default Study (2021)		MA Empirical Results Based on MIS Historical Data	MA Specification
			Global Sample	Global Sample	US Sample (Sector weighted)	
			Aaa-B3 (1983-2020)	Coarse MIS Ratings	Coarse MIS ratings	
			Caa1-Caa3 (1998-2020)	(1983-2020)	Value	
Aaa	0.226%	0.010%	(2) 0.127%	0.127%	0.503%	0.079%
Aa1	0.430%	0.100%	0.201%	(3) 0.729%	0.602%	0.203%
Aa2	0.723%	0.200%	0.833%		0.763%	
Aa3	1.144%	0.400%	0.907%		1.122%	
A1	1.710%	0.700%	1.584%	2.065%	1.751%	1.650%
A2	2.347%	1.200%	(1) 2.339%		2.272%	
A3	3.052%	1.800%	2.211%		3.129%	
Baa1	3.855%	2.600%	2.261%	3.362%	4.482%	4.309%
Baa2	4.827%	3.600%	3.059%		6.850%	
Baa3	6.076%	6.100%	5.059%		10.889%	
Ba1	14.226%	9.400%	8.860%	14.943%	18.679%	17.310%
Ba2	18.472%	13.500%	12.219%		22.191%	
Ba3	24.342%	17.660%	23.090%		28.448%	
B1	32.298%	22.200%	28.593%	34.134%	38.536%	36.471%
B2	42.574%	27.200%	33.436%		44.981%	
B3	54.703%	34.900%	41.262%		55.478%	
Caa1	66.851%	47.700%	44.220%	50.219%	51.363%	68.424%
Caa2	75.403%	65.000%	54.609%		84.391%	
Caa3	75.750%	80.700%	64.710%			

Holdings Composition Differ from Overall Issuance

Aligning parameters with Historical Experience

- » Institutional features drive life insurers towards holdings with characteristics different from overall issuance
- » Certain sectors are more suitable for life insurers across the ratings scale
 - Financial sector issued debt tends to exhibit shorter duration (3.9 average remaining maturity), with insurers holding longer dated financial sectors issues (11.1 average remaining maturity) **(1)**
 - Insurers hold a varying proportion of debt across the rating scale **(2)**
- » Relevant in the estimation of
 - Default rates
 - LGD

MIS Rating	U.S. Utility		U.S. Industrial		U.S. Financial	
	Sector as a Percentage of Life Corporate Holdings	Proportion of Corporate Issuers Attributed to Sector	Sector as a Percentage of Life Corporate Holdings	Proportion of Corporate Issuers Attributed to Sector	Sector as a Percentage of Life Corporate Holdings	Proportion of Corporate Issuers Attributed to Sector
Aaa	0.5%	5.9%	93.2%	42.9%	6.3%	51.2%
Aa	6.2%	8.3%	73.3%	36.5%	(2) 20.5%	55.2%
A	26.5%	17.8%	49.9%	46.0%	23.6%	36.2%
Baa	9.6%	21.2%	71.4%	58.1%	19.0%	20.7%
Ba	5.0%	5.9%	86.4%	81.5%	8.6%	12.6%
B	0.1%	1.0%	96.9%	92.8%	3.0%	6.2%
Caa	0.1%	0.6%	96.1%	95.6%	3.8%	3.9%
Ca	0.0%	1.1%	100.0%	90.4%	0.0%	8.5%
Overall	14.9%	10.4%	65.3%	68.1%	(1) 19.8%	21.5%

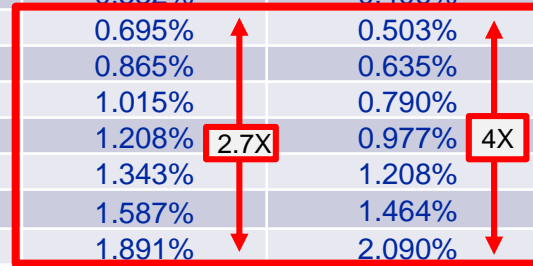
U.S. Corporate Sector	Average Time to Maturity for life insurers' US corporate holdings (notional weighted)	Average Time to Maturity for US corporate issues	Proportion of Issuers Attributed to Sector
Financial	(1) 11.1	3.9	21.5%
Industrial	12.8	7.7	68.1%
Utility	15.9	11.0	10.4%

Proposed C1 Base Factors

Incremental effects of MA proposed default rates

- » Default rate term structures representing experience of life insurance holdings tend to be more differentiated across MIS ratings than Academy proposed, and closer aligned to benchmarks
- » The resulting C1 base factors under MA's proposed default rates are generally more differentiated across the Aa3 to Baa3 range
- » The ratio of the Baa3 factor to the Aa3 factor is
 - 2.9 under MA's proposal with the Academy's default rates
 - 4.0 under MA's proposal
- » The Academy's proposed default rates result in C1 base factors being approximately 15% larger on average than under MA's proposed default rates.

MIS Rating	Current Factors	MA's Preliminary Proposed Base Factors with Academy's Default Rates	MA's Preliminary Proposed Base Factors
Aaa	0.390%	0.278%	0.153%
Aa1	0.390%	0.397%	0.260%
Aa2	0.390%	0.532%	0.406%
Aa3	0.390%	0.695%	0.503%
A1	0.390%	0.865%	0.635%
A2	0.390%	1.015%	0.790%
A3	0.390%	1.208%	0.977%
Baa1	1.260%	1.343%	1.208%
Baa2	1.260%	1.587%	1.464%
Baa3	1.260%	1.891%	2.090%
Ba1	4.460%	3.822%	3.070%
Ba2	4.460%	4.681%	4.399%
Ba3	4.460%	5.812%	5.849%
B1	9.700%	7.672%	7.176%
B2	9.700%	9.631%	9.291%
B3	9.700%	12.329%	12.131%
Caa1	22.310%	15.753%	16.590%
Caa2	22.310%	19.535%	23.320%
Caa3	22.310%	28.583%	32.284%



4

Risk Premium

Risk Premium Updates

Aligning with reserves

- » C1 RBC is the minimum required capital above statutory reserves to buffer against a tail loss
 - Risk Premium acts as an offset to C1 RBC; it is the part of statutory reserves provisioned against default loss
- » Variation in industry reserving standers
 - Both VM-20 and VM-22 explicitly require that reserves cover CTE 70, or approximately 88th percentile, default loss
 - VM-20 only applies to new life products after 2017. Most existing policies follow industry reserving standards that are commonly understood to cover moderately adverse conditions.
- » Recognizing variation in industry reserving standards and to closer align with PBR and reserving standards generally aim to cover moderately adverse conditions, Risk Premium is proposed to be set at **expected loss plus 0.5 standard deviation**
 - A higher Risk Premium lowers the C1 base factors and mildly increases their differentiation across MIS ratings and should better identify weakly capitalized firms and mitigate risk shifting incentives with new bond purchases
 - On average, as we decrease (increase) the risk premium by 0.5 standard deviation from MA's proposed level, the C1 base factors increase (decrease) around 20% for investment grade and around 15% for high yield factors
- » A transition to expected loss plus one standard deviation once
 - VM-20 become more widely applicable
 - VM-22 is formally updated and widely applicable

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Discount Rate and Tax Rate

Discount and Tax Rate

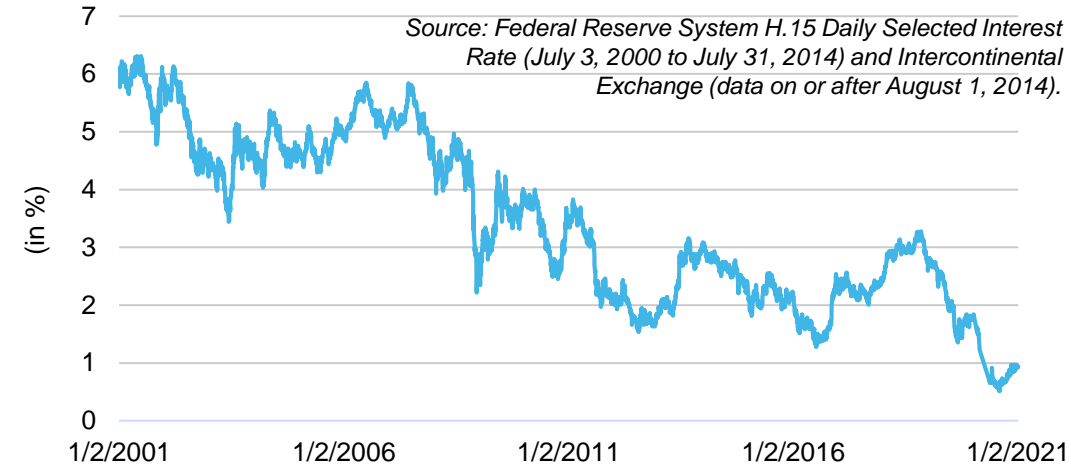
Possible candidates

Tax rate was updated from 35% to 21%

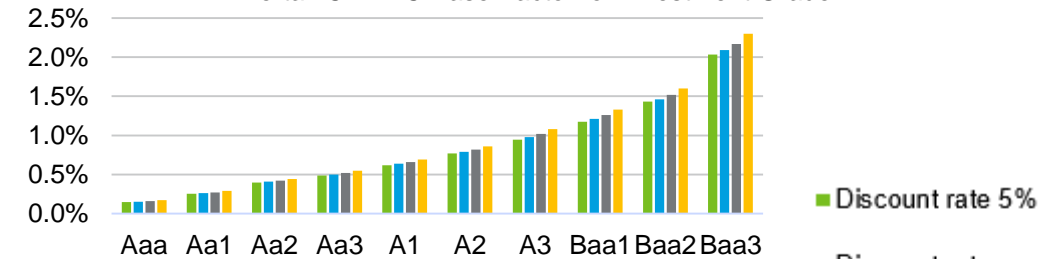
Discount rate

- » Used to calculate the net present value of projected cash flows.
- » MA recognizes the need to parameterize the discount rate with a long-term perspective of long-term interest rates, and the desire for this parameter to be relatively stable while also allowing a closer reflection of the current, low-rate, environment
 - 1993–2020 (4.32%) used in developing MA proposed C1 base factors
- » Compared with the discount rate of 4.32%
 - 1993–2013 used by the Academy (5%) decreases C1 base factors by
 - › 0.4-4% for investment grade
 - › 1-3% for high-yield
 - 2000–2020 (3.47%) increase C1 base factors by
 - › 2-7% for investment grade
 - › 2-3% for high-yield
 - 2010-2020 (2.25%) increase C1 base factors by
 - › 7-13% for investment grade
 - › 5-8% for high-yield

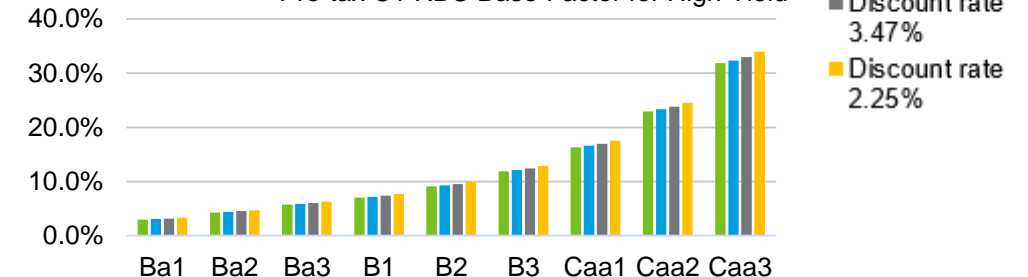
10-year USD Swap Rate



Pre-tax C1 RBC Base Factor for Investment Grade



Pre-tax C1 RBC Base Factor for High Yield

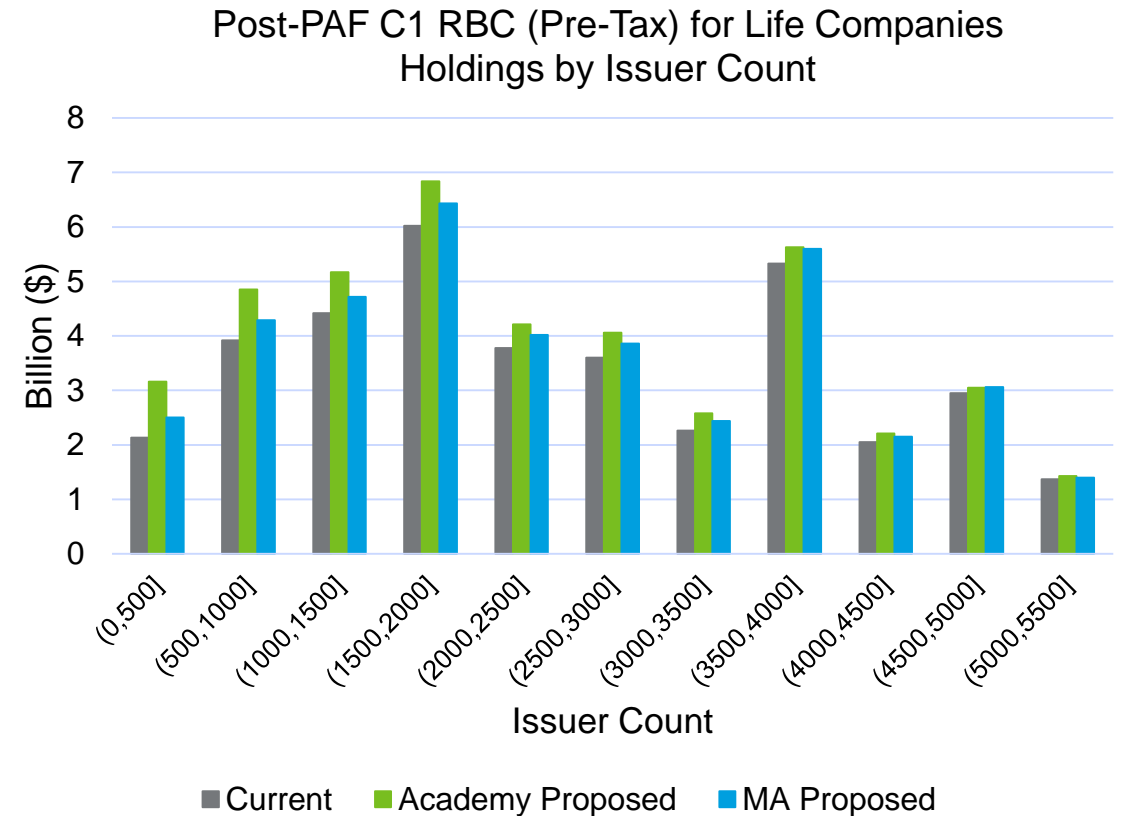
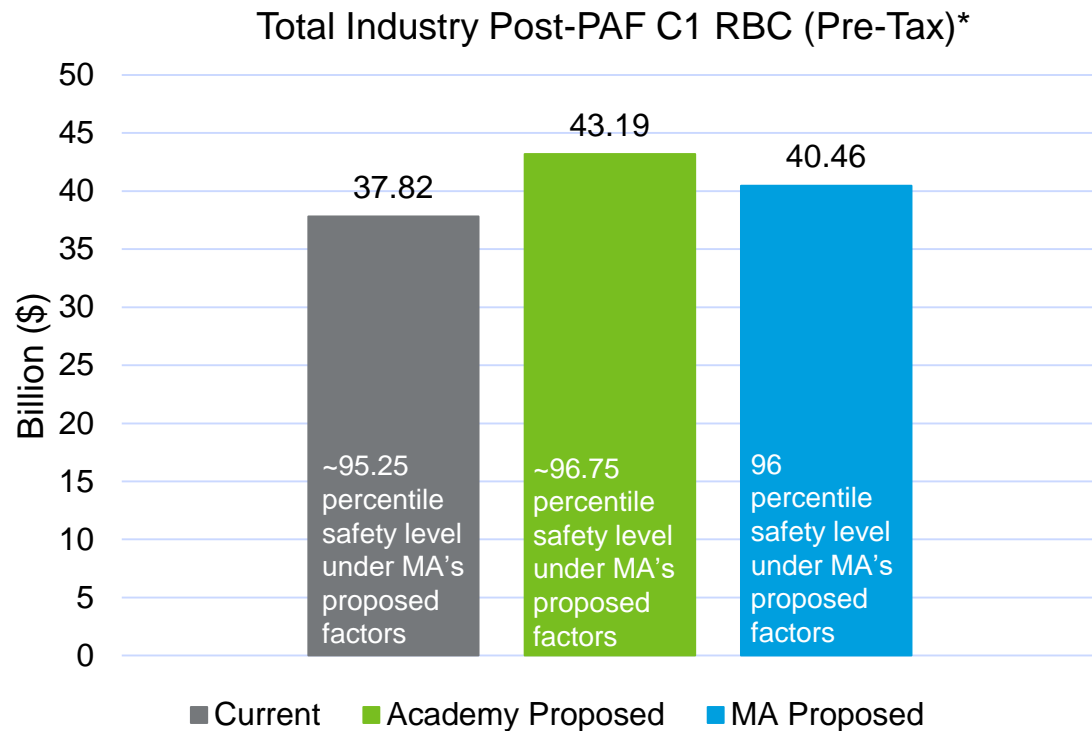


6

Recap

Post-PAF C1 RBC Industry Impact – Complete Portfolio Holdings

Post-PAF RBC proposed by MA is higher than the current level



*Data on ~94% life companies in US that have reported, which includes over 99% of the industry BACV as of 03/19/2021

Summary of MA Proposed C1 Factors and their Impact

Data better represents historical experience of life insurers' holdings; methodologies better capture issuer diversification

C1 base factors & PAFs more accurately reflect empirically observed default rates, default correlations, & diversification

More accurate C1 base factors and PAFs; better aligned with insolvency risk; reduced risk-shifting incentives

» Impact on post-PAF C1 RBC

- Higher post-PAF RBC, on average, across the life industry compared to current formula
- Larger post-PAF RBC increase compared to current formula, on average, for insurers with small and medium number of issuers, but much less so than that under Academy's proposal

» Limitations of economic state model and their impact on accuracy of C1 base factors & PAFs

- The economic state model overstates diversification across issuers relative to that observed empirically, resulting in
 - › Understatement of credit losses in C1 base factors, all else equal
 - › PAFs that are overly punitive (lenient) to portfolios with a smaller (larger) number of issuers
- Economic Scalars, which are part of the economic state model under the Academy's proposal, result in counterfactual increases and decreases to the C1 base factors across the NAIC designation categories. They lead to an overall flattening of high yield C1 base factors relative to investment grade, and under certain parameterizations C1 base factors that are non-monotonic.

» Impact of replacing the economic state model with MA proposed correlation model

- MA proposed correlation model more accurately reflects empirically observed default correlations and issuer diversification benefits, and that addresses all aforesaid limitations of the economic state model. As a result:
 - › MA proposed C1 base factors are more conservative and more differentiated across NAIC designation categories than those implied by the economic state model.
 - › MA proposed PAFs more accurately reflect issuer diversification benefits and are less punitive (lenient) to portfolios with a small (larger) number of issuers, relative to those from the Academy's proposal.

Amnon Levy

Managing Director, Portfolio and Balance Sheet Research
+1 (415) 874-6279
Amnon.Levy@moodys.com

Akshay Gupta

Assistant Director, Portfolio and Balance Sheet Research
Akshay.Gupta@moodys.com

Kamal Kumar

Director, Portfolio and Balance Sheet Research
Kamal.Kumar@moodys.com

Pierre Xu

Director, Portfolio and Balance Sheet Research
+1 (415) 874-6290
Pierre.Xu@moodys.com

Libor Pospisil

Director, Portfolio and Balance Sheet Research
Libor.Pospisil@moodys.com

Andy Zhang

Assistant Director, Portfolio and Balance Sheet Research
+1 (415) 874-6035
Andy.Zhang@moodys.com

Mark Li

Assistant Director, Portfolio and Balance Sheet Research
Mark.Li@moodys.com

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2020 RBC Charges by Company Size - Current verse Proposed Bond RBC Charges (Academy)
(Excluding Companies with negative TAC)

TAC Size	0 - \$5M	\$5M - \$25M	\$25M - \$75M	\$75M - \$250M	\$250M - \$1B	Over \$1B	Total
Total Adjusted Capital	232,591,166	2,301,548,068	5,528,544,390	20,761,379,178	53,499,004,867	552,920,803,561	635,243,871,230
C-0 - Current	2,543,632	63,569,589	56,382,592	330,628,874	1,341,360,348	25,874,639,420	27,669,124,455
C-1cs Current (2020)	6,999,060	80,914,228	217,023,765	635,595,365	1,987,950,948	42,700,980,880	45,629,464,246
C1-0 Current	23,909,669	204,325,336	461,699,126	1,925,694,266	5,128,886,359	52,348,811,507	60,093,326,263
C1-0 Proposed	31,039,071	243,534,371	570,023,207	2,312,439,740	6,181,004,479	59,741,607,290	69,079,648,157
C1-0 % Change	30%	19%	23%	20%	21%	14%	15%
C2 Current	9,515,534	128,474,185	489,342,213	2,135,451,377	4,956,238,406	21,631,281,978	29,350,293,693
C2a Current	9,162,213	97,154,737	354,999,448	675,017,899	1,728,370,117	14,121,576,791	16,786,281,205
C2b Current	0	997,417	343,728	240,760	274,766	102,873,100	104,729,771
C2c Current	0	1,182,735	1,089,335	81,722	238,173,226	5,941,056,646	6,181,583,664
C2a Current	4,068,039	48,654,114	116,361,745	443,435,500	900,307,512	7,303,058,869	8,815,885,779
C2b Current	521,271	6,374,613	16,725,633	30,113,783	44,935,778	582,030,430	680,701,508
ACL RBC - Current	24,487,586	265,233,868	596,473,382	2,571,145,433	6,351,882,558	64,417,774,565	74,226,997,392
ACL RBC - Proposed	31,039,071	243,534,371	570,023,207	2,312,439,740	6,181,004,479	59,741,607,290	69,079,648,157
ACL RBC % Change	27%	-8%	-4%	-10%	-3%	-7%	-7%
# of Companies	94	183	118	148	112	101	756

Distributions of Change in C1-0 Charges by Company Size under Proposed Bond RBC Charges (Academy)
(Excluding Companies with negative TAC)

C1-0 % Change\TAC	0 - \$5M	\$5M - \$25M	\$25M - \$75M	\$75M - \$250M	\$250M - \$1B	Over \$1B	Total
>50% to >25%	0	2	1				3
>25% to >15%	4	3	2				9
>15% to >5%	7	8	2	1	1	1	20
>5% to >5%	28	42	15	16	6	6	113
5% to 15%	13	25	19	24	28	38	147
15% to 25%	13	31	22	46	37	36	185
25% to 50%	19	55	48	52	34	13	221
Greater than 50%	10	17	10	6	7	7	58
Total	94	183	118	148	112	101	756

Distributions of Changes in ACL RBC by Company Size under Proposed Bond RBC Charges (Academy)
(Excluding Companies with negative TAC)

ACL RBC % Change\TAC	0 - \$5M	\$5M - \$25M	\$25M - \$75M	\$75M - \$250M	\$250M - \$1B	Over \$1B	Total
>25% to >15%	1						1
>15% to >5%		3				1	4
>5% to >5%	50	101	54	72	51	49	377
5% to 15%	21	44	41	53	46	47	252
15% to 25%	8	23	17	15	13	4	80
25% to 50%	10	9	4	6	2		31
Greater than 50%	4	3	2	2			11
Total	94	183	118	148	112	101	756

Distributions of Changes in RBC Ratios by Company Size under Proposed (Academy) Bond RBC Charges
(Excluding Companies with Negative TAC)

RBC Ratio % Change\TAC	0 - \$5M	\$5M - \$25M	\$25M - \$75M	\$75M - \$250M	\$250M - \$1B	Over \$1B	Total
Less than >50%	1		1	2			4
>50% to >25%	7	5	2	4			18
>25% to >15%	12	21	12	7	10	3	65
>15% to >5%	23	52	47	60	51	46	279
>5% to >5%	50	102	56	75	51	51	385
5% to 15%	1						1
15% to 25%		3				1	4
Subtotal	94	183	118	148	112	101	756

2020 RBC Charges by Company Size - Current verse Proposed Bond RBC Charges (Moody's)
(Excluding Companies with negative TAC)

TAC Size	0 - \$5M	\$5M - \$25M	\$25M - \$75M	\$75M - \$250M	\$250M - \$1B	Over \$1B	Total
Total Adjusted Capital	232,591,166	2,301,548,068	5,528,544,390	20,761,379,178	53,499,004,867	552,920,803,561	635,243,871,230
C-0 - Current	2,543,632	63,569,589	56,382,592	330,628,874	1,341,360,348	25,874,639,420	27,669,124,455
C-1cs Current (2020)	6,999,060	80,914,228	217,023,765	635,595,365	1,987,950,948	42,700,980,880	45,629,464,246
C1-0 Current	23,909,669	204,325,336	461,699,126	1,925,694,266	5,128,886,359	52,348,811,507	60,093,326,263
C1-0 Proposed	27,864,472	225,639,064	523,033,724	2,137,253,138	5,721,471,748	56,661,315,119	65,296,577,266
C1-0 % Change	17%	10%	13%	11%	12%	8%	9%
C2 Current	9,515,534	128,474,185	489,342,213	2,135,451,377	4,956,238,406	21,631,281,978	29,350,293,693
C2a Current	9,162,213	97,154,737	354,999,448	675,017,899	1,728,370,117	14,121,576,791	16,786,281,205
C2b Current	0	997,417	343,728	240,760	274,766	102,873,100	104,729,771
C2c Current	0	1,182,735	1,089,335	81,722	238,173,226	5,941,056,646	6,181,583,664
C2a Current	4,068,039	48,654,114	116,361,745	443,435,500	900,307,512	7,303,058,869	8,815,885,779
C2b Current	521,271	6,374,613	16,725,633	30,113,783	44,935,778	582,030,430	680,701,508
ACL RBC - Current	24,487,586	265,233,868	596,473,382	2,571,145,433	6,351,882,558	64,417,774,565	74,226,997,392
ACL RBC - Proposed	26,470,137	274,966,478	622,680,225	2,659,530,815	6,596,658,157	66,151,051,726	76,331,367,538
ACL RBC % Change	8%	4%	4%	3%	4%	3%	3%
# of Companies	94	183	118	148	112	101	756

Distributions of Change in C1-0 Charges by Company Size under Proposed Bond RBC Charges (Moody's)
(Excluding Companies with negative TAC)

C1-0 % Change\TAC	0 - \$5M	\$5M - \$25M	\$25M - \$75M	\$75M - \$250M	\$250M - \$1B	Over \$1B	Total
>50% to >25%	2	3					7
>25% to >15%	4	7	4	1			16
>15% to >5%	2	8		3			11
>5% to >5%	9	3	3	3	3	2	23
5% to 15%	28	55	29	35	14	10	171
15% to 25%	21	44	30	54	62	69	280
25% to 50%	14	39	36	38	23	10	160
Greater than 50%	13	18	13	12	7	6	69
GT 50%	1	6	3	3	3	3	19
Total	94	183	118	148	112	101	756

Distributions of Changes in ACL RBC by Company Size under Proposed Bond RBC Charges (Moody's)
(Excluding Companies with negative TAC)

ACL RBC % Change\TAC	0 - \$5M	\$5M - \$25M	\$25M - \$75M	\$75M - \$250M	\$250M - \$1B	Over \$1B	Total
>25% to >15%	1	1					2
>15% to >5%	4	5	1	2	1	1	14
>5% to >5%	53	121	74	96	72	70	486
5% to 15%	22	44	36	41	38	30	211
15% to 25%	11	7	5	5	1		29
25% to 50%	2	4	1	2			9
Greater than 50%	1	1	1	2			5
Total	94	183	118	148	112	101	756

Distributions of Changes in RBC Ratios by Company Size under Proposed (Moody's) Bond RBC Charges
(Excluding Companies with Negative TAC)

RBC Ratio % Change\TAC	0 - \$5M	\$5M - \$25M	\$25M - \$75M	\$75M - \$250M	\$250M - \$1B	Over \$1B	Total
Less than >50%	1						1
>50% to >25%	1	2	2	2			7
>25% to >15%	8	7	3	5			23
>15% to >5%	25	46	37	43	39	27	217
>5% to >5%	54	121	75	96	72	73	491
5% to 15%	4	3	1	2	1	1	12
15% to 25%		3					3
GT 50%	1	1					2
Subtotal	94	183	118	148	112	101	756

2020 Life RBC - Comparison of Action Levels by Company Size Between Current and Proposed Bonds RBC Charges

(Excluding Companies with Negative TAC)

	2020 RBC Action Level under Current RBC Formula					Total
	MCL	CAL	Trend Test	No Action		
RBC Action Level with Proposed Current and RBC Charges	MCL	3				3
	CAL		1			1
	Trend Test			6	8	14
	No Action				738	738
	Total	3	1	6	746	756

Comparison of RBC Ratio Range between Current and Proposed Bond RBC Charges (Academy)

(Excluding Companies with Negative TAC)

Academy \ Current	0% - 200%	200% - 400%	400% - 600%	600% - 1000%	Over 1000%	Total
0% - 200%	4					4
200% - 400%		32	12	1		45
400% - 600%			74	28		102
600% - 1000%				247	35	282
Over 1000%					323	323
Subtotal	4	32	86	276	358	756

2020 Life RBC - Comparison of Action Levels by Company Size Between Current and Proposed Bonds RBC Charges

(Excluding Companies with Negative TAC)

	2020 RBC Action Level under Current RBC Formula					Total
	MCL	CAL	Trend Test	No Action		
RBC Action Level with Proposed Current and RBC Charges	MCL	3				3
	CAL		1			1
	Trend Test			6	5	11
	No Action				741	741
	Total	3	1	6	746	756

Comparison of RBC Ratio Range between Current and Proposed Bond RBC Charges (Moody's)

(Excluding Companies with Negative TAC)

Moody's \ Current	0% - 200%	200% - 400%	400% - 600%	600% - 1000%	Over 1000%	Total
0% - 200%	4					4
200% - 400%		32	9	1		42
400% - 600%			77	13		90
600% - 1000%				261	19	280
Over 1000%					339	340
Subtotal	4	32	86	276	358	756

Capital Adequacy (E) Task Force RBC Proposal Form

- | | | |
|---|---|--|
| <input type="checkbox"/> Capital Adequacy (E) Task Force | <input type="checkbox"/> Health RBC (E) Working Group | <input checked="" type="checkbox"/> Life RBC (E) Working Group |
| <input type="checkbox"/> Catastrophe Risk (E) Subgroup | <input type="checkbox"/> Investment RBC (E) Working Group | <input type="checkbox"/> Operational Risk (E) Subgroup |
| <input type="checkbox"/> C3 Phase II/ AG43 (E/A) Subgroup | <input type="checkbox"/> P/C RBC (E) Working Group | <input type="checkbox"/> Longevity Risk (A/E) Subgroup |

DATE: <u>4/22/21</u>	<u>FOR NAIC USE ONLY</u>
CONTACT PERSON: <u>Dave Fleming</u> TELEPHONE: <u>816-783-8121</u> EMAIL ADDRESS: <u>dfleming@naic.org</u> ON BEHALF OF: <u>Life Risk-Based Capital (E) Working Group</u> NAME: <u>Philip Barlow, Chair</u> TITLE: <u>Associate Commissioner of Insurance</u> AFFILIATION: <u>District of Columbia</u> ADDRESS: <u>1050 First Street, NE Suite 801</u> <u>Washington, DC 20002</u>	Agenda Item # <u>2021-10-L</u> Year <u>2021</u> <b style="text-align: center;"><u>DISPOSITION</u> <input type="checkbox"/> ADOPTED <input type="checkbox"/> REJECTED _____ <input type="checkbox"/> DEFERRED TO _____ <input type="checkbox"/> REFERRED TO OTHER NAIC GROUP <input checked="" type="checkbox"/> EXPOSED <u>4/22/21</u> <input type="checkbox"/> OTHER (SPECIFY) _____

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

- | | | |
|--|---|---|
| <input type="checkbox"/> Health RBC Blanks | <input type="checkbox"/> Property/Casualty RBC Blanks | <input checked="" type="checkbox"/> Life and Fraternal RBC Instructions |
| <input type="checkbox"/> Health RBC Instructions | <input type="checkbox"/> Property/Casualty RBC Instructions | <input checked="" type="checkbox"/> Life and Fraternal RBC Blanks |
| <input type="checkbox"/> OTHER _____ | | |

DESCRIPTION OF CHANGE(S)

This proposal incorporates bond factors proposed by the American Academy of Actuaries (Academy) for the expanded presentation of bond designation categories in the annual statement and risk-based capital (RBC) schedules.

REASON OR JUSTIFICATION FOR CHANGE **

The expanded presentation of bonds is a result of the work of the Investment Risk-Based Capital (E) Working Group. The factors represent the Academy’s work on this project. The Academy’s proposed factors had been previously discussed and exposed for comment at the Investment Risk-Based Capital (E) Working Group in the Academy’s 2015 and 2017 reports. The factors included in this proposal have been updated for tax changes that occurred after the initial factors were presented.

Additional Staff Comments:

- 4-22-21: Proposal was exposed for comments (DBF)

** This section must be completed on all forms.

Revised 2-2019

Company Name

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Attachment 3
NAIC Company Code

BONDS

SVO Bond			(1)	(2)
Designation Category		Annual Statement Source	Book / Adjusted	RBC
Long Term Bonds			Carrying Value	Requirement
(1)	Exempt Obligations	AVR Default Component Column 1 Line 1	X 0.0000	=
(2.1)	NAIC Designation Category 1.A	AVR Default Component Column 1 Line 2.1	X 0.0029	=
(2.2)	NAIC Designation Category 1.B	AVR Default Component Column 1 Line 2.2	X 0.0042	=
(2.3)	NAIC Designation Category 1.C	AVR Default Component Column 1 Line 2.3	X 0.0055	=
(2.4)	NAIC Designation Category 1.D	AVR Default Component Column 1 Line 2.4	X 0.0070	=
(2.5)	NAIC Designation Category 1.E	AVR Default Component Column 1 Line 2.5	X 0.0084	=
(2.6)	NAIC Designation Category 1.F	AVR Default Component Column 1 Line 2.6	X 0.0102	=
(2.7)	NAIC Designation Category 1.G	AVR Default Component Column 1 Line 2.7	X 0.0119	=
(2.8)	Subtotal NAIC 1	Sum of Lines (2.1) through (2.7)		
(3.1)	NAIC Designation Category 2.A	AVR Default Component Column 1 Line 3.1	X 0.0137	=
(3.2)	NAIC Designation Category 2.B	AVR Default Component Column 1 Line 3.2	X 0.0163	=
(3.3)	NAIC Designation Category 2.C	AVR Default Component Column 1 Line 3.3	X 0.0194	=
(3.4)	Subtotal NAIC 2	Sum of Lines (3.1) through (3.3)		
(4.1)	NAIC Designation Category 3.A	AVR Default Component Column 1 Line 4.1	X 0.0365	=
(4.2)	NAIC Designation Category 3.B	AVR Default Component Column 1 Line 4.2	X 0.0466	=
(4.3)	NAIC Designation Category 3.C	AVR Default Component Column 1 Line 4.3	X 0.0597	=
(4.4)	Subtotal NAIC 3	Sum of Lines (4.1) through (4.3)		
(5.1)	NAIC Designation Category 4.A	AVR Default Component Column 1 Line 5.1	X 0.0615	=
(5.2)	NAIC Designation Category 4.B	AVR Default Component Column 1 Line 5.2	X 0.0832	=
(5.3)	NAIC Designation Category 4.C	AVR Default Component Column 1 Line 5.3	X 0.1148	=
(5.4)	Subtotal NAIC 4	Sum of Lines (5.1) through (5.3)		
(6.1)	NAIC Designation Category 5.A	AVR Default Component Column 1 Line 6.1	X 0.1683	=
(6.2)	NAIC Designation Category 5.B	AVR Default Component Column 1 Line 6.2	X 0.2280	=
(6.3)	NAIC Designation Category 5.C	AVR Default Component Column 1 Line 6.3	X 0.3000	=
(6.4)	Subtotal NAIC 5	Sum of Lines (6.1) through (6.3)		
(7)	NAIC 6	AVR Default Component Column 1 Line 7	X 0.3000	=
(8)	Total Long-Term Bonds	Sum of Lines (1) + (2.8) + (3.4) + (4.4) + (5.4) + (6.4) + (7)		

(Column 1) should equal Page 2 Column 3 Line 1 + Schedule DL Part 1 Column 6 Line 7099999

Company Name

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Short Term Bonds					
(9)	Exempt Obligations	AVR Default Component Column 1 Line 18	X	0.0000	=
(10.1)	NAIC Designation Category 1.A	AVR Default Component Column 1 Line 19.1	X	0.0029	=
(10.2)	NAIC Designation Category 1.B	AVR Default Component Column 1 Line 19.2	X	0.0042	=
(10.3)	NAIC Designation Category 1.C	AVR Default Component Column 1 Line 19.3	X	0.0055	=
(10.4)	NAIC Designation Category 1.D	AVR Default Component Column 1 Line 19.4	X	0.0070	=
(10.5)	NAIC Designation Category 1.E	AVR Default Component Column 1 Line 19.5	X	0.0084	=
(10.6)	NAIC Designation Category 1.F	AVR Default Component Column 1 Line 19.6	X	0.0102	=
(10.7)	NAIC Designation Category 1.G	AVR Default Component Column 1 Line 19.7	X	0.0119	=
(10.8)	Subtotal NAIC 1	Sum of Lines (10.1) through (10.7)			
(11.1)	NAIC Designation Category 2.A	AVR Default Component Column 1 Line 20.1	X	0.0137	=
(11.2)	NAIC Designation Category 2.B	AVR Default Component Column 1 Line 20.2	X	0.0163	=
(11.3)	NAIC Designation Category 2.C	AVR Default Component Column 1 Line 20.3	X	0.0194	=
(11.4)	Subtotal NAIC 2	Sum of Lines (11.1) through (11.3)			
(12.1)	NAIC Designation Category 3.A	AVR Default Component Column 1 Line 21.1	X	0.0365	=
(12.2)	NAIC Designation Category 3.B	AVR Default Component Column 1 Line 21.2	X	0.0466	=
(12.3)	NAIC Designation Category 3.C	AVR Default Component Column 1 Line 21.3	X	0.0597	=
(12.4)	Subtotal NAIC 3	Sum of Lines (12.1) through (12.3)			
(13.1)	NAIC Designation Category 4.A	AVR Default Component Column 1 Line 22.1	X	0.0615	=
(13.2)	NAIC Designation Category 4.B	AVR Default Component Column 1 Line 22.2	X	0.0832	=
(13.3)	NAIC Designation Category 4.C	AVR Default Component Column 1 Line 22.3	X	0.1148	=
(13.4)	Subtotal NAIC 4	Sum of Lines (13.1) through (13.3)			
(14.1)	NAIC Designation Category 5.A	AVR Default Component Column 1 Line 23.1	X	0.1683	=
(14.2)	NAIC Designation Category 5.B	AVR Default Component Column 1 Line 23.2	X	0.2280	=
(14.3)	NAIC Designation Category 5.C	AVR Default Component Column 1 Line 23.3	X	0.3000	=
(14.4)	Subtotal NAIC 5	Sum of Lines (14.1) through (14.3)			
(15)	NAIC 6	AVR Default Component Column 1 Line 24	X	0.3000	=
(16)	Total Short-Term Bonds	Sum of Lines (9) + (10.8) + (11.4) + (12.4) + (13.4) + (14.4) + (15)			
	(Column 1) should equal Schedule DA Part 1 Column 7 Line 8399999 + Schedule DL Part 1 Column 6 Line 8999999 + LR012 Miscellaneous Assets Column (1) Line (2.2)				
(17)	Total Long-Term and Short-Term Bonds (pre-MODCO/Funds Withheld)	Line (8) + (16)			
(18)	Credit for Hedging	LR014 Hedged Asset Bond Schedule Column 13 Line 0399999			
(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)			
(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)			
(21)	Total Long-Term and Short-Term Bonds (including MODCO/Funds Withheld and Credit for Hedging adjustments.)	Lines (17) - (18) - (19) + (20)			
(22)	Non-exempt U.S. Government Agency Bonds	Schedule D Part 1 and Schedule DA Part 1, in part†	X	0.0029	=
(23)	Bonds Subject to Size Factor	Line (21) - Line (1) - Line (9) - Line(22)			
(24)	Number of Issuers	Company Records			
(25)	Size Factor for Bonds				
(26)	Bonds Subject to Size Factor after the Size Factor is Applied	Line(23) x Line(25)			
(27)	Total Bonds	Line (22) + Line(26)			

† 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.

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

Company Name

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ASSET CONCENTRATION FACTOR

(1)	(2)	(3)	(4)	(5)	(6)
Asset Type	Book / Adjusted Carrying Value	Factor	Additional RBC	Adjustment/ Subsidiary RBC	RBC Requirement
Issuer Name: _____					
(1.1) Bond NAIC Designation Category 2.A		X 0.0137	=		
(1.2) Bond NAIC Designation Category 2.B		X 0.0163	=		
(1.3) Bond NAIC Designation Category 2.C		X 0.0194	=		
(2.1) Bond NAIC Designation Category 3.A		X 0.0365	=		
(2.2) Bond NAIC Designation Category 3.B		X 0.0466	=		
(2.3) Bond NAIC Designation Category 3.C		X 0.0597	=		
(3.1) Bond NAIC Designation Category 4.A		X 0.0615	=		
(3.2) Bond NAIC Designation Category 4.B		X 0.0832	=		
(3.3) Bond NAIC Designation Category 4.C		X 0.1148	=		
(4.1) Bond NAIC Designation Category 5.A		X 0.1683	=		
(4.2) Bond NAIC Designation Category 5.B		X 0.2280	=		
(4.3) Bond NAIC Designation Category 5.C		X 0.3000	=		
(5) Bond NAIC 6		X 0.1500	=		
(6.1) Bond NAIC Designation Category 1.A †		X 0.0029	=		
(6.2) Bond NAIC Designation Category 1.B †		X 0.0042	=		
(6.3) Bond NAIC Designation Category 1.C †		X 0.0055	=		
(6.4) Bond NAIC Designation Category 1.D †		X 0.0070	=		
(6.5) Bond NAIC Designation Category 1.E †		X 0.0084	=		
(6.6) Bond NAIC Designation Category 1.F †		X 0.0102	=		
(6.7) Bond NAIC Designation Category 1.G †		X 0.0119	=		
(7) Unaffiliated Preferred Stock NAIC 2		X 0.0126	=		
(8) Unaffiliated Preferred Stock NAIC 3		X 0.0446	=		
(9) Unaffiliated Preferred Stock NAIC 4		X 0.0970	=		
(10) Unaffiliated Preferred Stock NAIC 5		X 0.2231	=		
(11) Unaffiliated Preferred Stock NAIC 6		X 0.1500	=		
(12) Unaffiliated Preferred Stock NAIC 1 †		X 0.0039	=		
(13) Collateral Loans		X 0.0680	=		
(14) Receivable for Securities		X 0.0140	=		
(15) Write-ins for Invested Assets		X 0.0680	=		
(16) Premium Notes		X 0.0680	=		
(17) Real Estate - Foreclosed			=		
(18) Real Estate - Foreclosed Encumbrances		X ‡	=		
(19) Real Estate - Investments			=		
(20) Real Estate - Investment Encumbrances		X ‡	=		
(21) Real Estate - Schedule BA			=		
(22) Real Estate - Schedule BA Encumbrances		X ‡	=		
(23) Farm Mortgages - Category CM2		X 0.0175	=		
(24) Farm Mortgages - Category CM3		X 0.0300	=		
(25) Farm Mortgages - Category CM4		X 0.0500	=		
(26) Farm Mortgages - Category CM5		X 0.0750	=		
(27) Commercial Mortgages - Category CM2		X 0.0175	=		
(28) Commercial Mortgages - Category CM3		X 0.0300	=		
(29) Commercial Mortgages - Category CM4		X 0.0500	=		
(30) Commercial Mortgages - Category CM5		X 0.0750	=		

† After the ten largest issuer exposures are chosen, any NAIC 1 bonds or preferred stocks from any of these issuers should be included.

‡ Refer to the instructions for the Asset Concentration Factor for details of this calculation.

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

Company Name

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ASSET CONCENTRATION FACTOR (CONTINUED)

(1)	(2)	(3)	(4)	(5)	(6)
Asset Type	Book / Adjusted Carrying Value	Factor	Additional RBC	Adjustment/ Subsidiary RBC	RBC Requirement
(31) Farm Mortgages - 90 Days Overdue					
(32) Farm Mortgages - 90 Days Overdue - Cumulative Writedowns		X ‡	=		
(33) Residential Mortgages - 90 Days Overdue					
(34) Residential Mortgages - 90 Days Overdue - Cumulative Writedowns		X ‡	=		
(35) Commercial Mortgages - 90 Days Overdue					
(36) Commercial Mortgages - 90 Days Overdue - Cumulative Writedowns		X ‡	=		
(37) Farm Mortgages in Foreclosure					
(38) Farm Mortgages in Foreclosure - Cumulative Writedowns		X ‡	=		
(39) Residential Mortgages in Foreclosure					
(40) Residential Mortgages in Foreclosure - Cumulative Writedowns		X ‡	=		
(41) Commercial Mortgages in Foreclosure					
(42) Commercial Mortgages in Foreclosure - Cumulative Writedowns		X ‡	=		
(43) Unaffiliated Mortgages with Covenants		X ‡	=		
(44) Unaffiliated Mortgages - Defeased with Government Securities		X 0.0090	=		
(45) Unaffiliated Mortgages - Primarily Senior		X 0.0175	=		
(46) Unaffiliated Mortgages - All Other		X 0.0300	=		
(47) Affiliated Mortgages - Category CM2		X 0.0175	=		
(48) Affiliated Mortgages - Category CM3		X 0.0300	=		
(49) Affiliated Mortgages - Category CM4		X 0.0500	=		
(50) Affiliated Mortgages - Category CM5		X 0.0750	=		
(51) Schedule BA Mortgages 90 Days Overdue					
(52) Schedule BA Mortgages 90 Days Overdue - Cumulative Writedowns		X ‡	=		
(53) Schedule BA Mortgages in Process of Foreclosure					
(54) Schedule BA Mortgages Foreclosed - Cumulative Writedowns		X ‡	=		
(55) Federal Guaranteed Low Income Housing Tax Credits		X 0.0014	=		
(56) Federal Non-Guaranteed Low Income Housing Tax Credits		X 0.0260	=		
(57) State Guaranteed Low Income Housing Tax Credits		X 0.0014	=		
(58) State Non-Guaranteed Low Income Housing Tax Credits		X 0.0260	=		
(59) All Other Low Income Housing Tax Credits		X 0.1500	=		
(60) NAIC 02 Working Capital Finance Notes		X 0.0163	=		
(61) Other Schedule BA Assets		X 0.1500	=		
(62) Total of Issuer = Sum of Lines (1) through (61)					

NOTE: Ten issuer sections and a grand total page will be available on the filing software. The grand total page is calculated as the sum of issuers 1-10 by asset type.

‡ Refer to the instructions for the Asset Concentration Factor for details of this calculation.

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

Company Name

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HEDGED ASSET BOND SCHEDULE

As of:

Type of Hedged Asset	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
	Hedging Instruments				Hedged Asset - Bonds								RBC Credit	
	Description	Notional Amount	Relationship Type of the Hedging Instrument and Hedged Asset	Maturity Date	Description	CUSIP	Book / Adjusted Carrying Value	Overlap with Insurer's Bond Portfolio	Maturity Date	NAIC Designation Category	RBC Factor	Gross RBC Charge	RBC Credit for Hedging Instruments	Net RBC Charge
Bonds	†	†		†	†	†	†	‡	†	†	§	*	£	**
(0100001)														
(0100002)														
(0100003)														
(0100004)														
(0100005)														
(0100006)														
(0100007)														
(0100008)														
(0100009)														
(0100010)														
(0100011)														
(0100012)														
(0100013)														
(0100014)														
(0100015)														
(0100016)														
(0100017)														
(0100018)														
(0100019)														
(0100020)														
(0100021)														
(0100022)														
(0100023)														
(0100024)														
(0100025)														
(0100026)														
(0100027)														
(0100028)														
(0100029)														
(0100030)														
(0199999)	Subtotal - NAIC 1 Through 5 Bonds		XXXX	XXXX	Subtotal	XXXX			XXXX	XXXX	XXXX			
(0299999)	Subtotal - NAIC 6 Bonds		XXXX	XXXX	Subtotal	XXXX			XXXX	XXXX	XXXX			
(0399999)	Total		XXXX	XXXX	Total	XXXX			XXXX	XXXX	XXXX			

Note: For the intermediate category of hedging, we recommend that the risk mitigation and resulting RBC credit be determined as if each specific security common to both the index/basket hedge and the portfolio is a basic hedge with the entire basic hedge methodology applied to each matching name. This includes the application of the maturity mismatch formula and the maximum RBC credit of 94% of the C-1 asset charge for fixed income hedges.

† Columns are derived from Investment schedules.

‡ The portion of Column (2) Notional Amount of the Hedging Instrument that hedges Column (7) Book / Adjusted Carrying Value. This amount cannot exceed Column (7) Book / Adjusted Carrying Value.

§ Factor based on Column (10) NAIC Designation and NAIC C-1 RBC factors table.

* Column (7) Book Adjusted Carrying Value multiplied by Column (11) RBC Factor.

£ Column (13) is calculated according to the risk-based capital instructions.

** Column (12) Gross RBC Charge minus Column (13) RBC Credit for Hedging Instruments.

Denotes manual entry items that do not come directly from the annual statement.

Company Name

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OFF-BALANCE SHEET COLLATERAL

(Including any Schedule DL, Part 1 Assets not Included in the Asset Valuation Reserve)

		(1) Book / Adjusted Carrying Value	(2) Factor	(3) RBC Requirement
<u>Fixed Income - Bonds</u>				
(1) Exempt Obligations	Company Records		X 0.000	=
(2.1) NAIC Designation Category 1.A	Company Records		X 0.0029	=
(2.2) NAIC Designation Category 1.B	Company Records		X 0.0042	=
(2.3) NAIC Designation Category 1.C	Company Records		X 0.0055	=
(2.4) NAIC Designation Category 1.D	Company Records		X 0.0070	=
(2.5) NAIC Designation Category 1.E	Company Records		X 0.0084	=
(2.6) NAIC Designation Category 1.F	Company Records		X 0.0102	=
(2.7) NAIC Designation Category 1.G	Company Records		X 0.0119	=
(2.8) Subtotal NAIC 1	Sum of Lines (2.1) through (2.7)			
(3.1) NAIC Designation Category 2.A	Company Records		X 0.0137	=
(3.2) NAIC Designation Category 2.B	Company Records		X 0.0163	=
(3.3) NAIC Designation Category 2.C	Company Records		X 0.0194	=
(3.4) Subtotal NAIC 2	Sum of Lines (3.1) through (3.3)			
(4.1) NAIC Designation Category 3.A	Company Records		X 0.0365	=
(4.2) NAIC Designation Category 3.B	Company Records		X 0.0466	=
(4.3) NAIC Designation Category 3.C	Company Records		X 0.0597	=
(4.4) Subtotal NAIC 3	Sum of Lines (4.1) through (4.3)			
(5.1) NAIC Designation Category 4.A	Company Records		X 0.0615	=
(5.2) NAIC Designation Category 4.B	Company Records		X 0.0832	=
(5.3) NAIC Designation Category 4.C	Company Records		X 0.1148	=
(5.4) Subtotal NAIC 4	Sum of Lines (5.1) through (5.3)			
(6.1) NAIC Designation Category 5.A	Company Records		X 0.1683	=
(6.2) NAIC Designation Category 5.B	Company Records		X 0.2280	=
(6.3) NAIC Designation Category 5.C	Company Records		X 0.3000	=
(6.4) Subtotal NAIC 5	Sum of Lines (6.1) through (6.3)			
(7) NAIC 6	Company Records		X 0.300	=
(8) Total Bonds	Sum of Lines (1) + (2.8) + (3.4) + (4.4) + (5.4) + (6.4) + (7)			
<u>Fixed Income - Preferred Stock</u>				
(9) Asset NAIC 1	Company Records		X 0.0039	=
(10) Asset NAIC 2	Company Records		X 0.0126	=
(11) Asset NAIC 3	Company Records		X 0.0446	=
(12) Asset NAIC 4	Company Records		X 0.0970	=
(13) Asset NAIC 5	Company Records		X 0.2231	=
(14) Asset NAIC 6	Company Records		X 0.300	=
(15) Total Preferred Stock	Sum of Lines (9) through (14)			
(16) Common Stock	Company Records		X 0.450 †	=
(17) Schedule BA - Other Invested Assets	Company Records		X 0.300	=
(18) Other Invested Assets	Company Records		X 0.300	=
(19) Total Off-Balance Sheet Collateral	Lines (8) + (15) + (16) + (17) + (18)			

† The factor for common stock can vary depending on the type of stock. The factor would be subject to a minimum of 22.5 percent and a maximum of 45 percent.

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

#REF!

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 percent of the trials by category and a 96 percent 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 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 1 through 7 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 7099999.

Lines (9) through (15)

The book/adjusted carrying value of all 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 through 24 of the Asset Valuation Reserve Default Component, Page 30 of the annual statement.

Line (16)

The total should equal short-term bonds reported on Schedule DA, Part 1, Line 8399999 plus Schedule DL Part 1, Column 6, Line 8999999 plus LR012 Miscellaneous Assets Column (1) Line (2.2).

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 2.5 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. Portfolios with more than 1,300 issuers will receive a discount. 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.)

<u>Line (25)</u>	<u>Source</u>	<u>(a)</u> <u>Number of Issuers</u>			<u>(b)</u> <u>Weighted Issuers</u>
First 50	Company Records	_____	X	2.5	= _____
Next 50	Company Records	_____	X	1.3	= _____
Next 300	Company Records	_____	X	1.0	= _____
Over 400	Company Records	_____	X	0.9	= _____
Total Number of Issuers from Line (23)		=====			
Total Weighted Issuers					=====
Size Factor = Total Weighted Issuers divided by Total Number of Issuers					=====

ASSET CONCENTRATION FACTOR LR010

Basis of Factors

The purpose of the concentration factor is to reflect the additional risk of high concentrations in single exposures (represented by an individual issuer of a security or a holder of a mortgage, etc.) The concentration factor doubles the risk-based capital pre-tax factor (with a maximum of 45 percent pre-tax) of the 10 largest asset exposures excluding various low-risk categories or categories that already have a maximum factor. Since the risk-based capital of the assets included in the concentration factor has already been counted once in the basic formula, the asset concentration factor only serves to add in the additional risk-based capital required. The calculation is completed on a consolidated basis; however, the concentration factor is reduced by amounts already included in the concentration factors of subsidiaries to avoid double-counting.

Specific Instructions for Application of the Formula

The 10 largest asset exposures should be developed by consolidating the assets of the parent with the assets of the company's insurance and investment subsidiaries. The concentration factor component on any asset already reflected in the subsidiary's RBC for the concentration factor should be deducted from Column (4). This consolidation process affects higher tiered companies only. Companies on the lowest tier of the organizational chart will prepare the asset concentration on a "stand alone" basis.

The 10 largest exposures should exclude the following: affiliated and non-affiliated common stock, affiliated preferred stock, home office properties, policy loans, bonds for which AVR and RBC are zero, NAIC 1 bonds, NAIC 1 unaffiliated preferred stock, NAIC 1 Hybrids, CM 1 Commercial and Farm Mortgages and any other asset categories with RBC factors less than 0.8 percent post-tax (this includes residential mortgages in good standing, insured or guaranteed mortgages, and cash and short-term investments).

In determining the assets subject to the concentration factor for both C-1s and C-1cs, the ceding company should exclude any asset whose performance inures primarily (>50 percent) to one reinsurer under modified coinsurance or funds withheld arrangements. The reinsurer should include 100 percent of such asset. Any asset where no one reinsurer receives more than 50 percent of its performance should remain with the ceding company.

Assets should be aggregated by issuer before determining the 10 largest exposures. Aggregations should be done separately for bonds and preferred stock (the first six digits of the CUSIP number can be used as a starting point) (please note that the same issuer may have more than one unique series of the first six digits of the CUSIP), mortgages and real estate. Securities held within Schedule BA partnerships should be aggregated by issuer as if the securities are held directly. Likewise, where joint venture real estate is mortgaged by the insurer, both the mortgage and the joint venture real estate should be considered as part of a single exposure. Tenant exposure is not included. For bonds and unaffiliated preferred stock, aggregations should be done first for classes 2 through 6. After the 10 largest issuer exposures are chosen, any NAIC 1 bonds, NAIC 1 unaffiliated preferred stock or NAIC 1 hybrids from any of these issuers should be included before doubling the risk-based capital. For some companies, following the above steps may generate less than 10 "issuer" exposures. These companies should list all available exposures.

Replicated assets other than synthetically created indices should be included in the asset concentration calculation in the same manner as other assets.

The book/adjusted carrying value of each asset is listed in Column (2).

The RBC factor will correspond to the risk-based capital category of the asset reported previously in the formula before application of the size factor for bonds. The RBC filing software automatically allows for an overall 45 percent RBC cap.

Lines (17) through (22)

The Asset Concentration RBC Requirement for a particular property plus the Real Estate RBC Requirement for a particular property cannot exceed the book/adjusted carrying value of the property. Any properties exceeding the book/adjusted carrying value must be adjusted down to the book/adjusted carrying value in Column (6) of the Asset Concentration.

Line (18), Column (4) is calculated as Line (17), Column (2) multiplied by 0.2300 plus Line (18), Column (2) multiplied by 0.2000, but not greater than Line (17), Column (2).

Line (20), Column (4) is calculated as Line (19), Column (2) multiplied by 0.1500 plus Line (20), Column (2) multiplied by 0.1200, but not greater than Line (19), Column (2).

Line (22), Column (4) is calculated as Line (21), Column (2) multiplied by 0.2300 plus Line (22), Column (2) multiplied by 0.2000, but not greater than Line (21), Column (2).

Lines (23) through (54)

The Asset Concentration RBC Requirement for a particular mortgage plus the LR004 Mortgages RBC Requirement or LR009 Schedule BA Mortgages RBC Requirement for a particular mortgage cannot exceed 45 percent of the book/adjusted carrying value of the mortgage. Any mortgages exceeding 45 percent of the book/adjusted carrying value must be adjusted down in Column (6) of the Asset Concentration.

Line (32), Column (4) is calculated as the greater of 0.1800 multiplied by [(Line (31) plus Line (32))] less Line (32) or Line (31) multiplied by the appropriate factor for the CM class to which the loan is assigned.

Line (34), Column (4) is calculated as the greater of 0.0140 multiplied by [(Line (33) plus Line (34))] less Line (34) or Line (33) multiplied by 0.0068.

Line (36), Column (4) is calculated as the greater of 0.1800 multiplied by [(Line (35) plus Line (36))] less Line (36) or Line (35) multiplied by the appropriate factor for the CM class to which the loan is assigned.

Line (38), Column (4) is calculated as the greater of 0.2200 multiplied by [(Line (37) plus Line (38))] less Line (38) or Line (37) multiplied by the appropriate factor for the CM class to which the loan is assigned.

Line (40), Column (4) is calculated as the greater of 0.0270 multiplied by [(Line (39) plus Line (40))] less Line (40) or Line (39) multiplied by 0.0068.

Line (42), Column (4) is calculated as the greater of 0.2200 multiplied by [(Line (41) plus Line (42))] less Line (42) or Line (41) multiplied by the appropriate factor for the CM class to which the loan is assigned.

Line (43), Column (4) is calculated as Line (43) multiplied by the appropriate factor for the CM class to which the loan is assigned.

Line (52), Column (4) is calculated as the greater of 0.1800 multiplied by [(Line (51) plus Line (52))] less Line (52) or Line (51) multiplied by the appropriate factor for the CM class to which the loan is assigned.

Line (54), Column (4) is calculated as the greater of 0.2200 multiplied by [(Line (53) plus Line (54))] less Line (54) or Line (53) multiplied by the appropriate factor for the CM class to which the loan is assigned.

HEDGED ASSET BOND AND COMMON STOCK SCHEDULES

LR014 and LR015

(Instructions related to intermediate hedges are in italics.)

Hedging

The concept of hedging credit, equity and other risks is widely accepted and understood among insurers and their regulators. In order for regulators to distinguish between insurers that have effectively reduced their risks from those insurers that have not, the risk based capital computation should be sensitive to such differences. Increasing or decreasing exposure to different asset classes in relation to a benchmark asset allocation tailored to meet the long term obligations to policy owners is critical to successfully managing an insurance company. Hedging is the process of using derivative instruments to most efficiently limit risk associated with a particular asset in a manner consistent with the insurer's long term objectives. The relative advantage of using cash market transactions versus derivative market transactions depends upon market conditions.

The NAIC model investment laws and regulations establish specific constraints on the use of derivatives. Governance of derivative use starts with approved and documented authorities from the insurer's Board of Directors to management. These authorities are coordinated with and enhanced by limits established by the insurer's domiciliary state.

Hedging strategies currently employed by insurers range from straightforward relationships between the hedged asset and the derivative instrument (the hedge) to more complex relationships. The purpose of this section of the RBC calculation is to measure and reflect in RBC the risk reduction achieved by an insurer's use of the most straightforward types of hedges involving credit default and equity C-1 risks.

To avoid the possible double counting of RBC credits, excluded from this section are any RBC credits arising from hedges that are part of the Clearly Defined Hedging Strategy (CDHS) required for C-3 cash flow testing or other risk mitigation techniques (e.g. reinsurance) which produce reduced levels of RBC by operation of other parts of the RBC formula.

RBC and Measuring the Risk Reduced by Hedging

To measure the risks reduced by hedging and reflect the effects in RBC it is important to understand the characteristics and purpose of the hedge. A portfolio manager seeking to hedge a particular asset or portfolio risk must determine if the derivative instruments available will do a suitable job of risk mitigation.

Default risk - A portfolio manager may determine that the default risk of a particular debt security which matures in 8 years needs to be hedged because of a near term credit concern which may resolve before the debt matures. A credit default swap (CDS) would be the most effective hedging instrument. In some circumstances the manager may purchase a CDS with 8 years to maturity which fully mitigates the default risk and shall result in an RBC credit which fully offsets the C-1 default risk charge on the debt security. However, seeking the most liquid and cost efficient market for the purchase of such an instrument may lead to the purchase of a 5 year CDS which the manager plans to renew (roll) as the credit circumstances evolve in the coming years. In this case there is a 3 year maturity mismatch between the debt security and the hedging instrument. To account for the difference between insurers that have hedged the debt security to full maturity versus those with a mismatched position, the determination of the RBC credit shall be made in accordance with the following formula which limits the results to a fraction of the C-1 charge for the hedged asset.

$$\text{RBC Credit As \% of C1 Asset Charge} = \text{Min} \left(1, \frac{\text{Time to Maturity of CDS}}{\text{Time to Maturity of Bond}} \right) \times (94\% - 10\%) + 10\%$$

This accounts for mismatched maturities and provides a regulatory margin of safety within a range of 94%-10% of the C-1 asset charge.

There may also be circumstances where default risk is reduced by hedging specific portfolios using a basket or index-based derivative (e.g. CDX family of derivatives) with the same or very similar components as the portfolio. For these hedges the risk reduction shall be measured based on the number of issuers common to both the insurer's portfolio and the index/basket CDS. A minimum of 50% overlap of the derivative instrument notional amount and the book/adjusted carrying value of the hedged bonds shall be required to qualify for any RBC credit. Additionally, if the insurer hedges an index, each bond must be listed (e. g. if the insurer acquires a CDX that hedges 125 names equally, then the insurer must list all 125 names on the schedule), regardless if the insurer owns all the bonds in the index.

As RBC is currently measured and reported annually and to an extent provides a regulator with an indicator of capital sufficiency for the near term future; default risk protection as provided by CDS (based on a specific security or an index of securities) shall have more than 1 year remaining to maturity in order to receive any RBC credit, provided that the remaining maturity of the hedged debt security or average maturity of the hedged portfolio is greater than 1 year. When both the default risk protection and the hedged debt security have less than one year to maturity, full RBC credit shall be allowed provided that the maturity of the protection is later than the maturity of the debt security; otherwise no RBC credit is allowed.

Equity market risk - A portfolio manager may determine that the market risk of holding a particular common stock needs to be reduced. Because an outright sale at that point in time might be disadvantageous to the insurer and/or policy owners, a short futures contract may be purchased to eliminate the current market risk by establishing a sale price in the future. The C-1 RBC equity risk credit shall be limited to 94%.

There may also be circumstances where equity market risk is reduced by hedging equity portfolios using derivatives based on equity market indices (e.g. S&P 500 futures contracts). Unless the equity portfolio is exactly matched to the index, the hedge will not provide precise one-to-one protection from fluctuations in value. The insurer must list all positions in the equity index individually (e. g. all 500 common stocks that are part of the S&P 500), regardless if the insurer owns all the stocks in the index.

Definitions and Instructions for the Spreadsheet Computation of Risk Reduction

(Numeric references represent spreadsheet columns)

Bonds

- (1) Description - Reported on Schedule DB.
- (2) Notional Amount - Amount reported on Schedule DB.
- (3) Relationship Type of the Hedging Instrument and Hedged Asset. There are two categories; Basic and Intermediate relationships. Basic relationship = Single issuer credit default swap on a single issuer name to hedge the credit risk of a specific hedged asset. *Intermediate relationship = A portfolio of insurer assets paired with a basket or index based hedging instrument with the same or very similar components as the portfolio. For intermediate relationships, a minimum of 50% overlap of the derivative instrument notional amount and the book adjusted carrying value of the hedged bonds shall be required to qualify for any RBC credit.*
- (4) Maturity Date - Date reported on Schedule DB.

- (5) Description - Bond description found in Schedule D. *For intermediate relationships, each bond must be listed (e. g. if the insurer acquires a credit default index that hedges 125 names equally, then the insurer must list all 125 names on the schedule.)*
- (6) CUSIP Identification - Bond unique identifier found in Schedule D.
- (7) Book Adjusted Carrying Value - Value found on Schedule D.
- (8) Overlap with Insurer's Bond Portfolio – The portion of Column (2) Notional Amount of the Hedging Instrument that hedges Column (7) Book Adjusted Carrying Value. This amount cannot exceed Column (7) Book Adjusted Carrying Value.
- (9) Maturity Date - The date is found in Schedule D.
- (10) NAIC Designation - Designation found in Schedule D. Necessary to determine correct RBC Factor for the Bonds.
- (11) RBC Factor - Factor based on Column (10) NAIC Designation and NAIC C-1 RBC factors table.
- (12) Gross RBC Charge – This is the C-1 RBC charge based on holdings at the end of the year. Calculation: Columns (7) Book Adjusted Carrying Value multiplied by (11) RBC Factor.
- (13) RBC Credit for Hedging Instruments – If Column (8) Overlap with Insurer's Bond Portfolio is zero; the RBC Credit would also be zero. The Hedging Instrument must have more than 1 year remaining to maturity in order to receive any RBC credit provided that the remaining time to maturity of the Hedged Asset - Bonds is greater than 1 year. If both the Hedging Instrument and the Hedged Asset - Bonds maturity dates are less than 1 year, the maximum RBC credit determined using the formula below shall be allowed provided that the maturity of the hedging instrument is equal to or later than the maturity of the bond. Calculation is Column (8) Overlap with Insurer's Bond Portfolio multiplied by RBC Credit as % of C-1 Asset Charge formula (formula listed below) multiplied by Column (11) RBC Factor.

$$\text{RBC Credit as \% of C1 Asset Charge} = \text{Min} \left(1, \frac{\text{Time to Maturity of Hedging Instrument}}{\text{Time to Maturity of Bond}} \right) \times (94\% - 10\%) + 10\%$$

Time to Maturity of Hedging Instrument divided by Time to Maturity of Bond cannot exceed 1.

- (14) Net RBC Charge – Column (12) Gross RBC Charge minus (13) RBC Credit for Hedging Instruments.

Common Stocks

- (1) Description - Reported on Schedule DB.
- (2) Notional Amount - Amount reported on Schedule DB.
- (3) Relationship Type of the Hedging Instrument and Hedged Asset. There are two categories; Basic relationships or Intermediate relationships. Basic relationship = Single name equity Hedging Instrument paired with a specific common stock. *Intermediate relationship = A portfolio of common stocks paired with a basket or index based Hedging Instrument with the same or very similar components as the portfolio. For intermediate relationships, a minimum of 50% overlap of the derivative instrument notional amount and the book adjusted carrying value of the hedged common stocks shall be required to qualify for any RBC credit.*

- (4) Description - Common Stock description found in Schedule D Part 2 Section 2. *For intermediate relationships, each common stock must be listed (e. g. if the insurer acquires a short futures contract that hedges the S&P 500, then the insurer must list all 500 stocks on the schedule).*
- (5) CUSIP Identification - Common Stock unique identifier found in Schedule D Part 2 Section 2.
- (6) Book Adjusted Carrying Value - Value found on Schedule D Part 2 Section 2.
- (7) Overlap with Insurer's Stock Portfolio – The portion of Column (2) Notional Amount of the Hedging Instrument that hedges Column (6) Book/Adjusted Carrying Value. This amount cannot exceed the Column (6) Book Adjusted Carrying Value.
- (8) RBC Factor - Factor based on NAIC C-1 RBC factors table.
- (9) Gross RBC Charge - The C-1 RBC charge based on holdings at the end of the year. Calculation: Columns (6) Book Adjusted Carrying Value multiplied by (8) RBC Factor.
- (10) RBC Credit for Hedging Instruments - RBC credit for equity market risk reduction is limited to 94% of the C-1 Asset charge. Calculation: Column (7) Overlap with Insurer's Stock Portfolio multiplied by (8) RBC Factor multiplied by 94%.
- (11) Net RBC Charge - Column (9) Gross RBC Charge minus (10) RBC Credit for Hedging Instruments.

Factors Table As determined by the NAIC

NAIC Designation	Factor
	0.0000
1	0.0029
1.A	0.0029
1.B	0.0042
1.C	0.0055
1.D	0.0070
1.E	0.0084
1.F	0.0102
1.G	0.0119
2.A	0.0137
2.B	0.0163
2.C	0.0194
3.A	0.0365
3.B	0.0466
3.C	0.0597
4.A	0.0615
4.B	0.0832
4.C	0.1148
5.A	0.1683
5.B	0.2280
5.C	0.3000
6	0.3000

Common Stock Type	Factor
Other Unaffiliated Public Common Stock	0.4500 †
Money Market Mutual Funds	0.0040
Federal Home Loan Bank Common Stock	0.0110
Unaffiliated Private Common Stock	0.3000

† - 30 percent adjusted up or down by the weighted average beta for the publicly traded common stock portfolio subject to a minimum of 22.5 percent and a maximum of 45 percent.

OFF-BALANCE SHEET COLLATERAL
(Including any Schedule DL, Part 1 Assets not Included in the Asset Valuation Reserve)
LR018

Basis of Factors

Security lending programs are required to maintain collateral. Some entities post the collateral supporting security lending programs on their financial statements, and incur C-1 risk charges on those assets. Other entities have collateral that is not recorded on their financial statements. While not recorded on the financial statements of the company, such collateral has risks that are not otherwise captured in the RBC formula.

Annual Statement Schedule DL, Part 1, Securities Lending Collateral Assets reported on the balance sheet (Assets Page, Line 10) should be included on the schedule with the Off-Balance Sheet Collateral if they are not already reflected in the Asset Valuation Reserve and are reflected in another portion of the Life RBC formula.

The collateral in these accounts is maintained by a third-party (typically a bank or other agent). The collateral agent maintains on behalf of the company detail asset listings of the collateral assets, and this data is the source for preparation of this schedule. The company should maintain such asset listings, at a minimum CUSIP, market value, book/carrying value, and maturity date. The asset risk charges are derived from existing RBC factors for bonds, preferred and common stocks, other invested assets, and invested assets not otherwise classified (aggregate write-ins).

Specific Instructions for Application of the Formula

Off-balance sheet collateral included in General Interrogatories, Part 1, Lines 24.05 and 24.06 of the annual statement should agree with Line (19).

Lines (1) through (8) – Bonds

Bond factors are described on page LR002 Bonds.

Line (9) through (15) – Preferred Stocks

Preferred stock factors are described on page LR005 Unaffiliated Preferred and Common Stock.

Line (16) – Common Stock

Common stock factors are described on page LR005 Unaffiliated Preferred and Common Stock.

Line (17) – Schedule BA – Other Invested Assets

Other invested assets factors are described on page LR008 Other Long Term Assets.

Line (18) – Aggregate Write-ins for Other Invested Assets

Aggregate write-ins for other invested assets factors are described on page LR012 Miscellaneous Assets.



AMERICAN ACADEMY of ACTUARIES

Objective. Independent. Effective.™

March 11, 2021

Philip Barlow
 Chair
 Life Risk-Based Capital (E) Working Group
 National Association of Insurance Commissioners (NAIC)

Dear Philip,

On behalf of the American Academy of Actuaries¹ C1 Work Group (C1WG), we present to the Life Risk-Based Capital (E) Working Group updated base bond factors and a companion portfolio adjustment formula to reflect corporate tax rates enacted by the Tax Cuts and Jobs Act of 2017 for the Life Risk-Based Capital (LRBC) formula. The C1WG's most recent recommendation on updated bond factors was provided to the NAIC's Investment Risk-Based Capital Working Group on October 10, 2017.² No other changes have been made to the October 17, 2017, recommendation.

As we have done in previous reports to the NAIC, we are providing direct model output for the base factors. As is the case with the current capital requirements for bonds, we recommend capping the base factor for the lowest-quality bond designation at 30%. Note that this approach caps the capital requirement for bonds at the base factor for unaffiliated common stock. In addition to capping the factor, we have not rounded any of the factors, as was done for the current bond factors.

A. UPDATED BASE FACTORS

The table below shows updated bond factors using a 21% corporate tax rate and the factors recommended in October 2017. These factors are used in the first step in calculating the basic capital requirements for bonds. These factors have been established at the statistical safety level specified by regulators. These factors in combination with the portfolio adjustment are expected to establish required capital at the 96th percentile over a 10-year time horizon. The assumptions used in developing these factors are based on expected loss given default experience for a portfolio of bonds that is representative of a typical life insurer's bond portfolio.

In the development of the capital requirements for credit risk, recall that the tax rate affects the net loss flowing through statutory surplus. The factor is based on a discounted after-tax cash flows. As such, an after-tax discount is used in the calculation. In the October 2017 recommendation, the after-tax cash flows were discounted at 3.25%. The updated bond factors are based on after-tax cash flows discounted at

¹ The American Academy of Actuaries is a 19,500-member professional association whose mission is to serve the public and the U.S. actuarial profession. For more than 50 years, the Academy has assisted public policymakers on all levels by providing leadership, objective expertise, and actuarial advice on risk and financial security issues. The Academy also sets qualification, practice, and professionalism standards for actuaries in the United States.

²https://www.actuary.org/sites/default/files/files/publications/Academy_C1WG_Comments_to_NAIC_IRBC_101017.pdf.

3.95%. Note that both sets of factors are based on a 5% pre-tax rate; only the after-tax discount rate has changed.

Base C1 Bond Factors

	10.17.2017 Recommendation	3.5.2021 Update
	Pre-Tax	Pre-Tax
Aaa	0.31%	0.29%
Aa1	0.43%	0.42%
Aa2	0.57%	0.55%
Aa3	0.72%	0.70%
A1	0.86%	0.84%
A2	1.06%	1.02%
A3	1.24%	1.19%
Baa1	1.42%	1.37%
Baa2	1.69%	1.63%
Baa3	2.00%	1.94%
Ba1	3.75%	3.65%
Ba2	4.76%	4.66%
Ba3	6.16%	5.97%
B1	6.35%	6.15%
B2	8.54%	8.32%
B3	11.82%	11.48%
Caa1	17.31%	16.83%
Caa2	23.22%	22.80%
Caa3	34.11%	33.86%

B. UPDATED PORTFOLIO ADJUSTMENT FORMULA

The table below shows an updated portfolio adjustment formula, as developed for the updated base factors above. As a reminder, the purpose of the adjustment is to modify the base calculation for the diversification of the insurer's bond portfolio, relative to the representative portfolio. The portfolio adjustment increases or decreases the base capital requirement (equal to the arithmetic sum of the base factor times the statutory carrying value of each bond) based on the number of issuers in the insurer's portfolio.

The representative bond portfolio used in developing the base factors contained 824 issuers. As per the October 2017 recommended portfolio adjustment, the updated portfolio adjustment is neutral or approximately equal to 1.0 for an average portfolio (i.e., a portfolio with the same number of bonds as contained in the representative portfolio.) The updated approach meets that criterion because the exact percentile confidence level of the base factors was selected to reproduce aggregate industry C1 requirements when the base factors are applied to each company portfolio. That said, the confidence level for the base factors is close to the 96th percentile for each rating class, and the portfolio adjustment only captures differences in a company's diversification risk relative to the representative portfolio.

Portfolio Adjustment Factors

	10.17.2017		3.5.2021		
	Recommendation		Update		
	Issuers	Factor		Issuers	Factor
Up to	10	7.80	Up to	10	7.50
Next	90	1.75	Next	90	1.75
Next	100	1.00	Next	100	0.90
Next	300	0.80	Next	300	0.85
Over	500	0.75	Over	500	0.75

C. COMMENTS ON THE AGE OF ASSUMPTIONS

The C1WG began its work on the C1 Bond Capital Requirements in 2011. With input from regulators (NAIC's C1 Factor Review Subgroup, NAIC's Investment RBC Working Group, and the NAIC's Life Risk-Based Capital Working Group), the C1WG updated the capital requirements to be used within the U.S. Solvency framework.

Many of the assumptions used in these factors, such as the bond default and recovery assumptions, are based on the experience for corporate bonds through 1983–2012. Other assumptions, notably the discount rate, are also based on data from a similar time period.

We understand that regulators are intent on adopting updated bond factors for the 2021 Life Risk-Based Capital calculation, particularly given the shortfall of the current requirements to meet regulators' desired statistical safety level for credit risk. However, we would be remiss in not stating our concern about adopting a set of factors based on outdated assumptions.

While we have not modeled any assumption changes, we are concerned that the factors in this letter may be lower than what an analysis of updated data would produce. The base factors recommended in 2017

for bonds, exclusive of the impact of increased requirements from the tax change, increase the capital requirements for credit risk approximately 15-20% for the industry, on average. Updated assumptions might indicate that capital requirements should be increased further. We understand the desire to now adopt factors that move the capital requirements closer to the desired statistical level but encourage regulators to consider more frequent reviews of the assumptions and the resulting factors.

We appreciate your consideration of this update. Please contact Nancy Bennett, senior life fellow (bennett@actuary.org), or Khloe Greenwood, life policy analyst (greenwood@actuary.org), with any questions.

Sincerely,

Nancy Bennett, MAAA, FSA, CERA
Co-Chairperson, C1 Work Group
American Academy of Actuaries

Jerry Holman, MAAA, FSA, CFA
Co-Chairperson, C1 Work Group
American Academy of Actuaries

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Capital Adequacy (E) Task Force RBC Proposal Form

- | | | |
|---|---|--|
| <input type="checkbox"/> Capital Adequacy (E) Task Force | <input type="checkbox"/> Health RBC (E) Working Group | <input checked="" type="checkbox"/> Life RBC (E) Working Group |
| <input type="checkbox"/> Catastrophe Risk (E) Subgroup | <input type="checkbox"/> Investment RBC (E) Working Group | <input type="checkbox"/> Operational Risk (E) Subgroup |
| <input type="checkbox"/> C3 Phase II/ AG43 (E/A) Subgroup | <input type="checkbox"/> P/C RBC (E) Working Group | <input type="checkbox"/> Longevity Risk (A/E) Subgroup |

DATE: <u>4/22/21</u>	<u>FOR NAIC USE ONLY</u>
CONTACT PERSON: <u>Dave Fleming</u> TELEPHONE: <u>816-783-8121</u> EMAIL ADDRESS: <u>d Fleming@naic.org</u> ON BEHALF OF: <u>Life Risk-Based Capital (E) Working Group</u> NAME: <u>Philip Barlow, Chair</u> TITLE: <u>Associate Commissioner of Insurance</u> AFFILIATION: <u>District of Columbia</u> ADDRESS: <u>1050 First Street, NE Suite 801</u> <u>Washington, DC 20002</u>	Agenda Item # <u>2021-11-L</u> Year <u>2021</u> <u>DISPOSITION</u> <input type="checkbox"/> ADOPTED <input type="checkbox"/> REJECTED _____ <input type="checkbox"/> DEFERRED TO _____ <input type="checkbox"/> REFERRED TO OTHER NAIC GROUP <input checked="" type="checkbox"/> EXPOSED <u>4/22/21</u> <input type="checkbox"/> OTHER (SPECIFY) _____

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

- | | | |
|--|---|---|
| <input type="checkbox"/> Health RBC Blanks | <input type="checkbox"/> Property/Casualty RBC Blanks | <input checked="" type="checkbox"/> Life and Fraternal RBC Instructions |
| <input type="checkbox"/> Health RBC Instructions | <input type="checkbox"/> Property/Casualty RBC Instructions | <input checked="" type="checkbox"/> Life and Fraternal RBC Blanks |
| <input type="checkbox"/> OTHER _____ | | |

DESCRIPTION OF CHANGE(S)

This proposal incorporates bond factors proposed by the American Council of Life Insurers (ACLI) for the expanded presentation of bond designation categories in the annual statement and risk-based capital (RBC) schedules.

REASON OR JUSTIFICATION FOR CHANGE **

The expanded presentation of bonds is a result of the work of the Investment Risk-Based Capital (E) Working Group. This proposal presents alternative factors to those proposed by the American Academy of Actuaries (Academy).

Additional Staff Comments:

- 4-22-21: Proposal was exposed for comments (DBF)

** This section must be completed on all forms.

Revised 2-2019

Company Name

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Attachment 4
NAIC Company Code

BONDS

SVO Bond		Annual Statement Source	(1)		(2)	
Designation Category			Book / Adjusted	Factor	RBC	Requirement
Long Term Bonds			Carrying Value			
(1)	Exempt Obligations	AVR Default Component Column 1 Line 1		X 0.00000	=	
(2.1)	NAIC Designation Category 1.A	AVR Default Component Column 1 Line 2.1		X 0.00153	=	
(2.2)	NAIC Designation Category 1.B	AVR Default Component Column 1 Line 2.2		X 0.00260	=	
(2.3)	NAIC Designation Category 1.C	AVR Default Component Column 1 Line 2.3		X 0.00406	=	
(2.4)	NAIC Designation Category 1.D	AVR Default Component Column 1 Line 2.4		X 0.00503	=	
(2.5)	NAIC Designation Category 1.E	AVR Default Component Column 1 Line 2.5		X 0.00635	=	
(2.6)	NAIC Designation Category 1.F	AVR Default Component Column 1 Line 2.6		X 0.00790	=	
(2.7)	NAIC Designation Category 1.G	AVR Default Component Column 1 Line 2.7		X 0.00977	=	
(2.8)	Subtotal NAIC 1	Sum of Lines (2.1) through (2.7)			=	
(3.1)	NAIC Designation Category 2.A	AVR Default Component Column 1 Line 3.1		X 0.01208	=	
(3.2)	NAIC Designation Category 2.B	AVR Default Component Column 1 Line 3.2		X 0.01464	=	
(3.3)	NAIC Designation Category 2.C	AVR Default Component Column 1 Line 3.3		X 0.02090	=	
(3.4)	Subtotal NAIC 2	Sum of Lines (3.1) through (3.3)			=	
(4.1)	NAIC Designation Category 3.A	AVR Default Component Column 1 Line 4.1		X 0.03070	=	
(4.2)	NAIC Designation Category 3.B	AVR Default Component Column 1 Line 4.2		X 0.04399	=	
(4.3)	NAIC Designation Category 3.C	AVR Default Component Column 1 Line 4.3		X 0.05849	=	
(4.4)	Subtotal NAIC 3	Sum of Lines (4.1) through (4.3)			=	
(5.1)	NAIC Designation Category 4.A	AVR Default Component Column 1 Line 5.1		X 0.07176	=	
(5.2)	NAIC Designation Category 4.B	AVR Default Component Column 1 Line 5.2		X 0.09291	=	
(5.3)	NAIC Designation Category 4.C	AVR Default Component Column 1 Line 5.3		X 0.12131	=	
(5.4)	Subtotal NAIC 4	Sum of Lines (5.1) through (5.3)			=	
(6.1)	NAIC Designation Category 5.A	AVR Default Component Column 1 Line 6.1		X 0.16590	=	
(6.2)	NAIC Designation Category 5.B	AVR Default Component Column 1 Line 6.2		X 0.23320	=	
(6.3)	NAIC Designation Category 5.C	AVR Default Component Column 1 Line 6.3		X 0.30000	=	
(6.4)	Subtotal NAIC 5	Sum of Lines (6.1) through (6.3)			=	
(7)	NAIC 6	AVR Default Component Column 1 Line 7		X 0.30000	=	
(8)	Total Long-Term Bonds	Sum of Lines (1) + (2.8) + (3.4) + (4.4) + (5.4) + (6.4) + (7)			=	

(Column (1) should equal Page 2 Column 3 Line 1 + Schedule DL Part 1 Column 6 Line 7099999)

Company Name

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Short Term Bonds					
(9)	Exempt Obligations	AVR Default Component Column 1 Line 18	X	0.00000	=
(10.1)	NAIC Designation Category 1.A	AVR Default Component Column 1 Line 19.1	X	0.00153	=
(10.2)	NAIC Designation Category 1.B	AVR Default Component Column 1 Line 19.2	X	0.00260	=
(10.3)	NAIC Designation Category 1.C	AVR Default Component Column 1 Line 19.3	X	0.00406	=
(10.4)	NAIC Designation Category 1.D	AVR Default Component Column 1 Line 19.4	X	0.00503	=
(10.5)	NAIC Designation Category 1.E	AVR Default Component Column 1 Line 19.5	X	0.00635	=
(10.6)	NAIC Designation Category 1.F	AVR Default Component Column 1 Line 19.6	X	0.00790	=
(10.7)	NAIC Designation Category 1.G	AVR Default Component Column 1 Line 19.7	X	0.00977	=
(10.8)	Subtotal NAIC 1	Sum of Lines (10.1) through (10.7)			
(11.1)	NAIC Designation Category 2.A	AVR Default Component Column 1 Line 20.1	X	0.01208	=
(11.2)	NAIC Designation Category 2.B	AVR Default Component Column 1 Line 20.2	X	0.01464	=
(11.3)	NAIC Designation Category 2.C	AVR Default Component Column 1 Line 20.3	X	0.02090	=
(11.4)	Subtotal NAIC 2	Sum of Lines (11.1) through (11.3)			
(12.1)	NAIC Designation Category 3.A	AVR Default Component Column 1 Line 21.1	X	0.03070	=
(12.2)	NAIC Designation Category 3.B	AVR Default Component Column 1 Line 21.2	X	0.04399	=
(12.3)	NAIC Designation Category 3.C	AVR Default Component Column 1 Line 21.3	X	0.05849	=
(12.4)	Subtotal NAIC 3	Sum of Lines (12.1) through (12.3)			
(13.1)	NAIC Designation Category 4.A	AVR Default Component Column 1 Line 22.1	X	0.07176	=
(13.2)	NAIC Designation Category 4.B	AVR Default Component Column 1 Line 22.2	X	0.09291	=
(13.3)	NAIC Designation Category 4.C	AVR Default Component Column 1 Line 22.3	X	0.12131	=
(13.4)	Subtotal NAIC 4	Sum of Lines (13.1) through (13.3)			
(14.1)	NAIC Designation Category 5.A	AVR Default Component Column 1 Line 23.1	X	0.16590	=
(14.2)	NAIC Designation Category 5.B	AVR Default Component Column 1 Line 23.2	X	0.23320	=
(14.3)	NAIC Designation Category 5.C	AVR Default Component Column 1 Line 23.3	X	0.30000	=
(14.4)	Subtotal NAIC 5	Sum of Lines (14.1) through (14.3)			
(15)	NAIC 6	AVR Default Component Column 1 Line 24	X	0.30000	=
(16)	Total Short-Term Bonds	Sum of Lines (9) + (10.8) + (11.4) + (12.4) + (13.4) + (14.4) + (15)			
		(Column (1) should equal Schedule DA Part 1 Column 7 Line 8399999 +			
		Schedule DL Part 1 Column 6 Line 8999999 + LR012 Miscellaneous Assets Column (1) Line (2.2))			
(17)	Total Long-Term and Short-Term Bonds	Line (8) + (16)			
	(pre-MODCO/Funds Withheld)				
(18)	Credit for Hedging	LR014 Hedged Asset Bond Schedule Column 13 Line 0399999			
(19)	Reduction in RBC for MODCO/Funds	LR045 Modco or Funds Withheld Reinsurance			
	Withheld Reinsurance Ceded Agreements	Ceded - Bonds C-1o Column (4) Line (9999999)			
(20)	Increase in RBC for MODCO/Funds	LR046 Modco or Funds Withheld Reinsurance			
	Withheld Reinsurance Assumed Agreements	Assumed - Bonds C-1o Column (4) Line (9999999)			
(21)	Total Long-Term and Short-Term Bonds	Lines (17) - (18) - (19) + (20)			
	(including MODCO/Funds Withheld and Credit for Hedging adjustments.)				
(22)	Non-exempt U.S.	Schedule D Part 1 and Schedule DA	X	0.00153	=
	Government Agency Bonds	Part 1, in part†			
(23)	Bonds Subject to Size Factor	Line (21) - Line (1) - Line (9) - Line (22)			
(24)	Number of Issuers	Company Records			
(25)	Size Factor for Bonds				
(26)	Bonds Subject to Size Factor after the Size Factor is Applied	Line (23) x Line (25)			
(27)	Total Bonds	Line (22) + Line (26)			

† 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.

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

Company Name

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ASSET CONCENTRATION FACTOR

	(1)	(2)	(3)	(4)	(5)	(6)
		Book / Adjusted	Factor	Additional	Adjustment/	RBC
Asset Type		Carrying Value		RBC	Subsidiary RBC	Requirement
Issuer Name:						
(1.1) Bond NAIC Designation Category 2.A			X 0.01208	=		
(1.2) Bond NAIC Designation Category 2.B			X 0.01464	=		
(1.3) Bond NAIC Designation Category 2.C			X 0.02090	=		
(2.1) Bond NAIC Designation Category 3.A			X 0.03070	=		
(2.2) Bond NAIC Designation Category 3.B			X 0.04399	=		
(2.3) Bond NAIC Designation Category 3.C			X 0.05849	=		
(3.1) Bond NAIC Designation Category 4.A			X 0.07176	=		
(3.2) Bond NAIC Designation Category 4.B			X 0.09291	=		
(3.3) Bond NAIC Designation Category 4.C			X 0.12131	=		
(4.1) Bond NAIC Designation Category 5.A			X 0.01659	=		
(4.2) Bond NAIC Designation Category 5.B			X 0.23320	=		
(4.3) Bond NAIC Designation Category 5.C			X 0.30000	=		
(5) Bond NAIC 6			X 0.15000	=		
(6.1) Bond NAIC Designation Category 1.A †			X 0.00153	=		
(6.2) Bond NAIC Designation Category 1.B †			X 0.00260	=		
(6.3) Bond NAIC Designation Category 1.C †			X 0.00406	=		
(6.4) Bond NAIC Designation Category 1.D †			X 0.00503	=		
(6.5) Bond NAIC Designation Category 1.E †			X 0.00635	=		
(6.6) Bond NAIC Designation Category 1.F †			X 0.00790	=		
(6.7) Bond NAIC Designation Category 1.G †			X 0.00977	=		
(7) Unaffiliated Preferred Stock NAIC 2			X 0.01260	=		
(8) Unaffiliated Preferred Stock NAIC 3			X 0.04460	=		
(9) Unaffiliated Preferred Stock NAIC 4			X 0.09700	=		
(10) Unaffiliated Preferred Stock NAIC 5			X 0.22310	=		
(11) Unaffiliated Preferred Stock NAIC 6			X 0.15000	=		
(12) Unaffiliated Preferred Stock NAIC 1 †			X 0.00390	=		
(13) Collateral Loans			X 0.06800	=		
(14) Receivable for Securities			X 0.01400	=		
(15) Write-ins for Invested Assets			X 0.06800	=		
(16) Premium Notes			X 0.06800	=		
(17) Real Estate - Foreclosed				=		
(18) Real Estate - Foreclosed Encumbrances			X ‡	=		
(19) Real Estate - Investments				=		
(20) Real Estate - Investment Encumbrances			X ‡	=		
(21) Real Estate - Schedule BA				=		
(22) Real Estate - Schedule BA Encumbrances			X ‡	=		
(23) Farm Mortgages - Category CM2			X 0.01750	=		
(24) Farm Mortgages - Category CM3			X 0.03000	=		
(25) Farm Mortgages - Category CM4			X 0.05000	=		
(26) Farm Mortgages - Category CM5			X 0.07500	=		
(27) Commercial Mortgages - Category CM2			X 0.01750	=		
(28) Commercial Mortgages - Category CM3			X 0.03000	=		
(29) Commercial Mortgages - Category CM4			X 0.05000	=		
(30) Commercial Mortgages - Category CM5			X 0.07500	=		

† After the ten largest issuer exposures are chosen, any NAIC 1 bonds or preferred stocks from any of these issuers should be included.

‡ Refer to the instructions for the Asset Concentration Factor for details of this calculation.

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

Company Name

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ASSET CONCENTRATION FACTOR (CONTINUED)

(1)	(2)	(3)	(4)	(5)	(6)
<u>Asset Type</u>	<u>Book / Adjusted Carrying Value</u>	<u>Factor</u>	<u>Additional RBC</u>	<u>Adjustment/ Subsidiary RBC</u>	<u>RBC Requirement</u>
(31) Farm Mortgages - 90 Days Overdue					
(32) Farm Mortgages - 90 Days Overdue - Cumulative Writedowns		X ‡			
(33) Residential Mortgages - 90 Days Overdue					
(34) Residential Mortgages - 90 Days Overdue - Cumulative Writedowns		X ‡			
(35) Commercial Mortgages - 90 Days Overdue					
(36) Commercial Mortgages - 90 Days Overdue - Cumulative Writedowns		X ‡			
(37) Farm Mortgages in Foreclosure					
(38) Farm Mortgages in Foreclosure - Cumulative Writedowns		X ‡			
(39) Residential Mortgages in Foreclosure					
(40) Residential Mortgages in Foreclosure - Cumulative Writedowns		X ‡			
(41) Commercial Mortgages in Foreclosure					
(42) Commercial Mortgages in Foreclosure - Cumulative Writedowns		X ‡			
(43) Unaffiliated Mortgages with Covenants		X ‡			
(44) Unaffiliated Mortgages - Defeased with Government Securities		X 0.00900			
(45) Unaffiliated Mortgages - Primarily Senior		X 0.01750			
(46) Unaffiliated Mortgages - All Other		X 0.03000			
(47) Affiliated Mortgages - Category CM2		X 0.01750			
(48) Affiliated Mortgages - Category CM3		X 0.03000			
(49) Affiliated Mortgages - Category CM4		X 0.05000			
(50) Affiliated Mortgages - Category CM5		X 0.07500			
(51) Schedule BA Mortgages 90 Days Overdue					
(52) Schedule BA Mortgages 90 Days Overdue - Cumulative Writedowns		X ‡			
(53) Schedule BA Mortgages in Process of Foreclosure					
(54) Schedule BA Mortgages Foreclosed - Cumulative Writedowns		X ‡			
(55) Federal Guaranteed Low Income Housing Tax Credits		X 0.00140			
(56) Federal Non-Guaranteed Low Income Housing Tax Credits		X 0.02600			
(57) State Guaranteed Low Income Housing Tax Credits		X 0.00140			
(58) State Non-Guaranteed Low Income Housing Tax Credits		X 0.02600			
(59) All Other Low Income Housing Tax Credits		X 0.15000			
(60) NAIC 02 Working Capital Finance Notes		X 0.01630			
(61) Other Schedule BA Assets		X 0.15000			
(62) Total of Issuer = Sum of Lines (1) through (61)					

NOTE: Ten issuer sections and a grand total page will be available on the filing software. The grand total page is calculated as the sum of issuers 1-10 by asset type.

‡ Refer to the instructions for the Asset Concentration Factor for details of this calculation.

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

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HEDGED ASSET BOND SCHEDULE

As of:

Type of Hedged Asset	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
	Hedging Instruments				Hedged Asset - Bonds								RBC Credit	
	Description †	Notional Amount †	Relationship Type of the Hedging Instrument and Hedged Asset	Maturity Date †	Description †	CUSIP †	Book / Adjusted Carrying Value †	Overlap with Insurer's Bond Portfolio ‡	Maturity Date †	NAIC Designation Category †	RBC Factor §	Gross RBC Charge *	RBC Credit for Hedging Instruments £	Net RBC Charge **
Bonds														
(0100001)														
(0100002)														
(0100003)														
(0100004)														
(0100005)														
(0100006)														
(0100007)														
(0100008)														
(0100009)														
(0100010)														
(0100011)														
(0100012)														
(0100013)														
(0100014)														
(0100015)														
(0100016)														
(0100017)														
(0100018)														
(0100019)														
(0100020)														
(0100021)														
(0100022)														
(0100023)														
(0100024)														
(0100025)														
(0100026)														
(0100027)														
(0100028)														
(0100029)														
(0100030)														
(0199999)	Subtotal - NAIC 1 Through 5 Bonds		XXXXX	XXXXX	Subtotal	XXXXX			XXXXX	XXXXX	XXXXX			
(0299999)	Subtotal - NAIC 6 Bonds		XXXXX	XXXXX	Subtotal	XXXXX			XXXXX	XXXXX	XXXXX			
(0399999)	Total		XXXXX	XXXXX	Total	XXXXX			XXXXX	XXXXX	XXXXX			

Note: For the intermediate category of hedging, we recommend that the risk mitigation and resulting RBC credit be determined as if each specific security common to both the index/basket hedge and the portfolio is a basic hedge with the entire basic hedge methodology applied to each matching name. This includes the application of the maturity mismatch formula and the maximum RBC credit of 94% of the C-1 asset charge for fixed income hedges.

† Columns are derived from Investment schedules.

‡ The portion of Column (2) Notional Amount of the Hedging Instrument that hedges Column (7) Book / Adjusted Carrying Value. This amount cannot exceed Column (7) Book / Adjusted Carrying Value.

§ Factor based on Column (10) NAIC Designation and NAIC C-1 RBC factors table.

* Column (7) Book Adjusted Carrying Value multiplied by Column (11) RBC Factor.

£ Column (13) is calculated according to the risk-based capital instructions.

** Column (12) Gross RBC Charge minus Column (13) RBC Credit for Hedging Instruments.

Denotes manual entry items that do not come directly from the annual statement.

Company Name

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OFF-BALANCE SHEET COLLATERAL

(Including any Schedule DL, Part 1 Assets not Included in the Asset Valuation Reserve)

		(1) Book / Adjusted Carrying Value	2.00000 Factor	(3) RBC Requirement
<u>Fixed Income - Bonds</u>				
(1) Exempt Obligations	Company Records		X 0.00000	=
(2.1) NAIC Designation Category 1.A	Company Records		X 0.00153	=
(2.2) NAIC Designation Category 1.B	Company Records		X 0.00260	=
(2.3) NAIC Designation Category 1.C	Company Records		X 0.00406	=
(2.4) NAIC Designation Category 1.D	Company Records		X 0.00503	=
(2.5) NAIC Designation Category 1.E	Company Records		X 0.00635	=
(2.6) NAIC Designation Category 1.F	Company Records		X 0.00790	=
(2.7) NAIC Designation Category 1.G	Company Records		X 0.00977	=
(2.8) Subtotal NAIC 1	Sum of Lines (2.1) through (2.7)			
(3.1) NAIC Designation Category 2.A	Company Records		X 0.01208	=
(3.2) NAIC Designation Category 2.B	Company Records		X 0.01464	=
(3.3) NAIC Designation Category 2.C	Company Records		X 0.02090	=
(3.4) Subtotal NAIC 2	Sum of Lines (3.1) through (3.3)			
(4.1) NAIC Designation Category 3.A	Company Records		X 0.03070	=
(4.2) NAIC Designation Category 3.B	Company Records		X 0.04399	=
(4.3) NAIC Designation Category 3.C	Company Records		X 0.05849	=
(4.4) Subtotal NAIC 3	Sum of Lines (4.1) through (4.3)			
(5.1) NAIC Designation Category 4.A	Company Records		X 0.07176	=
(5.2) NAIC Designation Category 4.B	Company Records		X 0.09291	=
(5.3) NAIC Designation Category 4.C	Company Records		X 0.12131	=
(5.4) Subtotal NAIC 4	Sum of Lines (5.1) through (5.3)			
(6.1) NAIC Designation Category 5.A	Company Records		X 0.16590	=
(6.2) NAIC Designation Category 5.B	Company Records		X 0.23320	=
(6.3) NAIC Designation Category 5.C	Company Records		X 0.30000	=
(6.4) Subtotal NAIC 5	Sum of Lines (6.1) through (6.3)			
(7) NAIC 6	Company Records		X 0.30000	=
(8) Total Bonds	Sum of Lines (1) + (2.8) + (3.4) + (4.4) + (5.4) + (6.4) + (7)			
<u>Fixed Income - Preferred Stock</u>				
(9) Asset NAIC 1	Company Records		X 0.00390	=
(10) Asset NAIC 2	Company Records		X 0.01260	=
(11) Asset NAIC 3	Company Records		X 0.04460	=
(12) Asset NAIC 4	Company Records		X 0.09700	=
(13) Asset NAIC 5	Company Records		X 0.22310	=
(14) Asset NAIC 6	Company Records		X 0.30000	=
(15) Total Preferred Stock	Sum of Lines (9) through (14)			
(16) Common Stock	Company Records		X 0.45000 †	=
(17) Schedule BA - Other Invested Assets	Company Records		X 0.30000	=
(18) Other Invested Assets	Company Records		X 0.30000	=
(19) Total Off-Balance Sheet Collateral	Lines (8) + (15) + (16) + (17) + (18)			

† The factor for common stock can vary depending on the type of stock. The factor would be subject to a minimum of 22.5 percent and a maximum of 45 percent.

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

#REF!

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 percent of the trials by category and a 96 percent 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 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 1 through 7 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 7099999.

Lines (9) through (15)

The book/adjusted carrying value of all 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 through 24 of the Asset Valuation Reserve Default Component, Page 30 of the annual statement.

Line (16)

The total should equal short-term bonds reported on Schedule DA, Part 1, Line 8399999 plus Schedule DL Part 1, Column 6, Line 8999999 plus LR012 Miscellaneous Assets Column (1) Line (2.2).

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 2.5 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. Portfolios with more than 1,300 issuers will receive a discount. 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.)

<u>Line (25)</u>	<u>Source</u>	<u>(a)</u> <u>Number of Issuers</u>			<u>(b)</u> <u>Weighted Issuers</u>
First 50	Company Records	_____	X	2.5	= _____
Next 50	Company Records	_____	X	1.3	= _____
Next 300	Company Records	_____	X	1.0	= _____
Over 400	Company Records	_____	X	0.9	= _____
Total Number of Issuers from Line (23)		=====			=====
Total Weighted Issuers					=====
Size Factor = Total Weighted Issuers divided by Total Number of Issuers					=====

ASSET CONCENTRATION FACTOR LR010

Basis of Factors

The purpose of the concentration factor is to reflect the additional risk of high concentrations in single exposures (represented by an individual issuer of a security or a holder of a mortgage, etc.) The concentration factor doubles the risk-based capital pre-tax factor (with a maximum of 45 percent pre-tax) of the 10 largest asset exposures excluding various low-risk categories or categories that already have a maximum factor. Since the risk-based capital of the assets included in the concentration factor has already been counted once in the basic formula, the asset concentration factor only serves to add in the additional risk-based capital required. The calculation is completed on a consolidated basis; however, the concentration factor is reduced by amounts already included in the concentration factors of subsidiaries to avoid double-counting.

Specific Instructions for Application of the Formula

The 10 largest asset exposures should be developed by consolidating the assets of the parent with the assets of the company's insurance and investment subsidiaries. The concentration factor component on any asset already reflected in the subsidiary's RBC for the concentration factor should be deducted from Column (4). This consolidation process affects higher tiered companies only. Companies on the lowest tier of the organizational chart will prepare the asset concentration on a "stand alone" basis.

The 10 largest exposures should exclude the following: affiliated and non-affiliated common stock, affiliated preferred stock, home office properties, policy loans, bonds for which AVR and RBC are zero, NAIC 1 bonds, NAIC 1 unaffiliated preferred stock, NAIC 1 Hybrids, CM 1 Commercial and Farm Mortgages and any other asset categories with RBC factors less than 0.8 percent post-tax (this includes residential mortgages in good standing, insured or guaranteed mortgages, and cash and short-term investments).

In determining the assets subject to the concentration factor for both C-1o and C-1cs, the ceding company should exclude any asset whose performance inures primarily (>50 percent) to one reinsurer under modified coinsurance or funds withheld arrangements. The reinsurer should include 100 percent of such asset. Any asset where no one reinsurer receives more than 50 percent of its performance should remain with the ceding company.

Assets should be aggregated by issuer before determining the 10 largest exposures. Aggregations should be done separately for bonds and preferred stock (the first six digits of the CUSIP number can be used as a starting point) (please note that the same issuer may have more than one unique series of the first six digits of the CUSIP), mortgages and real estate. Securities held within Schedule BA partnerships should be aggregated by issuer as if the securities are held directly. Likewise, where joint venture real estate is mortgaged by the insurer, both the mortgage and the joint venture real estate should be considered as part of a single exposure. Tenant exposure is not included. For bonds and unaffiliated preferred stock, aggregations should be done first for classes 2 through 6. After the 10 largest issuer exposures are chosen, any NAIC 1 bonds, NAIC 1 unaffiliated preferred stock or NAIC 1 hybrids from any of these issuers should be included before doubling the risk-based capital. For some companies, following the above steps may generate less than 10 "issuer" exposures. These companies should list all available exposures.

Replicated assets other than synthetically created indices should be included in the asset concentration calculation in the same manner as other assets.

The book/adjusted carrying value of each asset is listed in Column (2).

The RBC factor will correspond to the risk-based capital category of the asset reported previously in the formula before application of the size factor for bonds. The RBC filing software automatically allows for an overall 45 percent RBC cap.

Lines (17) through (22)

The Asset Concentration RBC Requirement for a particular property plus the Real Estate RBC Requirement for a particular property cannot exceed the book/adjusted carrying value of the property. Any properties exceeding the book/adjusted carrying value must be adjusted down to the book/adjusted carrying value in Column (6) of the Asset Concentration.

Line (18), Column (4) is calculated as Line (17), Column (2) multiplied by 0.2300 plus Line (18), Column (2) multiplied by 0.2000, but not greater than Line (17), Column (2).

Line (20), Column (4) is calculated as Line (19), Column (2) multiplied by 0.1500 plus Line (20), Column (2) multiplied by 0.1200, but not greater than Line (19), Column (2).

Line (22), Column (4) is calculated as Line (21), Column (2) multiplied by 0.2300 plus Line (22), Column (2) multiplied by 0.2000, but not greater than Line (21), Column (2).

Lines (23) through (54)

The Asset Concentration RBC Requirement for a particular mortgage plus the LR004 Mortgages RBC Requirement or LR009 Schedule BA Mortgages RBC Requirement for a particular mortgage cannot exceed 45 percent of the book/adjusted carrying value of the mortgage. Any mortgages exceeding 45 percent of the book/adjusted carrying value must be adjusted down in Column (6) of the Asset Concentration.

Line (32), Column (4) is calculated as the greater of 0.1800 multiplied by [(Line (31) plus Line (32))] less Line (32) or Line (31) multiplied by the appropriate factor for the CM class to which the loan is assigned.

Line (34), Column (4) is calculated as the greater of 0.0140 multiplied by [(Line (33) plus Line (34))] less Line (34) or Line (33) multiplied by 0.0068.

Line (36), Column (4) is calculated as the greater of 0.1800 multiplied by [(Line (35) plus Line (36))] less Line (36) or Line (35) multiplied by the appropriate factor for the CM class to which the loan is assigned.

Line (38), Column (4) is calculated as the greater of 0.2200 multiplied by [(Line (37) plus Line (38))] less Line (38) or Line (37) multiplied by the appropriate factor for the CM class to which the loan is assigned.

Line (40), Column (4) is calculated as the greater of 0.0270 multiplied by [(Line (39) plus Line (40))] less Line (40) or Line (39) multiplied by 0.0068.

Line (42), Column (4) is calculated as the greater of 0.2200 multiplied by [(Line (41) plus Line (42))] less Line (42) or Line (41) multiplied by the appropriate factor for the CM class to which the loan is assigned.

Line (43), Column (4) is calculated as Line (43) multiplied by the appropriate factor for the CM class to which the loan is assigned.

Line (52), Column (4) is calculated as the greater of 0.1800 multiplied by [(Line (51) plus Line (52))] less Line (52) or Line (51) multiplied by the appropriate factor for the CM class to which the loan is assigned.

Line (54), Column (4) is calculated as the greater of 0.2200 multiplied by [(Line (53) plus Line (54))] less Line (54) or Line (53) multiplied by the appropriate factor for the CM class to which the loan is assigned.

HEDGED ASSET BOND AND COMMON STOCK SCHEDULES

LR014 and LR015

(Instructions related to intermediate hedges are in italics.)

Hedging

The concept of hedging credit, equity and other risks is widely accepted and understood among insurers and their regulators. In order for regulators to distinguish between insurers that have effectively reduced their risks from those insurers that have not, the risk based capital computation should be sensitive to such differences. Increasing or decreasing exposure to different asset classes in relation to a benchmark asset allocation tailored to meet the long term obligations to policy owners is critical to successfully managing an insurance company. Hedging is the process of using derivative instruments to most efficiently limit risk associated with a particular asset in a manner consistent with the insurer's long term objectives. The relative advantage of using cash market transactions versus derivative market transactions depends upon market conditions.

The NAIC model investment laws and regulations establish specific constraints on the use of derivatives. Governance of derivative use starts with approved and documented authorities from the insurer's Board of Directors to management. These authorities are coordinated with and enhanced by limits established by the insurer's domiciliary state.

Hedging strategies currently employed by insurers range from straightforward relationships between the hedged asset and the derivative instrument (the hedge) to more complex relationships. The purpose of this section of the RBC calculation is to measure and reflect in RBC the risk reduction achieved by an insurer's use of the most straightforward types of hedges involving credit default and equity C-1 risks.

To avoid the possible double counting of RBC credits, excluded from this section are any RBC credits arising from hedges that are part of the Clearly Defined Hedging Strategy (CDHS) required for C-3 cash flow testing or other risk mitigation techniques (e.g. reinsurance) which produce reduced levels of RBC by operation of other parts of the RBC formula.

RBC and Measuring the Risk Reduced by Hedging

To measure the risks reduced by hedging and reflect the effects in RBC it is important to understand the characteristics and purpose of the hedge. A portfolio manager seeking to hedge a particular asset or portfolio risk must determine if the derivative instruments available will do a suitable job of risk mitigation.

Default risk - A portfolio manager may determine that the default risk of a particular debt security which matures in 8 years needs to be hedged because of a near term credit concern which may resolve before the debt matures. A credit default swap (CDS) would be the most effective hedging instrument. In some circumstances the manager may purchase a CDS with 8 years to maturity which fully mitigates the default risk and shall result in an RBC credit which fully offsets the C-1 default risk charge on the debt security. However, seeking the most liquid and cost efficient market for the purchase of such an instrument may lead to the purchase of a 5 year CDS which the manager plans to renew (roll) as the credit circumstances evolve in the coming years. In this case there is a 3 year maturity mismatch between the debt security and the hedging instrument. To account for the difference between insurers that have hedged the debt security to full maturity versus those with a mismatched position, the determination of the RBC credit shall be made in accordance with the following formula which limits the results to a fraction of the C-1 charge for the hedged asset.

$$\text{RBC Credit As \% of C1 Asset Charge} = \text{Min} \left(1, \frac{\text{Time to Maturity of CDS}}{\text{Time to Maturity of Bond}} \right) \times (94\% - 10\%) + 10\%$$

This accounts for mismatched maturities and provides a regulatory margin of safety within a range of 94%-10% of the C-1 asset charge.

There may also be circumstances where default risk is reduced by hedging specific portfolios using a basket or index-based derivative (e.g. CDX family of derivatives) with the same or very similar components as the portfolio. For these hedges the risk reduction shall be measured based on the number of issuers common to both the insurer's portfolio and the index/basket CDS. A minimum of 50% overlap of the derivative instrument notional amount and the book/adjusted carrying value of the hedged bonds shall be required to qualify for any RBC credit. Additionally, if the insurer hedges an index, each bond must be listed (e. g. if the insurer acquires a CDX that hedges 125 names equally, then the insurer must list all 125 names on the schedule), regardless if the insurer owns all the bonds in the index.

As RBC is currently measured and reported annually and to an extent provides a regulator with an indicator of capital sufficiency for the near term future; default risk protection as provided by CDS (based on a specific security or an index of securities) shall have more than 1 year remaining to maturity in order to receive any RBC credit, provided that the remaining maturity of the hedged debt security or average maturity of the hedged portfolio is greater than 1 year. When both the default risk protection and the hedged debt security have less than one year to maturity, full RBC credit shall be allowed provided that the maturity of the protection is later than the maturity of the debt security; otherwise no RBC credit is allowed.

Equity market risk - A portfolio manager may determine that the market risk of holding a particular common stock needs to be reduced. Because an outright sale at that point in time might be disadvantageous to the insurer and/or policy owners, a short futures contract may be purchased to eliminate the current market risk by establishing a sale price in the future. The C-1 RBC equity risk credit shall be limited to 94%.

There may also be circumstances where equity market risk is reduced by hedging equity portfolios using derivatives based on equity market indices (e.g. S&P 500 futures contracts). Unless the equity portfolio is exactly matched to the index, the hedge will not provide precise one-to-one protection from fluctuations in value. The insurer must list all positions in the equity index individually (e. g. all 500 common stocks that are part of the S&P 500), regardless if the insurer owns all the stocks in the index.

Definitions and Instructions for the Spreadsheet Computation of Risk Reduction

(Numeric references represent spreadsheet columns)

Bonds

- (1) Description - Reported on Schedule DB.
- (2) Notional Amount - Amount reported on Schedule DB.
- (3) Relationship Type of the Hedging Instrument and Hedged Asset. There are two categories; Basic and Intermediate relationships. Basic relationship = Single issuer credit default swap on a single issuer name to hedge the credit risk of a specific hedged asset. *Intermediate relationship = A portfolio of insurer assets paired with a basket or index based hedging instrument with the same or very similar components as the portfolio. For intermediate relationships, a minimum of 50% overlap of the derivative instrument notional amount and the book adjusted carrying value of the hedged bonds shall be required to qualify for any RBC credit.*
- (4) Maturity Date - Date reported on Schedule DB.

- (5) Description - Bond description found in Schedule D. *For intermediate relationships, each bond must be listed (e. g. if the insurer acquires a credit default index that hedges 125 names equally, then the insurer must list all 125 names on the schedule.)*
- (6) CUSIP Identification - Bond unique identifier found in Schedule D.
- (7) Book Adjusted Carrying Value - Value found on Schedule D.
- (8) Overlap with Insurer's Bond Portfolio – The portion of Column (2) Notional Amount of the Hedging Instrument that hedges Column (7) Book Adjusted Carrying Value. This amount cannot exceed Column (7) Book Adjusted Carrying Value.
- (9) Maturity Date - The date is found in Schedule D.
- (10) NAIC Designation - Designation found in Schedule D. Necessary to determine correct RBC Factor for the Bonds.
- (11) RBC Factor - Factor based on Column (10) NAIC Designation and NAIC C-1 RBC factors table.
- (12) Gross RBC Charge – This is the C-1 RBC charge based on holdings at the end of the year. Calculation: Columns (7) Book Adjusted Carrying Value multiplied by (11) RBC Factor.
- (13) RBC Credit for Hedging Instruments – If Column (8) Overlap with Insurer's Bond Portfolio is zero; the RBC Credit would also be zero. The Hedging Instrument must have more than 1 year remaining to maturity in order to receive any RBC credit provided that the remaining time to maturity of the Hedged Asset - Bonds is greater than 1 year. If both the Hedging Instrument and the Hedged Asset - Bonds maturity dates are less than 1 year, the maximum RBC credit determined using the formula below shall be allowed provided that the maturity of the hedging instrument is equal to or later than the maturity of the bond. Calculation is Column (8) Overlap with Insurer's Bond Portfolio multiplied by RBC Credit as % of C-1 Asset Charge formula (formula listed below) multiplied by Column (11) RBC Factor.

$$\text{RBC Credit as \% of C1 Asset Charge} = \text{Min} \left(1, \frac{\text{Time to Maturity of Hedging Instrument}}{\text{Time to Maturity of Bond}} \right) \times (94\% - 10\%) + 10\%$$

Time to Maturity of Hedging Instrument divided by Time to Maturity of Bond cannot exceed 1.

- (14) Net RBC Charge – Column (12) Gross RBC Charge minus (13) RBC Credit for Hedging Instruments.

Common Stocks

- (1) Description - Reported on Schedule DB.
- (2) Notional Amount - Amount reported on Schedule DB.
- (3) Relationship Type of the Hedging Instrument and Hedged Asset. There are two categories; Basic relationships or Intermediate relationships. Basic relationship = Single name equity Hedging Instrument paired with a specific common stock. *Intermediate relationship = A portfolio of common stocks paired with a basket or index based Hedging Instrument with the same or very similar components as the portfolio. For intermediate relationships, a minimum of 50% overlap of the derivative instrument notional amount and the book adjusted carrying value of the hedged common stocks shall be required to qualify for any RBC credit.*

- (4) Description - Common Stock description found in Schedule D Part 2 Section 2. *For intermediate relationships, each common stock must be listed (e. g. if the insurer acquires a short futures contract that hedges the S&P 500, then the insurer must list all 500 stocks on the schedule).*
- (5) CUSIP Identification - Common Stock unique identifier found in Schedule D Part 2 Section 2.
- (6) Book Adjusted Carrying Value - Value found on Schedule D Part 2 Section 2.
- (7) Overlap with Insurer's Stock Portfolio – The portion of Column (2) Notional Amount of the Hedging Instrument that hedges Column (6) Book/Adjusted Carrying Value. This amount cannot exceed the Column (6) Book Adjusted Carrying Value.
- (8) RBC Factor - Factor based on NAIC C-1 RBC factors table.
- (9) Gross RBC Charge - The C-1 RBC charge based on holdings at the end of the year. Calculation: Columns (6) Book Adjusted Carrying Value multiplied by (8) RBC Factor.
- (10) RBC Credit for Hedging Instruments - RBC credit for equity market risk reduction is limited to 94% of the C-1 Asset charge. Calculation: Column (7) Overlap with Insurer's Stock Portfolio multiplied by (8) RBC Factor multiplied by 94%.
- (11) Net RBC Charge - Column (9) Gross RBC Charge minus (10) RBC Credit for Hedging Instruments.

Factors Table As determined by the NAIC

NAIC Designation	Factor
	0.00000
1	0.00153
1.A	0.00153
1.B	0.00260
1.C	0.00406
1.D	0.00503
1.E	0.00635
1.F	0.00790
1.G	0.00977
2.A	0.01208
2.B	0.01464
2.C	0.02090
3.A	0.03070
3.B	0.04399
3.C	0.05849
4.A	0.07176
4.B	0.09291
4.C	0.12131
5.A	0.16590
5.B	0.23320
5.C	0.30000
6	0.30000

Common Stock Type	Factor
Other Unaffiliated Public Common Stock	0.4500 †
Money Market Mutual Funds	0.0040
Federal Home Loan Bank Common Stock	0.0110
Unaffiliated Private Common Stock	0.3000

† - 30 percent adjusted up or down by the weighted average beta for the publicly traded common stock portfolio subject to a minimum of 22.5 percent and a maximum of 45 percent.

OFF-BALANCE SHEET COLLATERAL
(Including any Schedule DL, Part 1 Assets not Included in the Asset Valuation Reserve)
LR018

Basis of Factors

Security lending programs are required to maintain collateral. Some entities post the collateral supporting security lending programs on their financial statements, and incur C-1 risk charges on those assets. Other entities have collateral that is not recorded on their financial statements. While not recorded on the financial statements of the company, such collateral has risks that are not otherwise captured in the RBC formula.

Annual Statement Schedule DL, Part 1, Securities Lending Collateral Assets reported on the balance sheet (Assets Page, Line 10) should be included on the schedule with the Off-Balance Sheet Collateral if they are not already reflected in the Asset Valuation Reserve and are reflected in another portion of the Life RBC formula.

The collateral in these accounts is maintained by a third-party (typically a bank or other agent). The collateral agent maintains on behalf of the company detail asset listings of the collateral assets, and this data is the source for preparation of this schedule. The company should maintain such asset listings, at a minimum CUSIP, market value, book/carrying value, and maturity date. The asset risk charges are derived from existing RBC factors for bonds, preferred and common stocks, other invested assets, and invested assets not otherwise classified (aggregate write-ins).

Specific Instructions for Application of the Formula

Off-balance sheet collateral included in General Interrogatories, Part 1, Lines 24.05 and 24.06 of the annual statement should agree with Line (19).

Lines (1) through (8) – Bonds

Bond factors are described on page LR002 Bonds.

Line (9) through (15) – Preferred Stocks

Preferred stock factors are described on page LR005 Unaffiliated Preferred and Common Stock.

Line (16) – Common Stock

Common stock factors are described on page LR005 Unaffiliated Preferred and Common Stock.

Line (17) – Schedule BA – Other Invested Assets

Other invested assets factors are described on page LR008 Other Long Term Assets.

Line (18) – Aggregate Write-ins for Other Invested Assets

Aggregate write-ins for other invested assets factors are described on page LR012 Miscellaneous Assets.

Preliminary Proposed Updates to RBC C1 Bond Factors
For Discussion with Life Risk-Based Capital (E) Working Group

April 15, 2021

Moody's (NYSE:MCO) is a global integrated risk assessment firm that empowers organizations to make better decisions. Its data, analytical solutions and insights help decision-makers identify opportunities and manage the risks of doing business with others. We believe that greater transparency, more informed decisions, and fair access to information open the door to shared progress. With over 11,400 employees in more than 40 countries, Moody's combines an international presence with local expertise and more than a century of experience in financial markets. Learn more at moodys.com/about.

Moody's Corporation is comprised of two separate companies: Moody's Investors Service (MIS) and Moody's Analytics (MA).

Moody's Investors Service (MIS) provides investors with a comprehensive view of global debt markets through credit ratings and research. Moody's Analytics (MA) provides data, analytics, and insights to equip leaders of financial, non-financial, and government organizations with effective tools to understand a range of risks.

Throughout this document, "MIS rating" refers to a MIS credit rating. And while references to MIS are made, **the views and opinions in this document are solely of MA.**

Agenda

1. Executive Summary
2. Comparison of C1 Factors and C1 RBC Industry Impact
3. Impact of Proposed Targeted Improvements

1

Executive Summary

Scope

What We're Doing

Proposing RBC C1 bond factors using data and methodologies that better reflect economic risks to better assess insolvency risk and help identify potentially weakly capitalized life insurers.

- Methodologies and data rely entirely on public sources that are accessible and reproducible by NAIC and industry
- Articulated limitations
- NAIC to use at its discretion in setting the final C1 factors
- While the ACLI, the industry, the NAIC, and commissioners have been engaged extensively, the views are solely those of MA and based on an objective assessment of supporting documentation, and data and modeling approaches that in MA's experience viewed as best practice.

Heuristic Performance Criteria

How We're Doing It

Proposing C1 factors to align insolvency risks with capital requirements across NAIC ratings and across number of issuers in portfolio, allowing for better identification of weakly capitalized firms; the C1 factors should not incentivize poor business decisions that can adversely impact solvency.

Challenges:

- C1 factors are cardinal, and a function of MA's default rates estimated for each MIS ratings that are opinions of ordinal, horizon-free credit risk, rather than cardinal
- C1 factors are static while risks and spreads change over time, across ratings and asset classes, resulting in a potential misalignment between the C1 factors and the underlying risks of varied holdings in insurers' portfolios.
- Applied to range of credit assets, based on the second lowest NRSRO rating with statistical properties that can be different from MIS ratings

Executive Summary

Findings

What We Found

MA proposed C1 factors result in a general overall C1 RBC increase across the industry:

- C1 base factors are more differentiated across ratings (i.e., steeper slope) than the current C1 base factors or those proposed by the Academy
- Portfolio adjustment factors (PAF) for portfolios with small number of issuers are significantly less punitive than those under the Academy's proposal, and sit between the current PAFs and those proposed by the Academy

C1 Base Factors				Portfolio Adjustment Factors			
MIS Rating	Current Factors	Academy's Proposed Factors [2021]	MA Preliminary Proposed Base Factors	Thresholds in Step Function Form	Current Factors	Academy Proposed [2021]	MA Preliminary Proposed PAF
Aaa	0.390%	0.290%	0.153%	(Up to) 10	2.50	7.50	5.87
Aa1	0.390%	0.420%	0.260%				
Aa2	0.390%	0.550%	0.406%				
Aa3	0.390%	0.700%	0.503%	(Next) 90	1.83	1.75	1.54
A1	0.390%	0.840%	0.635%	(Next) 100	1.00	0.90	0.85
A2	0.390%	1.020%	0.790%				
A3	0.390%	1.190%	0.977%				
Baa1	1.260%	1.370%	1.208%	(Next) 300	0.86	0.85	0.85
Baa2	1.260%	1.630%	1.464%				
Baa3	1.260%	1.940%	2.090%				
Ba1	4.460%	3.650%	3.070%	(Above) 500	0.90	0.75	0.82
Ba2	4.460%	4.660%	4.399%				
Ba3	4.460%	5.970%	5.849%				
B1	9.700%	6.150%	7.176%				
B2	9.700%	8.320%	9.291%				
B3	9.700%	11.480%	12.131%				
Caa1	22.310%	16.830%	16.590%				
Caa2	22.310%	22.800%	23.320%				
Caa3	22.310%	33.860%	32.284%				

Next

Immediate Next Steps

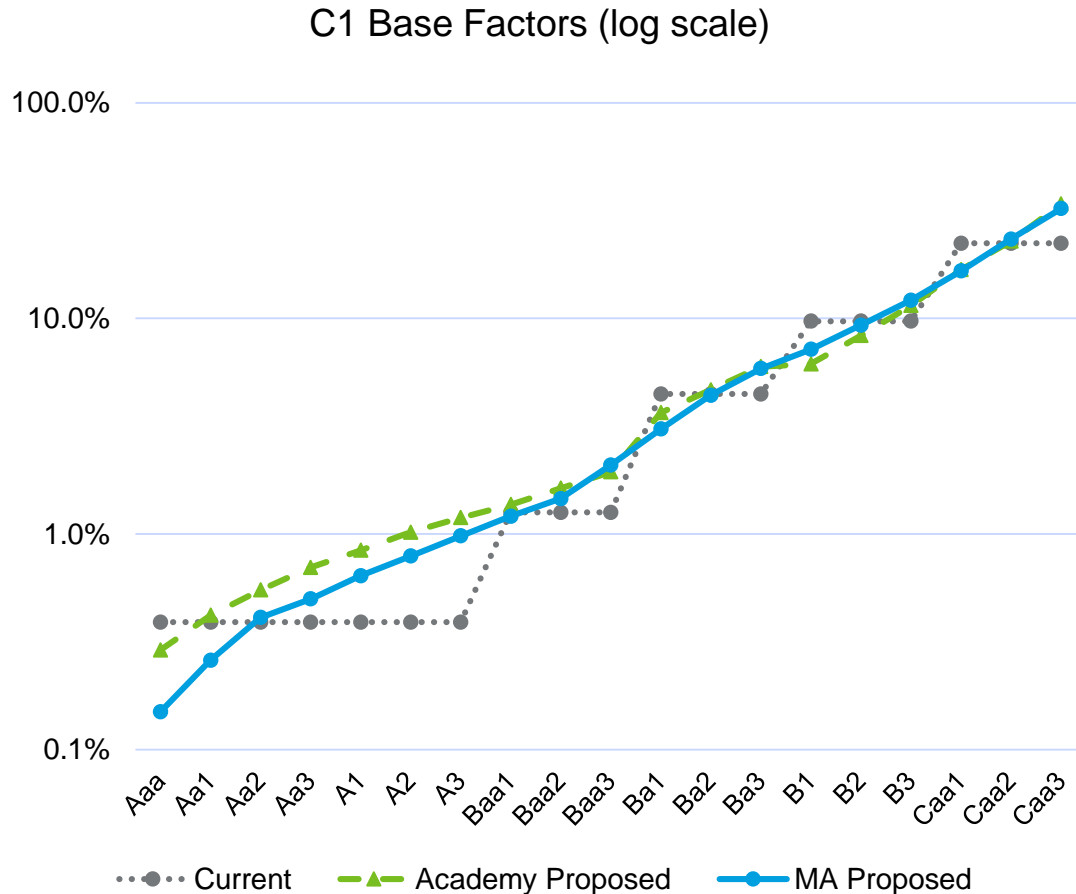
- Ongoing NAIC and Industry Focus Groups
- Achieve consensus on data and methodology
 - Provide transparency on approaches and resulting impact
 - Provide guidance on limitations of use and best practice

2

Comparison of C1 Factors and C1 RBC Industry Impact

Comparison of C1 Base Factors

MA proposed base factors have a steeper slope



Targeted improvements with largest impact on C1 base factors

- » **Economic state model**, initially outside scope, limitations viewed to be sufficiently material that MA recommends replacing with correlation model parameterized to default correlations observed empirically
 - Economic state scalars in the economic state model are generally more punitive for higher MIS ratings, resulting in a counterfactual flattening of risk across MIS ratings, and possible non-monotonic C1 base factors
 - MA proposed correlation model results in C1 base factors that are more conservative and differentiated across MIS ratings, while also correcting for PAF issues described subsequently under PAF section.
- » **Corporate default rate term structures** are estimated to represent the historical experience of life insurance holdings
 - Life holdings differ from overall issuance; e.g., life portfolio holdings have less weight on financial institutions that tend to issue shorter term debt
 - MA proposed default rates tend to have a steeper slope (more separated across MIS ratings) than those proposed by the Academy, with separation more closely aligning with benchmarks
- » **Risk Premium** conservatively set at expected loss plus 0.5 standard deviation recognizing variation in industry reserving standards and to closer align with PBR and reserving standards generally aiming to cover moderately adverse conditions. A higher Risk Premium lowers the C1 base factors and mildly increases the cross-sectional variation (or slope) and should be set to better identify of weakly capitalized firms identify and mitigate risk shifting incentives with new bond purchases.

Proposed Portfolio Adjustment Factor (PAF)

Most impacted by replacing the economic state model with MA correlation model

Initially outside scope, economic state model limitations viewed to be sufficiently material that MA recommends replacing with correlation model that reflects diversification benefits observed empirically.

The economic state model:

- » While calibrated to the level of defaults observed in economic contractions and recessions
- » Implies more issuer diversification benefits (i.e., lower default correlations) than observed empirically
- » Implies PAFs that are overly punitive (lenient) to portfolios with small (larger) number of issuers

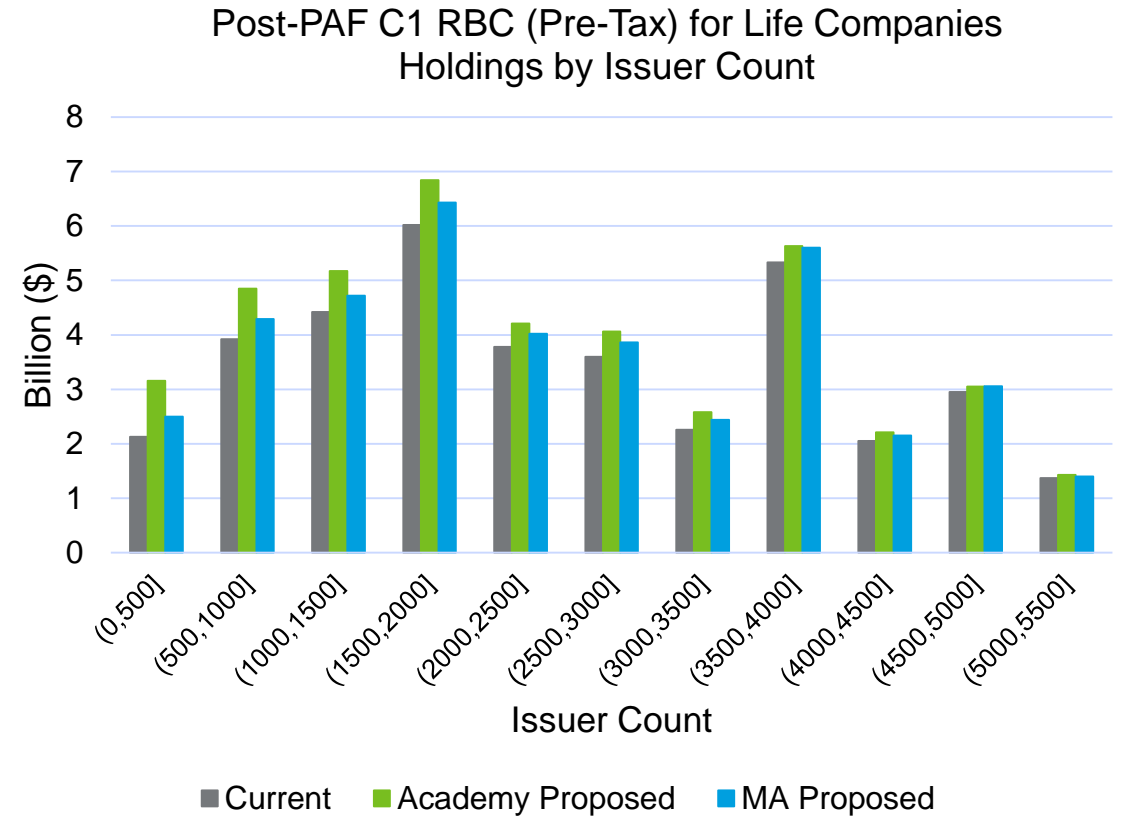
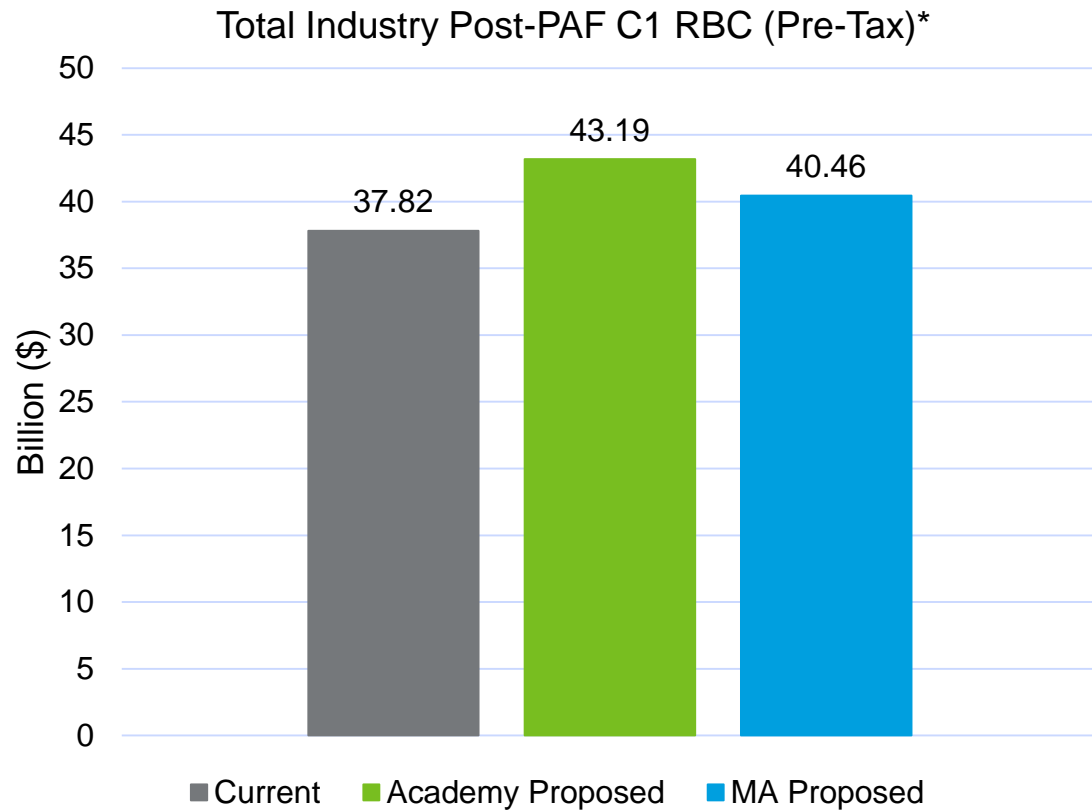
MA proposes a correlation model calibrated to default correlations observed empirically allowing for a more accurate and conservative reflection of issuer diversification benefits

Thresholds* in Step Function Form	Current*	Academy Proposed [2021]	Academy Proposed [2017]	MA Replication of Academy's Model Using Academy [2017] Parameters	MA Preliminary Proposed PAF
(Up to) 10	2.50	7.50	7.80	7.37	5.87
(Next) 90	1.83	1.75	1.75	1.76	1.54
(Next) 100	1.00	0.90	1.00	0.87	0.85
(Next) 300	0.86	0.85	0.80	0.82	0.85
(Above) 500	0.90	0.75	0.75	0.72	0.82

*Current PAF converted to Academy's proposed thresholds for better comparison.

Post-PAF C1 RBC Industry Impact – Complete Portfolio Holdings

Post-PAF RBC proposed by MA is higher than the current level

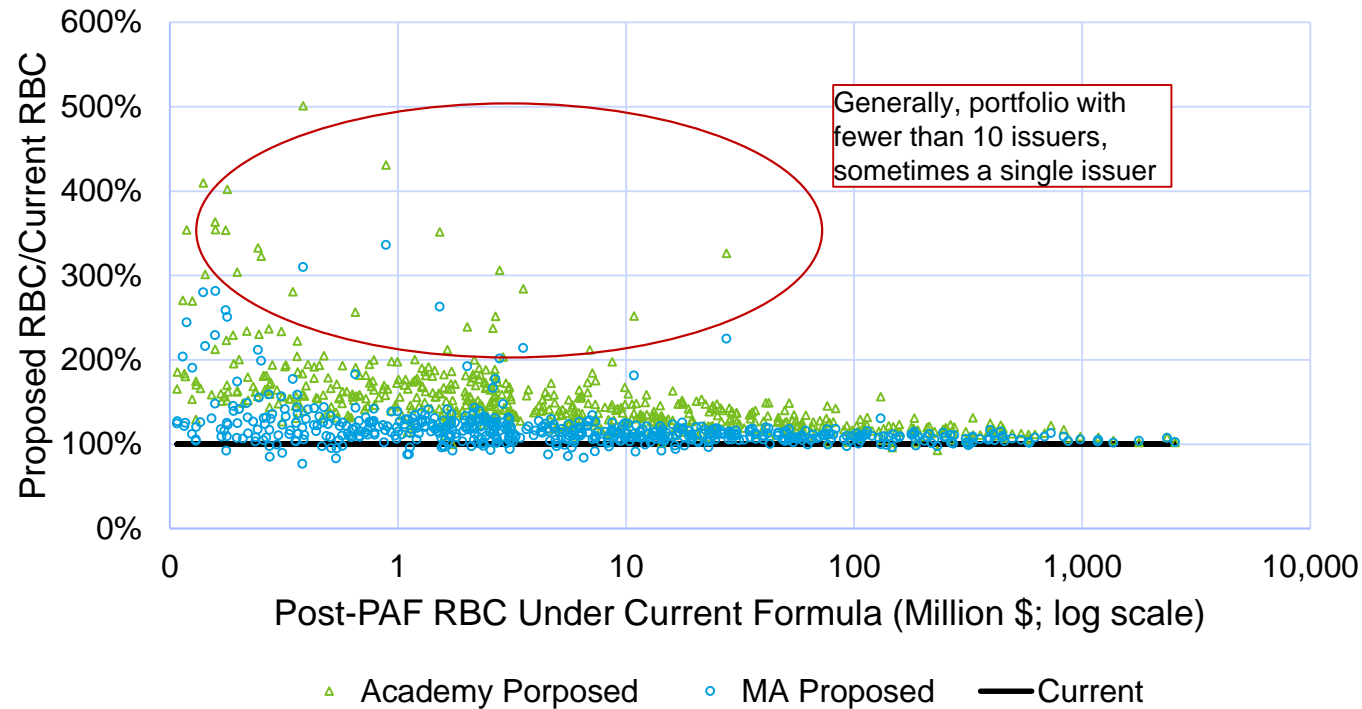


*Data on ~85% life companies in US that have reported as of 03/19/2021

Post-PAF C1 RBC Impact by Life Company

Complete portfolio holdings

Ratio of Life Company's Post-PAF C1 RBC (Pre-Tax) Under Proposed-to-Current Formula



- » MA proposed correlation model is parameterized to default correlations observed empirically allowing for a more accurate and conservative reflection of issuer diversification benefits
- » MA's proposal are generally higher than current. The difference is relatively constant across life companies of different sizes.
- » Academy's proposal are generally higher for portfolios with a small or medium number of issuers, often several times higher than under the current formula, driven largely by the economic state model implying more issuer diversification benefits (i.e., lower default correlations) than observed empirically

Note: Life companies with Current Post-PAF RBC below \$100K are not displayed in this figure

3

Summary of Proposed Targeted Improvements to the C1 Factors

Part 1 of 2: Most Impactful Targeted Improvements

Stakeholder Agreed-on Targeted Improvements	Current Formula	Academy Proposal	MA Proposal
Economic State Model	Five-state model; affects both default and LGD; MA did not analyze extensively, but likely similar properties to Academy proposal	A combination of two and four-state model; affects both default and LGD; Model results in C1 base factors that are not sufficiently differentiated across MIS ratings and may be non-monotonic, and a PAF that provides more diversification benefits than observed empirically	Initially outside scope, economic state model limitations viewed to be sufficiently material that MA proposes replacing with correlation model that reflects default correlations and diversification benefits observed empirically. Resulting C1 base factors are more differentiated and conservative, and PAF is more accurate and conservative reflection of diversification benefits.
Default Rates	Based on data from, Moody's 1991 Special Comment: Corporate Default and Recovery Rates, 1970-1990". Documentation on data smoothing and filtering is limited	Smoothed corporate default rate term structures grouped by MIS alphanumeric rating using Academy's algorithm.	Smoothed corporate default rate term structures representing the historical experience of life insurance holdings using default data grouped by MIS alphanumeric rating using MA's DRD. MA proposed default rates tend to have a steeper slope (more separated across MIS ratings) than those proposed by the Academy, with separation more closely aligning with benchmarks.
Risk Premium	Set equal to expected loss	Set equal to expected loss	Conservatively set at expected loss plus 0.5 standard deviation recognizing variation in industry reserving standards and to closer align with PBR and reserving standards generally aiming to cover moderately adverse conditions. A higher Risk Premium lowers the C1 base factors and mildly increases their cross-sectional variation (or slope) and should be set to better identify of weakly capitalized firms identify and mitigate risk shifting incentives with new bond purchases.
Portfolio Adjustment Factor (PAF)	Documentation is limited	Based on economic state model that implies more benefits to diversification across issuers than observed empirically, resulting in a PAF that is overly punitive (lenient) to portfolios with a small (larger) number of issuers	Initially outside scope, economic state model limitations viewed to be sufficiently material that MA proposes replacing the economic state model with a correlation model calibrated to default correlations and diversification benefits observed empirically allowing for a more accurate and conservative reflection of issuer diversification benefits.

Part 2 of 2: Remaining Targeted Improvements

Stakeholder Agreed-on Targeted Improvements	Current Formula	Academy Proposal	MA Proposal
Fix errors in engine that replicates Academy's factors	Limited documentation	Replicated code suggests default rates and LGD were drawn from separate economic states for Baa-Caa	Error fix for Baa-Caa MIS ratings, where default rates and LGD can be drawn from separate economic states in simulation
Discount Rate & Tax Rate	Limited documentation (2002) Tax rate: 35% Discount rate: 9.23% (6% after tax) Recovery of tax loss benefit: 75% Tax recovery on default: 26.25%	Tax rate: 21% (2021) Discount rate (1993-2013 window): 5% (3.95% after tax) Recovery of tax loss benefit: 80% Tax recovery on default: 16.8%	Tax rate: 21% Discount rate (1993-2020 window): 4.32% (3.41% after tax) Recovery of tax loss benefit: 80% Tax recovery on default: 16.8% While an alternative window start date can be justified, the discount rate enters the RBC C-1 framework as a single static rate and not as impactful as some other targeted improvements, reinforced by updated tax rate offset. Potentially important term structure dynamics that interplay with credit risk are not captured within the current framework.
Loss Given Default (LGD)	Limited documentation Average LGD by NAIC designation 37.25% (NAIC 1), 52.17% (NAIC 2), 56.67% (NAIC 3-5).	Does not align with the date of default. This deviation can result in bias with recovery rate levels, as well as their relationships with default rates. Average value of LGD = 53%	Use MA's Default & Recovery Database (DRD) over 1987–2019 window, reflects the loss experience of life insurance U.S. corporate holdings across sectors, reflect issuer-level LGD to avoid overweighting outliers, align ultimate recovery with default date and DRD reported MIS' recommended recovery data source for each default. Average value of LGD = 52%
Bounds on Base Factors	Upper bound set at 30% unaffiliated common stock factor	Upper bound set at 30% unaffiliated common stock factor	Upper bound set at 30% unaffiliated common stock factor. Consider alignment of C1 factors with values falling below those of other assets to avoid unintended risk-shifting incentives.
Concentration Factors	Doubling C1 factor of top ten holdings	Doubling C1 factor of top ten holdings	Further explore changes to the identification of top concentration risk contributors, and to the measurement of their contribution to concentration risk.

Pre-Tax Proposed Base Factors

Incremental effects of targeted improvements; last column includes impact of full MA proposal

MIS Rating	Current Factors	Academy's Proposed Factors [March 2021]	Academy's Proposed Factors [2017]	MA's Replication Under Academy Parameters and Settings	MA's Replication Under Academy Parameters with Corrected Simulation Engine	+ MA's Discount Rate, Tax Rate	+ MA's LGD	+ Risk Premium at EL + ½ SD	+ Economic State Model Replaced with Correlation Model	+ MA's Default Rates [Preliminary Base Factors]
Aaa	0.390%	0.290%	0.310%	0.319%	0.313%	0.310%	(3) 0.292%	0.245%	0.278%	0.153%
Aa1	0.390%	0.420%	0.430%	0.444%	0.444%	0.441%	0.426%	0.360%	0.397%	0.260%
Aa2	0.390%	0.550%	0.570%	0.602%	0.572%	0.567%	0.552%	0.460%	0.532%	0.406%
Aa3	0.390%	0.700%	0.720%	0.739%	0.722%	0.716%	0.690%	0.577%	0.695%	0.503%
A1	0.390%	0.840%	0.860%	0.901%	0.870%	0.865%	0.828%	0.674%	0.865%	0.635%
A2	0.390%	1.020%	1.060%	1.044%	1.001%	0.993%	0.970%	0.789%	(2) 1.015%	0.790%
A3	0.390%	1.190%	1.240%	1.194%	1.161%	1.150%	1.108%	0.896%	1.208%	0.977%
Baa1	1.260%	1.370%	1.420%	1.445%	1.410%	1.396%	1.344%	1.094%	1.343%	1.208%
Baa2	1.260%	1.630%	1.690%	1.710%	1.593%	1.579%	1.555%	1.250%	1.587%	1.464%
Baa3	1.260%	1.940%	2.000%	2.017%	1.910%	1.898%	1.866%	1.487%	1.891%	2.090%
Ba1	4.460%	3.650%	3.750%	3.716%	3.475%	3.446%	3.301%	2.738%	3.822%	3.070%
Ba2	4.460%	4.660%	4.760%	4.710%	4.393%	4.363%	4.385%	3.634%	4.681%	4.399%
Ba3	(1) 4.460%	5.970%	6.160%	6.258%	5.744%	5.693%	5.758%	(1) 4.794%	5.812%	5.849%
B1	9.700%	6.150%	6.350%	6.287%	5.909%	5.867%	5.847%	4.778%	7.672%	7.176%
B2	9.700%	8.320%	8.540%	8.544%	7.814%	7.759%	7.705%	6.412%	9.631%	9.291%
B3	9.700%	11.480%	11.820%	11.461%	10.739%	10.691%	10.769%	9.163%	12.329%	12.131%
Caa1	22.310%	16.830%	17.310%	16.563%	14.932%	14.847%	15.151%	13.180%	15.753%	16.590%
Caa2	22.310%	22.800%	23.220%	22.637%	20.283%	20.167%	20.579%	18.492%	19.535%	23.320%
Caa3	22.310%	33.860%	34.110%	34.046%	32.431%	32.373%	32.336%	31.140%	28.583%	32.284%

- (1) The economic state scalars are generally more punitive for higher MIS ratings, resulting in a counterfactual flattening of risk across MIS ratings.
- (2) Default rate term structures representing experience of life insurance holdings tend to be more separated across MIS ratings than Academy proposed, and closer aligned to benchmarks.
- (3) A higher Risk Premium lowers the C1 base factors and mildly increases their cross-sectional variation (or slope)

Moderate difference for lower MIS ratings	Minor difference	Moderate decrease	General decrease, with slope Increase	General increase, with slope increase	General decrease with life holdings sector weighted default rates
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Summary of MA Proposed C1 Factors and their Impact

Data and methodologies to better capture economic risks

More accurate C1 base factors and PAF

Improved solvency; Better identified weakly capitalized firms; Reduce risk shifting

» Impact on post-PAF C1 RBC

- Higher post-PAF RBC, on average, across the life industry compared to current
- Larger post-PAF RBC increase compared to current, on average, for insurance companies with small and medium number of issuers, but much less so than that under Academy's proposal

» Identification of weakly capitalized firms

- **MA's proposed C1 base factors** are more differentiated across MIS ratings (i.e., have a steeper slope) compared to both the current and Academy proposed, in the investment grade range in particular, more accurately reflecting the underlying economic risks
 - › Correlation model overcomes an undesirable property of the economic state model resulting in C1 base factors not sufficiently differentiated across MIS ratings and may even result in non-monotonic factors (higher for higher MIS rating categories)
- **MA's proposed PAFs** are more conservative than the Academy proposed
 - › Sit between the current PAFs and the Academy proposed
 - › MA proposed correlation model
 - calibrated to default correlations and diversification benefits observed empirically allowing for a more accurate and conservative reflection of issuer diversification benefits
 - overcomes an undesirable property of the economic state model resulting in more issuer diversification benefits (i.e., lower default correlations) than observed empirically. The economic state model implies PAFs that are overly punitive (lenient) to portfolios with small (larger) number of issuers

Timeline

Phase 1

» By March 31

- V1 proposed factors, iterating with NAIC and ACLI
 - Consensus on methodology, data, and performance criteria
 - Consensus on target probability
- V1 light documentation
- V1 initial industry impact analysis
- Focus group discussions

» By April 30

- Proposed factors for public comment
- Initial documentation and validation
- Impact analysis, iterating with NAIC and ACLI
 - Consensus on methodology, data, and limitations
 - Consensus on target probability
- Continued focus group discussions

» By mid-June - June 30

- Iterating with NAIC and ACLI as needed
 - Final proposed factors
 - Final documentation and validation of factors that meet financial industry standards
- Continued focus group discussions

» Through August

- Continued focus group discussions

Amnon Levy

Managing Director, Portfolio and Balance Sheet Research

+1 (415) 874-6279

Amnon.Levy@moodys.com

Akshay Gupta

Assistant Director, Portfolio and Balance Sheet Research

Akshay.Gupta@moodys.com

Pierre Xu

Director, Portfolio and Balance Sheet Research

+1 (415) 874-6290

Pierre.Xu@moodys.com

Libor Pospisil

Director, Portfolio and Balance Sheet Research

Libor.Pospisil@moodys.com

Andy Zhang

Assistant Director, Portfolio and Balance Sheet Research

+1 (415) 874-6035

Andy.Zhang@moodys.com

Mark Li

Assistant Director, Portfolio and Balance Sheet Research

Mark.Li@moodys.com

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