Capital Adequacy (E) Task Force

RBC Proposal Form

[ ] Capital Adequacy (E) Task Force	[ ] Health RBC (E) Working Group	[X] Life RBC (E) Working Group
[ ] Catastrophe Risk (E) Subgroup	[ ] Investment RBC (E) Working Group	[ ] Operational Risk (E) Subgroup
[ ] C3 Phase II/ AG43 (E/A) Subgroup	[ ] P/C RBC (E) Working Group	[ ] Longevity Risk (A/E) Subgroup

DATE: 4/22/21	**FOR NAIC USE ONLY**
CONTACT PERSON: Dave Fleming	Agenda Item # 2021-10-L
TELEPHONE: 816-783-8121	Year 2021
EMAIL ADDRESS: dfleming@naic.org	**DISPOSITION**
ON BEHALF OF: Life Risk-Based Capital (E) Working Group	[ ] ADOPTED
NAME: Philip Barlow, Chair	[ ] REJECTED
TITLE: Associate Commissioner of Insurance	[ ] DEFERRED TO
AFFILIATION: District of Columbia	[ ] REFERRED TO OTHER NAIC GROUP
ADDRESS: 1050 First Street, NE Suite 801	[X] EXPOSED 4/22/21
Washington, DC 20002	[ ] OTHER (SPECIFY)

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

[ ] Health RBC Blanks	[ ] Property/Casualty RBC Blanks	[x] Life and Fraternal RBC Instructions
[ ] Health RBC Instructions	[ ] Property/Casualty RBC Instructions	[x] Life and Fraternal RBC Blanks
[ ] 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**

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BONDS

	SVO Bond Designation Category	Annual Statement Source	(1) Book / Adjusted Carrying Value		Factor		(2) RBC Requirement
	Long Term Bonds						
(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)						

	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 (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))	Sum of Lines (9) + (10.8) + (11.4) + (12.4) + (13.4) + (14.4) + (15)				
(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.

ASSET CONCENTRATION FACTOR

	(1) Asset Type	(2) Book / Adjusted Carrying Value		(3) Factor		(4) Additional RBC	(5) Adjustment/ Subsidiary RBC	(6) 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	**0.2220**	=			
(4.3)	Bond NAIC Designation Category 5.C		X	**0.1500**	=			
(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.

ASSET CONCENTRATION FACTOR (CONTINUED)

	(1) Asset Type	(2) Book / Adjusted Carrying Value		(3) Factor		(4) Additional RBC	(5) Adjustment/ Subsidiary RBC	(6) 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 | Confidential when Completed | NAIC Company Code

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	
Bonds	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 **
(0100001)														
(0100002)														
(0100003)														
(0100004)														
(0100005)														
(0100006)														
(0100007)														
(0100008)														
(0100009)														
(0100010)														
(0100011)														
(0100012)														
(0100013)														
(0100014)														
(0100015)														
(0100016)														
(0100017)														
(0100018)														
(0100019)														
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(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.

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

		Annual Statement Source	(1) Book / Adjusted Carrying Value		(2) Factor		(3) RBC Requirement
	Fixed Income - Bonds						
(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)					
	Fixed Income - Preferred Stock						
(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 ~~minus Schedule D, Part 1A, Section 1, Column 7, Line 7.7 of the annual statement~~.

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~~7.5 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.)

Line (25)	Source	(a) Number of Issuers				(b) Weighted Issuers
First ~~50~~10	Company Records		X	~~2.5~~7.5	=	
Next ~~50~~90	Company Records		X	~~1.3~~1.75	=	
Next ~~300~~100	Company Records		X	~~1.0~~0.9	=	
Next 300	**Company Records**		**XX**	**0.8~~6~~.85**	**=**	
Over ~~400~~500	Company Records		**X**	**~~0.9~~0.75**	**=**	
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.

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

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.

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

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.

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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 Actuaries[1] 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.
[2] https://www.actuary.org/sites/default/files/files/publications/Academy_C1WG_Comments_to_NAIC_IRBC_101017.pdf.

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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 ADUSTMENT 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 Recommendation			**3.5.2021 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, C1Work Group
American Academy of Actuaries