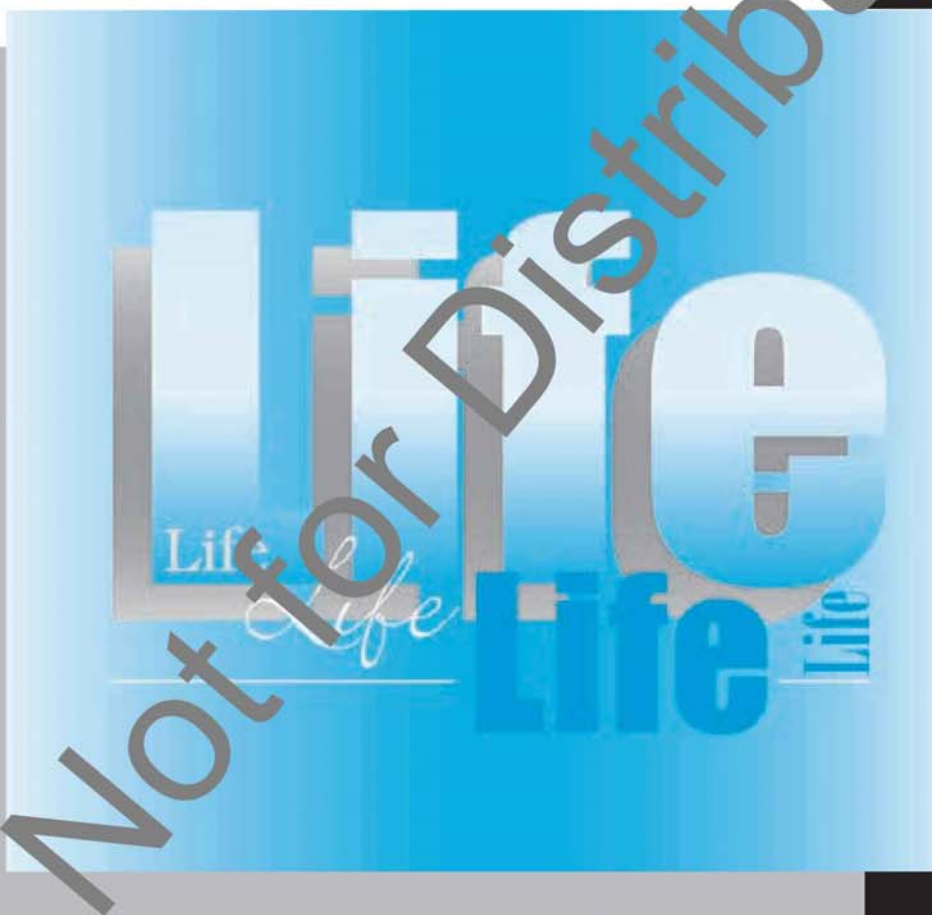




**RBC**  
Risk-Based Capital



2018

**FORRECASTING  
& INSTRUCTIONS**

*Not for Distribution*

# **Risk-Based Capital Forecasting & Instructions**

**Life**

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**2018**

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# NAIC Life Risk-Based Capital Newsletter

August 2018

Volume 24



## What RBC Pages Should Be Submitted?

For year-end 2018 life RBC, submit hardcopies of pages LR001 through LR049 to any state that requests a hardcopy in addition to the electronic filing. Starting with year-end 2007 RBC, a hardcopy was not required to be submitted to the NAIC. However, a portable document format (PDF) file representing the hardcopy filing is part of the electronic filing.

If any actuarial certifications are required per the RBC instructions, those should be included as part of the hardcopy filing. Starting with year-end 2008 RBC, the actuarial certifications were also part of the electronic RBC filing as PDF files, similar to the financial annual statement actuarial opinion.

Other pages, such as the mortgage and real estate worksheets, do not need to be submitted, but they still need to be retained by the company as documentation.

## Non-Government Money Market Mutual Funds

As a result of the adoption of proposal 2017-07-CA by the Capital Adequacy (E) Task Force at its Spring National Meeting, the instructions and line for non-government money market mutual funds (NMMMF) Line (22) on page LR005 was deleted. The purpose of the deletion was to avoid the double counting of MMMFs in both cash equivalents and common stock.

## Tax Reform Changes

As a result of the adoption of proposal 2018-13-L by the Capital Adequacy (E) Task Force on the June 28 conference call, changes necessitated for the life and fraternal RBC factors and instructions by the implementation of the Federal Tax Cuts and Jobs Act were made. While the primary changes were updating the tax factors on LR030, there were also adjustments to the pre-tax factors applied to bonds, and those items receiving the bond treatment, to reflect discounting at a higher rate. 0.97 is an approximation developed from the corporate bond model used to develop the proposed revision to bond factors under consideration by the Investment Risk-Based Capital (E) Working Group. Pre-tax factors for long-term care and disability premiums, health claim reserves, the interest rate risk and business risk were also adjusted to retain the current after-tax impact consistent with the approach taken when the tax factors were originally included.

The Life Risk-Based Capital (E) Working Group will be continuing work on the implications of tax reform in the formula.

## Federal Home Loan Bank Collateral

As a result of the adoption of proposal 2017-03-L by the Capital Adequacy (E) Task Force at its Spring National Meeting, the treatment of Federal Home Loan Bank (FHLB) advances was modified. The previous C-0 charge for collateral held for FHLB advances of 1.3% on LR017 was changed to 0% for the collateral equal to the amount advanced when that liability is part of C-3 modeling, and a factor based on the risk of the FHLB for any collateral in excess. The factor will be based on an NAIC 2 bond factor if the FHLB funded advance liabilities associated with funding agreement activities exceed 5% of total net admitted assets.

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## Operational Risk

A revised basic operational risk “add-on” structure and instructions were adopted by the Capital Adequacy (E) Task Force during its Spring National Meeting and April 28, 2018 conference call respectively. The “add-on” is equal to 3% of total RBC after covariance in all RBC formulas. The operational risk charge is offset (to a minimum of zero) by the amount of C-4a risk RBC carried by life RBC filers, as well as the C-4a risk RBC of life insurance subsidiaries owned directly by any insurer type.. The basic operational risk charge will be effective with the filing of the 2018 RBC formulas. The RBC charge was previously set at 0% for 2017 RBC by the Task force based on a technical issue that was subsequently addressed by the Operational Risk (E) Subgroup.

## Stop Loss Interrogatories

As a result of the adoption of proposal 2018-01-CA by the Capital Adequacy (E) Task Force at its April 30 conference call, electronic only tables for stop loss interrogatories were added. Table 1 will be used to collect data to review and evaluate the stop loss factors. Table 2 will be used to capture the number of stop loss contracts by group size.

## Medicaid Pass-Through Payments

As a result of the adoption of proposal 2017-08-CA by the Capital Adequacy (E) Task Force at its Spring National Meeting, new lines (6) and (16) were added to LR019. The purpose of the change is to reflect the fact that Medicaid Pass-Through Payments are more like uninsured business, such as ASC and ASO, and should reflect a similar charge.

## Affordable Care Act Changes

The Capital Adequacy (E) Task Force adopted proposals 2018-02-CA and 2017-09-CA at its Spring National Meeting. Proposal 2018-02-CA deleted the structure and instructions for the Underwriting Risk—Experience Fluctuation Risk—Informational-Only page from the formula. Proposal 2017-09-CA modifies the Risk Adjustment and Risk Corridor Sensitivity Test by removing the risk corridor portion. The purpose of these changes was due to discontinuation of the reinsurance and risk corridor programs, as well as the continued changes of the Affordable Care Act.

## Appendix 3 – Commonly Used Terms for Medicare Part D Coverage

As a result of the adoption of proposal 2018-03-CA by the Capital Adequacy (E) Task Force on its June 28 conference call, the individual definitions in Appendix 3—Commonly Used Terms for Medicare Part D Coverage were deleted and a reference to *Interpretation (INT) 05-05: Accounting for Revenue Under Medicare Part Coverage* was added to reduce the misalignment of changes in the INT compared to the RBC instructions.

### Risk-Based Capital Forecasting and Instructions

The NAIC *2018 Life Risk-Based Capital Forecasting & Instructions* is available for purchase through the NAIC Publications Department. Customers who purchase this publication can download the forecasting spreadsheet from the [NAIC Account Manager](#). This publication is available for purchase on or about November 1 each year. The User Guide is no longer included in the Forecasting & Instructions.

**WARNING:** The Risk-Based Capital Forecasting Spreadsheet CANNOT be used to meet the year-end risk-based capital electronic filing requirement. Risk-based capital filing software from an annual statement software vendor should be used to create the electronic filing. If the forecasting worksheet is sent instead of an electronic filing, it will not be accepted and the RBC will not have been filed.

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# 2018 NAIC Life Risk-Based Capital Report

Including

Forecasting and Instructions for Companies

as of December 31, 2018

Confidential  
When Completed

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National Association  
of Insurance Commissioners

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## NAIC Life Risk-Based Capital Report

### Introduction

Risk-based capital (RBC) is a method of measuring the minimum amount of capital appropriate for an insurance company to support its overall business operations in consideration of its size and risk profile. It provides an elastic means of setting the capital requirement in which the degree of risk is taken by the insurer is the primary determinant. The five major categories of risks involved are:

Asset Risk - Affiliates	C-0	This is the risk of assets' default for certain affiliated investments.
Asset Risk - Other	C-1	This is the risk of assets' default of principal and interest or fluctuation in fair value.
Insurance Risk	C-2	This is the risk of underestimating liabilities from business already written or inadequately pricing business to be written in the coming year.
Interest Rate Risk, Health Credit Risk and Market Risk	C-3	This is the risk of losses due to changes in interest rate levels and the risk that health benefits prepaid to providers become the obligation of the health insurer once again, and risk of losses due to changes in market levels associated with variable products with guarantees.
Business Risk	C-4	This is the risk of general business.

A company's risk-based capital is calculated by applying factors to various asset, premium, claim, expense and reserve items. The factor is higher for those items with greater underlying risk and lower for less risky items. The adequacy of a company's risk-based capital can then be measured by a comparison to its risk-based capital as determined by the formula.

Risk-based capital standards will be used by regulators to set in motion appropriate regulatory actions relating to insurers that show indications of weak or deteriorating conditions. It also provides an additional standard for minimum capital requirements that companies should meet to avoid being placed in rehabilitation or liquidation.

### Purpose of this Report

This report presents the NAIC Life Risk-Based Capital formula in an instructional format that should be helpful to anyone responsible for submitting data. This formula is an important tool for regulators. Determining accurate and timely data is an important part of this process. This is most likely to occur when everyone, from the company CEO to the individual preparing the data, has a basic understanding of the formula. While this report provides this understanding in a concise package, it is strongly recommended that the person or persons compiling and entering the information be senior company officials with a good understanding of the financial aspects of Life insurance and Health insurance, if applicable. It is also recommended that companies seek the assistance of their independent accountants and/or actuaries when preparing this report. Please complete the Jurat signature requirements in accordance with the requirements of the domiciliary state. Direct any questions concerning signature requirements to that state.

### What's in the Report

Certain terms relating to risk-based capital used in this report are defined in the Risk-Based Capital (RBC) for Insurers Model Act.

Generally, each narrative page discusses a different segment of each risk classification (e.g., there is a narrative for Bonds, Mortgages, Preferred and Common Stocks, etc. within the Asset Risk Section). The formula is presented in worksheet form following all of the narrative sections.

Most narrative pages have a brief summary of the background of the development of the factors, called the “Basis of the Factors.” Development of certain factors required sophisticated modeling techniques but the basic concepts are not complicated.

Each narrative page also has a section on “Specific Instructions for Application of the Formula.” This section should serve as a guideline for those who assemble the data or analyze the results. It includes definitions and explanations for specific items that should be calculated, clarification on the intent of the structure of certain sections of the formula and instructions on reconciliation of certain totals.

Annual statement sources referred to in this report and on the RBC software do not use parentheses, i.e., a reference to the current year’s total Asset Valuation Reserve on the Liabilities page in the annual statement will read as Page 3 Column 1 Line 24.01. Annual statement references will begin with a page number only for Pages 2 and 3. Otherwise the reference will be an exhibit number (e.g., Exhibit 6), a schedule letter (e.g., Schedule D) or a name of an exhibit schedule (e.g., Exhibit of Life Insurance or EOLI).

Risk-based capital references in this report will use parentheses around the line and column number. For example, a reference to the LR002 Bonds page Line 8 Column 2 in this report will read, “Bonds Line (8) Column (2).”

Negative values can sometimes appear in the Statement Value, Book/Adjusted Carrying Value, or RBC Subtotal columns of this report. These negative values in the Statement Value or the RBC Subtotal column are retained to facilitate cross-checking of amounts reported in the annual statement against amounts reported in the RBC filing. However, when a negative number appears in the Statement Value, Book/Adjusted Carrying Value or the RBC Subtotal columns, that value will be converted to zero before determining the RBC Requirement. For example, a negative \$10,000 for asset NAIC 1 long-term bonds [Bonds, page LR002 Column (1) Line (2)] will produce a zero (\$0 times 0.004) in Column (2), RBC Requirement, rather than a negative \$40 (-\$10,000 times 0.004). Similarly, a negative \$50,000 in affiliate life reserve credits [Reinsurance, page LR016 Column (3) Line (8)] will produce a zero (\$0 times -0.008) in Column (4), RBC Requirement, rather than a positive \$400 (-\$50,000 times -0.008).

### Management Discussion and Analysis

Each company has the opportunity to prepare a written analysis of their company’s risk-based capital results. This analysis is not a requirement. A company may explain special situations as it deems necessary. Companies should also give explanations where line items do not reconcile with amounts referenced to annual statement sources. However, modification of the risk-based capital formula is not acceptable. For example, RBC amounts that go to the Calculation of Authorized Control Level Risk-Based Capital page (C-0, C-1a, C-1b, C-2, C-3a, C-3b, C-3c, C-4a, C-4b), and the Total Adjusted Capital amount should not be overwritten. This written analysis should not be construed as the “RBC Plan” required in the Risk-Based Capital (RBC) for Insurers Model Act.

### Applicability of NAIC Life RBC Report

The NAIC Life RBC Report has been developed for U.S. Life and Health insurers who file the NAIC Life and Accident and Health annual statement “blue blank.” In some states, U.S. insurers that write only alien business may be excluded from risk-based capital requirements. In addition, states in which Blue Cross and Blue Shield and similar organizations file the blue blank may decide to exempt these companies from filing an RBC report based on the extent to which their operations are different from conventional insurers’ individual and group health insurance operations, although this formula is now generally consistent with the NAIC health risk-based capital formula designed for health entities including Blue Cross and Blue Shield plans.

## **Changes to the Formula**

Changes to the formula may be made necessary by annual statement presentation, accounting procedures and refinement of the formula. All such changes will be determined by the NAIC Capital Adequacy (E) Task Force.

## **How to Submit Data**

Printed RBC reports and electronic submissions should be submitted as specified in the individual state filing checklists. There may be places where the screen display of the RBC program and the printout format vary slightly from the booklet. In those instances, the booklet should explain the differences; however, the overall calculation will be the same.

## **Workpapers**

Workpapers needed to prepare this report should be retained and available for examination in accordance with record retention requirements of the domestic state laws or regulations.

## **Questions**

Contact Dave Fleming by phone at 816-783-8121 or by e-mail at [dfleming@naic.org](mailto:dfleming@naic.org) for RBC formula and reporting questions. The NAIC Financial Reporting Questions Help Line can also be contacted at 816-783-8400 for formula and reporting questions.



**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 over 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, Section 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.)

	(a) Number of Issuers	(b) Weighted Issuers
Source		
Company Records	X	2.5
Company Records	X	.3
Company Records	X	1.0
Company Records	Y	0.9
Total Number of Issuers from Line (23)		
Total Weighted Issuers		
Size Factor = Total Weighted Issuers divided by Total Number of Issuers		

**MORTGAGE EXPERIENCE ADJUSTMENT**

LR03

Under the new RBC and AVR methodology for Commercial and Farm Mortgage, this value will no longer be used and its determination is not necessary.

## MORTGAGES

### LR004

#### *Basis of Factors*

##### Mortgages in Good Standing

The pre-tax factors for commercial mortgages were developed based on analysis using the Commercial Mortgage Metrics model of Moody's Analytics and documented in a report from the American Council of Life Insurers on March 27, 2013. The factors provide for differing levels of risk, the level determined by a contemporaneous debt service coverage ratio and the contemporaneous loan-to-value. The 0.14 percent pre-tax factor on insured and guaranteed mortgages reflects research on approximately 30-60 days interest lost due to possible delay in recovery on default. The pre-tax factor of 0.68 percent for residential mortgages reflects a significantly lower risk than commercial mortgages. The pre-tax factors were developed by dividing the post-tax factor by 0.7375 (0.7375 is calculated by taking 1.0 less the result of 0.75 multiplied by 0.35). **The pre-tax factors are not changing for 2018 due to tax reform.**

##### Mortgages 90 Days Overdue, Not in Process of Foreclosure

The category pre-tax factor for commercial and farm mortgages of 18 percent is based on data taken from the Society of Actuaries "Commercial Mortgage Credit Risk Study." For insured and guaranteed or residential mortgages, factors are set at twice the level for those "in good standing" to reflect the increased likelihood of default losses.

##### Mortgages in Process of Foreclosure

Mortgages in process of foreclosure are considered to be as risky as NAIC 5 bonds and are assigned the same category pre-tax factor of 23 percent for commercial and farm mortgages.

##### Due and Unpaid Taxes on Overdue Mortgages and Mortgages in Foreclosure

The factor for due and unpaid taxes on overdue mortgages and mortgages in foreclosure is 100 percent.

##### *Specific Instructions for Application of the Formula*

##### Column (1)

Insured or guaranteed mortgages should be reported separately from residential and commercial mortgages. Insured or guaranteed loans include only those mortgage loans insured or guaranteed by the Federal Housing Administration, under the National Housing Act (Canada) or by the Veterans Administration (exclusive of any portion insured by FHA). Mortgage loans guaranteed by another company (affiliated or unaffiliated) are not to be included in the insured or guaranteed category.

Except for Lines (1) through (3), (26) and (27), calculations are done on an individual mortgage basis and then the summary amounts are entered in this column for each class of mortgage investment. Refer to the mortgage calculation worksheet A (Figure 1) for how the individual mortgage calculations are completed for Other Than In Good Standing mortgages on Lines (16) through (25). Refer to the mortgage calculation worksheet – company developed (Figure 3) for how the individual mortgage calculations are completed for In Good Standing - Commercial mortgages on Lines (4) through (8) and for In Good Standing - Farm mortgages on Lines (10) through (14). Line (28) should equal Page 2, Column 3, Lines 3.1 plus 3.2, plus Schedule B, Part 1 Footnotes 3 and 4, first of the two amounts in the footnotes.

Column (2)

Companies are permitted to reduce the book/adjusted carrying value of mortgage loans reported in Schedule B by any involuntary reserves. Involuntary reserves are equivalent to valuation allowances specified in SSAP No. 37 paragraph 16. These reserves are held as an offset for a particular troubled mortgage loan that would be required to be written down if the impairment was permanent.

Column (3)

Column (3) is calculated as the net of Column (1) less Column (2).

Column (4)

Summary amounts of the individual mortgage calculations are entered in this column for each class of mortgage investments. Refer to the mortgage calculation worksheet (Figure 1). Cumulative writedowns include the total amount of writedowns, amounts non-admitted and involuntary reserves that have been taken or established with respect to a particular mortgage.

Column (5)

For Lines (4) and (10), the pre-tax factor is equal to 0.0090  
For Lines (5) and (11), the pre-tax factor is equal to 0.0175  
For Lines (6) and (12), the pre-tax factor is equal to 0.0300  
For Lines (7) and (13), the pre-tax factor is equal to 0.0500  
For Lines (8) and (14), the pre-tax factor is equal to 0.0750

For Lines (26) and (27), the pre-tax factor is 1.0. For Lines (16) through (25), the average factor column is calculated as Column (6) divided by Column (3).

Column (6)

For Lines (4) through (8), (10) through (14) and (16) through (25), summary amounts are entered for Column (6) based on calculations done on an individual mortgage basis. Refer to the mortgage calculation worksheets (Figure 1) and (Figure 3). For Lines (1) through (9), (26) and (27), the RBC subtotal is multiplied by the factor to calculate Column (6).

Mortgage Worksheet A  
Other Than In Good Standing

(Figure 1)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(7a)	(9)	(10)
<u>Name / ID</u>	<u>Book/Adjusted Carrying Value</u>	<u>Involuntary Reserve Adjustment</u> §	<u>RBC Subtotal</u> £	<u>Cumulative Writedowns*</u>	<u>Category Factor</u>	<u>In Good Standing Factor</u>	<u>In Good Standing Category</u>	<u>Col (4) X Col (7)</u>	<u>RBC Requirement</u> ‡
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(7a)	(9)	(10)
All Mortgages Without Cumulative Writedowns				XXX	†	†	†		
All Mortgages With Cumulative Writedowns:					†	†	†		
(2)					†	†	†		
(3)					†	†	†		
(4)					†	†	†		
(5)					†	†	†		
(6)					†	†	†		
(7)					†	†	†		
(8)					†	†	†		
(9)					†	†	†		
(10)					†	†	†		
(11)					†	†	†		
(12)					†	†	†		
(13)					†	†	†		
(14)					†	†	†		
(15)					†	†	†		
<b>Total Mortgages</b>									

This worksheet is prepared on a loan-by-loan basis for each of the mortgage categories listed in (Figure 2) that are applicable. The Column (2), (3), (5) and (10) subtotals for each category are carried over and entered in Columns (1), (2), (3) and (6) of the Mortgages (LR004) in the risk-based capital formula. Small mortgages aggregated into one line on Schedule B can be treated as one mortgage on this worksheet. This worksheet will be available in the risk-based capital filing software.

† See (Figure 2) for factors to use in the calculation. The In Good Standing Factor will be based on the CM category developed in the company generated worksheet (Figure 3) and reported in Column 7a for Commercial or Farm Mortgages.

‡ The RBC Requirement column is calculated as the greater of Column (8) or Column (9), but not less than zero.

§ Involuntary reserves are reserves held as an offset to a particular asset that is clearly a troubled asset and are included on Page 3, Line 25 of the annual statement.

£ Column (4) is calculated as Column (2) less Column (3).

\* Cumulative writedowns include the total amount of writedowns, amounts non-admitted and involuntary reserves that have been taken or established with respect to a particular mortgage.

(Figure 2)

The mortgage factors are used in conjunction with the mortgage worksheets (Figures 1 and 3) to calculate the RBC Requirement for each individual mortgage. The factors are used in Columns (6), (7) and (7a) of the mortgage worksheet and are dependent on which of the 25 mortgage categories below the mortgage falls into. The following factors are used for each category of mortgages:

LR004 Line Number	<u>Mortgage Factors</u>		ME A Factor
	<u>In Good Standing</u>	<u>Category Standing</u>	
(1)	Residential Mortgages-Insured or Guaranteed	N/A ‡	N/A
(2)	Residential Mortgages-All Other	N/A ‡	N/A
(3)	Commercial Mortgages-Insured or Guaranteed	N/A ‡	N/A
(4)	Commercial Mortgages-All Other – Category CM1	N/A ‡	N/A ‡
(5)	Commercial Mortgages – Category CM2	N/A ‡	N/A ‡
(6)	Commercial Mortgages – Category CM3	N/A ‡	N/A ‡
(7)	Commercial Mortgages – Category CM4	N/A ‡	N/A ‡
(8)	Commercial Mortgages – Category CM5	N/A ‡	N/A ‡
(10)	Farm Mortgages – Category CM1	N/A ‡	N/A ‡
(11)	Farm Mortgages – Category CM2	N/A ‡	N/A ‡
(12)	Farm Mortgages – Category CM3	N/A ‡	N/A ‡
(13)	Farm Mortgages – Category CM4	N/A ‡	N/A ‡
(14)	Farm Mortgages – Category CM5	N/A ‡	N/A ‡
<u>90 Days Overdue, Not in Process of Foreclosure</u>			
(16)	Farm Mortgages – Category CM6	0.1800	N/A ‡
(17)	Residential Mortgages-Insured or Guaranteed	0.0027	1.0 N/A
(18)	Residential Mortgages-All Other	0.0140	1.0 N/A
(19)	Commercial Mortgages-Insured or Guaranteed	0.0027	1.0 N/A
(20)	Commercial Mortgages-All Other – Category CM6	0.1800	N/A ‡
<u>In Process of Foreclosure</u>			
(21)	Farm Mortgages – Category CM7	0.2300	N/A ‡
(22)	Residential Mortgages-Insured or Guaranteed	0.0054	1.0 N/A
(23)	Residential Mortgages-All Other	0.0270	1.0 N/A
(24)	Commercial Mortgages-Insured or Guaranteed	0.0054	1.0 N/A
(25)	Commercial Mortgages-All Other – Category CM7	0.2300	N/A ‡



Is negative amortization allowed? (34)	Amortization Type (35)	Rolling Average NOI (36)	RBC Debt Service (37)	RBC DCR (38)	Price Index at Valuation (39)	Contemporaneous Property Value (40)	RBC LTV (41)	CM Category (42)
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The Company should develop this worksheet on a loan-by-loan basis for each commercial mortgage – other or farm loan held in the current year for the National Council of Real Estate Investor Fiduciaries columns (7) and (9) subtotals for each category are to be carried over and entered in Columns (1) and (2) of Mortgage Lender (LR) (4) in the risk-based capital formula lines (4) – (8) and (10) – (14). Small mortgages aggregated into one line on Schedule B can be treated as one mortgage on this worksheet. Amounts in Columns (7), (9) and (42) are carried individually to Worksheet A columns (2), (3) and (7a) for loans that are 90 Days Past Due and In Process of Foreclosure. NOTE: This worksheet will not be available in the risk-based capital filing software and needs to be developed by the company.

#	Column Heading	Description / explanation of item
		Price Index current is the value on 9/30 of the current year for the National Council of Real Estate Investor Fiduciaries Price Index for the United States.
(1)	Name / ID	Identify each mortgage included as in the loan ledger.
(2)	Date of Origination	Enter the year and month that the loan was originated. If the loan has been restructured, extended, or otherwise re-written, enter that new date.
(3)	Maturity Date	Enter earlier of maturity of the loan or the date the lender can call the loan.
(4)	Property Type	Enter 1 for mortgages with an Office, Industrial, Retail or multifamily property as collateral. Enter 2 for mortgages with a Hotel and Specialty Commercial as property type. For properties that are multiple use, use the property type with the greatest square footage in the property. Enter 3 for Farm Loans.
(5)	Farm Sub-type	If Property Type=3 (Farm Loans), then you must enter a Sub Category: 1=Timber, 2=Farm and Ranch, 3=Agribusiness
(6)	Postal Code	Single Purpose, ≠ Agribusiness All Other (See Note 8.) Enter zip code for property for US. If multiple properties or zip codes, enter multiple codes. If foreign address, use postal code. If not available, N/A.
(7)	Book / Adjusted Carrying Value	Enter the value that the loan is carried at on the company ledger.
(8)	Statutory Write-downs	Enter the value of any write-downs taken on this loan due to permanent impairment.
(9)	Involuntary Reserve	Enter the amount of any involuntary reserve amount. Involuntary reserves are reserves that are held as an offset to a particular asset that is clearly a troubled asset and are included on Page 3 Line 25 of the Annual Statement.
(10)	Original Loan Balance?	Enter the loan balance at the time of origination of the loan.
(11)	Principal Balance to Co.	Enter the value of the loan balance owed by the borrower.
(12)	Balloon Payment at Maturity	Enter the amount of any balloon or principal payment due at maturity.
(13)	Principal Balance Total	Enter the total amount of mortgage outstanding including debt that is senior to or pari passu with the company's mortgage (Note 2)
(14)	NOI Second Prior	Enter the NOI from the year prior to the value in (15). See Note 1.



(15)	NOI Prior	Input	Enter the NOI from the prior year to the value in (16). See Note 1.
(16)	NOI	Input	Enter the Net Operating Income for the most recent 12 month fiscal period with an end-date between July 1 of the year prior to this report and June 30 of the year of this report. The NOI should be reported following the guidance of the Commercial Real Estate Finance Council Investor Reporting Profile v.5.0, Section VII. See Notes 1, 3, 4, 5, and 6 below.
(17)	Interest Rate	Input	Enter the annual interest rate at which the loan is accruing. -If the rate is floating, enter the larger of the current month rate or the average rate of interest for the prior 12 months, or -If the rate is fixed by the contract, not level over the year, but level for the next 12 months, use current rate. If the 'Total Loan Balance' consists of multiple loans, use an average loan interest rate weighted by principal balance.
(18)	Trailing 12 Month Debt Service	Input	Enter actual 12 months debt service for prior 12 months
(19)	Original Property Value	Input	Enter the Property Value at the time of origination of the loan. (see Note 9)
(20)	Property Value	Input	Property Value is the value of the Property at the time of loan origination, or at time of revaluation due to impairment underwriting, restructure, extension, or other re-writing. (see Note 9)
(21)	Year of Valuation	Input	Year of the valuation date defining the value in (20). Loans will be either the date of origination, or time of restructure, refinance, or other event which precipitated a new valuation.
(22)	Quarter of Valuation	Input	Calendar quarter of the valuation date defining the value in (20).
(23)	Credit Enhancement	Input	Enter the full dollar amount of any credit enhancement. (see Note 5)
(24)	Senior Debt?	Input	Enter yes if senior position, no if not. (see Note 7.)
(25)	Construction Loan?	Input	Enter 'Yes' if this is a construction loan. (see Note 4.)
(26)	Construction – not in balance?	Input	Enter 'Yes' if his is a construction loan that is not in balance. (see Note 4)
(27)	Construction – Issues?	Input	Enter 'Yes' if this is a construction loan with issues. (see Note 4)
(28)	Land Loan?	Input	Enter 'Yes' if this is a loan on non-income producing land. (see Note 6)
(29)	90 days past due?	Input	Enter 'Yes' if payments are 90 days past due.
(30)	In process of foreclosure?	Input	Enter 'Yes' if the loan is in process of foreclosure.
(31)	Is current payment lower than a payment based on the loan interest?	Input	Yes / No
(32)	Is loan interest a floating rate?	Input	Yes / No
(33)	If not floating, does loan reset during term?	Input	Yes / No - Some fixed rate loans define in the loan document a change to a new rate during the life of the loan, which may be a pre-determined rate or may be the then current market rate. Generally any such changes are less frequent than annual.
(34)	Is negative amortization allowed?	Input	Yes / No
(35)	Amortization type?	Input	1 = fully amortizing 2 = amortizing with balloon 3 = full I/O 4 = partial I/O, then amortizing

(36)	Rolling Average NOI	Computation	For 2013 – 100% of NOI For 2014 – 65% NOI + 35% NOI Prior For 2015 – 50% NOI + 30% NOI Prior + 20% NOI 2 <sup>nd</sup> Prior For loans originated or valued within the current year, use 100% NOI. For loans originated 2013 or later and within 2 years, use 65% NOI and 35% NOI Prior
(37)	RBC Debt Service	Computation	This amount is the amount of 12 monthly principal and interest payments required to amortize the Total Loan Balance (13) using a Standardized Amortization period of 300 months and the Annual Loan Interest Rate (17).
(38)	RBC DCR	Computation	This is the ratio of the Net Operating Income (36) divided by the RBC Debt Service (37) rounded down to 2 decimal places. See Note 3 below for special circumstances.
(39)	NCREIF Price Index at Valuation	Computation	The value of the NCREIF Price Index on the last day of the calendar quarter that includes the date defined in (21) and (22).
(40)	Contemporaneous Property Value	Computation	The Property Value (20) times the ratio (rounded to 4 decimal places) of the Price Index current to the Price Index at valuation (39).
(41)	RBC LTV	Computation	The Total Loan Value (13) divided by the Contemporaneous Value (40) rounded to the nearest percent.
(42)	CM Category	Computation	The risk category determined by applying the DCR (38) and the LTV (41) to the criteria in Figure (4), Figure (5) or Figure (6). See Notes 2, 3, 4, 5, and 6 below for special circumstances.

Note 1: Net Operating Income (NOI): The majority of commercial mortgage loans require the borrower to provide the lender with at least annual financial statements. The NOI would be determined at the RBC calculation date based on the most recent annual period from financial statements provided by the borrower and analyzed based on accepted industry standards. The most recent annual period is determined as follows:

- If the borrower reports on a calendar year basis, the statements for the calendar year ending December 31 of the year prior to the RBC calculation date will be used. For example, if the RBC calculation date is 12/31/2012, the most recent annual period is the calendar year that ends 12/31/2011.
- If the borrower reports on a fiscal year basis, the statements for the fiscal year that ends after June 30 of the prior calendar year and no later than June 30 of the year of the RBC calculation date will be used. For example, if the RBC calculation date is 2/31/2012, the most recent annual period is the fiscal year that ends after 6/30/2011 and no later than 6/30/2012.
- The foregoing time periods are used to provide sufficient time for the borrower to prepare the financial statements and provide them to the lender, and for the lender to calculate the NOI.

The accepted industry standards for determining NOI were developed by the Commercial Mortgage Standards Association now known as CRE Financial Council (CREFC). The company must develop the NOI using the standards provided by the CREFC Methodology for Analyzing and Reporting Property Income Statements v.5.1. ([www.crefc.org/irp](http://www.crefc.org/irp)). These standards are part of the CREFC Investor Reporting Package (CREFC IRP Section VII.) developed to support consistent reporting for commercial real estate loans owned by third party investors. This guidance would be a standardized basis for determining NOI for RBC.

The NOI will be adjusted to use a 3 year rolling average for the DSC calculation. For 2013, a single year of NOI will be used. For 2014, 2 years will be used, weighted 65% most recent year and 35% prior year. Thereafter, 3 years will be used weighted 50% most recent year, 30% prior year, and 20% 2<sup>nd</sup> prior year. This will apply when there is a history of NOI values. For new originations, including refinancing, the above schedule would apply by duration from origination. For the special circumstances listed below, the specific instructions below will produce the NOI to be used, without further averaging.

Note 2: The calculation of debt service coverage and loan to value will include all debt secured by the property that is (1) senior to or pari passu with the insurer's investment; and (2) any debt subordinate to the insurer's investment that is not (a) subject to an intercreditor, standstill or subordination agreement with the insurer provided that the agreement does not grant the subordinate debt holder any rights that would materially affect the rights of the insurer and provided that the subordinate debt holder is prohibited from taking any action against the borrower that would materially affect the insurer's priority lien position with respect to the property without the prior written consent of the insurer, or (b) subject to governing laws that provide that the insurer's investment holds a senior position to the subordinated debt holder and provide substantially similar protections to the insurer as in (2)(a) above.

Note 3: *Unavailable Operating Statements*

There are a variety of situations where the most recent annual period's operating statement may not be available to assist in determining NOI. These situations will occur in distinct categories and each category requires special consideration. The categories are:

1. Loans on owner occupied properties
  - a. For properties where the owner is the sole or primary tenant (50% or more of the rentable space), property level operating statements may not be available or meaningful. If the property is occupied and the loan, taxes and insurance are current, it will be acceptable to derive income and a reasonable estimate of expenses from the most recent appraisal or equivalent and additional known actual expenses (e.g. real estate taxes and insurance).
  - b. For properties where the owner is a minority tenant (49% or less of the rentable space), the owner-occupied space should be underwritten at the average rent per square foot of the arm's length tenant leases. This income estimate should be added to the other tenant leases and combined with a reasonable estimate of expenses based on the most recent appraisal or equivalent and additional known actual expenses (e.g., real estate taxes and insurance).
2. Borrower does not provide the annual operating statement
  - a. Borrower refuses to provide the annual operating statements
    - i. If the leases are in place and evidenced by estoppels and inspections, NOI would be derived from normalized underwriting in accordance with the CREFC Methodology for Analyzing and Reporting Property Income Statements.
    - ii. If there is evidence from inspection that the property is occupied, but there is no evidence of in place leases (e.g., lease documents or estoppels), NOI would be set equal to the lesser of calculated debt service (DC=1.0) or the NOI from the normalized underwriting.
    - iii. If there is no evidence from inspection that the property is occupied and no evidence of in place leases (e.g., lease documents or estoppels), assume NOI = \$0.
  - b. If the borrower does not have access to a complete previous year operating statement, determine NOI based on the CREFC guidelines for analyzing a partial year income statement.

Note 4: Construction loans:

Construction loans would be categorized as follows, based on a determination by the loan servicer whether the loan is in balance and whether construction issues exist:

- a. In balance, no construction issues: DC 1.0, LTV determined as usual
- b. Not in Balance, no construction issues: CM4
- c. Construction issues: CM5

A loan is "in balance" if the committed amount of the construction loan plus any lender held reserves and unfunded borrower equity is sufficient to cover the remaining costs of the development project, including debt service not anticipated to be paid from property operations.

A “*construction issue*” is a problem that may reasonably jeopardize the completion of the project. Examples of construction issues include the abandonment of construction and construction defects that are not being addressed.

**Note 5: Credit enhancements:** Where the loan payments are secured by a letter of credit from an investment grade financial institution, or an escrow account held at an investment grade financial institution, NOI less than the debt service may be increased by these amounts until it is equal to but not exceeding the debt service. These situations are typically short term in nature, and are intended to bridge the lease-up following renovation or loss of a major tenant.

**Note 6: Non-income-producing land:** NOI = \$0

**Note 7: Non-senior financing:**

- a. The company should first calculate DSC and LTV for non-senior financing using the standardized debt service and aggregate LTV of all financing pari passu and senior to the position held by the company.
- b. The non-senior piece should then be assigned to the next riskier RBC category. For example, if the DSC and LTV metrics determined in (a) indicate a category of CM2, the non-senior piece would be assigned to category CM3. However, it would not be required to assign a riskier category than CM5 if the loan is not at least 90-days delinquent or in foreclosure.

**Note 8: Definitions of each type of Farm Mortgage:**

**Timber:** A loan is classified as a timber loan if more than 50% of the collateral market value (land and timber) of the security is attributable to land supporting a timber crop that is or will be of commercial value.

**Farm & Ranch:** Farm and ranch land utilized in the production of agricultural commodities of all kinds, including grains, cotton, sugar, nuts, fruits, vegetables, forage crops and livestock of all kinds, including, beef, swine, poultry, fowl and fish. Loans included in this category are those in which agricultural land accounts for more than 50% of total collateral market value.

**Agribusiness Single Purpose:** Specialized collateral utilized in the production, further processing, adding value or manufacturing of an agricultural commodity or forest product. In order for a loan to be classified as such, the market value of the single-purpose (special use) collateral would account for more than 50% of total collateral market value.

This collateral is generally not multi-functional and can only be used for a specific production, manufacturing and/or processing function within a specific sub-sector of the food or agribusiness industry and whereby such assets are not strategically important in nature to the overall industry capacity. These assets can be shut down or replicated easily in other locations, or existing plants can be expanded to absorb shuttered capacity. The assets are not generally limited in nature by environmental or operational permits and/or regulatory requirements. An example would be a poultry processing plant located in the Southeast of the United States where there is excess capacity inherent to the industry and production capacity is easily obtainable.

Other loans included in this category are those collateralized by single purpose (special use) confinement livestock production facilities in which the special use facilities account for more than 50% of total collateral market value.

**Agribusiness All Other:** Multi-purpose collateral utilized in the production, further processing, adding value or manufacturing of an agricultural commodity or forest product. In order for a loan to be classified as such, the market value of any single use portion may not be greater than 50% of total collateral market value.

This collateral is multi-functional in nature, adaptable to other manufacturing, processing, or servicing food or agribusiness industries or sub-industries. Assets could also be very strategic in nature and not easily replaceable either due to cost, location, environmental permitting and/or government regulations. These assets may be single purpose in nature, but so vital to the industry capacity needs that they will be generally purchased by another like processing company or strategic or financial buyer. An example of these types of assets are strategically located and highly automated cold storage facilities whereby they can be used for dairy storage, distribution centers or converted into warehouse or other type uses. Another example may be a cheese processing plant that is strategically located within the dairy industry, limited permits, environmental restrictions that would limit added capacity, or high barriers to entry to build a like facility within the industry. For example, one of the largest cheese plants in the industry is located in California and it is not easily replicated within the cheese processing industry due to its location, capacity, costs, access to fluid milk supply and related feed and water, as well as highly regulated environmental and government restrictions.

Other loans included in this category are those in which more than 50% of the collateral market value is accounted for by chattel assets or other assets related to the business and financial operations of agribusinesses, including inventories, accounts, trade receivables, cash and brokerage accounts, machinery, equipment, livestock and other assets utilized for or generated by agribusiness operations.

Note 9. The origination value is developed during the underwriting process using appropriate appraisal standards.

- a. If values were received from a qualified third party appraiser, those values must be used.
- b. If the company performs internal valuations using standards comparable to an external appraisal, when the internal valuation may be used.

(Figure 4)

For Office, Industrial, Retail and Multi-family:

RISK CATEGORY	DSC LIMITS		LTV LIMITS
CM1	1.50 ≤ DSC	and	LTV < 85%
CM2	0.95 ≤ DSC < 1.50	and	LTV < 75%
CM2	1.15 ≤ DSC < 1.50	and	75% ≤ LTV < 100%
CM2	1.50 ≤ DSC	and	85% ≤ LTV < 100%
CM2	1.75 ≤ DSC	and	100% ≤ LTV
CM3	DSC < 0.95	and	LTV < 85%
CM3	0.95 ≤ DSC < 1.15	and	75% ≤ LTV < 100%
CM3	1.15 ≤ DSC < 1.75	and	100% ≤ LTV
CM4	DSC < 0.95	and	85% ≤ LTV < 105%
CM4	0.95 ≤ DSC < 1.15	and	100% ≤ LTV
CM5	DSC < 0.95	and	105% ≤ LTV
CM6	Loans 90 days past due but not yet in process of foreclosure		
CM7	Loans in process of foreclosure		

(Figure 5)

For Hotels and Specialty Commercial:

RISK CATEGORY	DSC LIMITS	LTV LIMITS
CM1	1.85 ≤ DSC	LTV < 60%
CM2	1.45 ≤ DSC < 1.85	LTV < 70%
CM2	1.85 ≤ DSC	60% ≤ LTV < 70%
CM3	0.90 ≤ DSC < 1.45	≤ LTV < 90%
CM3	1.45 ≤ DSC < 1.85	70% ≤ LTV < 90%
CM3	1.85 ≤ DSC	115% < LTV
CM4	DSC < 0.90	LTV < 90%
CM4	0.90 ≤ DSC < 1.10	90% ≤ LTV < 90%
CM4	1.10 ≤ DSC < 1.45	80% < LTV
CM5	1.10 ≤ DSC	90% < LTV

(Figure 6)

Farm Mortgages (Agricultural Loans):

	Timber	Farm & Home	Agribusiness Single Purpose	Agribusiness All Other
CM1	LTV ≤ 55%	LTV < 60%		LTV ≤ 60%
CM2	55% < LTV ≤ 65%	60% < LTV ≤ 70%	LTV ≤ 60%	60% < LTV ≤ 70%
CM3	65% < LTV ≤ 85%	70% < LTV ≤ 90%	60% < LTV ≤ 70%	70% < LTV ≤ 90%
CM4	85% < LTV ≤ 105%	90% < LTV ≤ 110%	70% < LTV ≤ 90%	90% < LTV ≤ 110%
CM5	105% < LTV	110% < LTV	90% < LTV	110% < LTV

## UNAFFILIATED PREFERRED AND COMMON STOCK

LR005

### *Basis of Factors*

#### Unaffiliated Preferred Stock

Starting with year-end 2004 RBC, the preferred stock factors were changed to be the same as for bonds.

#### Unaffiliated Common Stock

Non-government money market mutual funds are more like cash than common stock; therefore, it is appropriate to use the same factor as for cash. Federal Home Loan Bank Stock has characteristics more like a fixed-income instrument rather than common stock. A 1.1 percent pre-tax factor was chosen. The factor for other unaffiliated common stock is based on studies conducted at two large life insurance companies. Both of these studies focused on well-diversified portfolios with characteristics similar to the Standard and Poor's 500 and indicate that a 30 percent pre-tax factor is needed to provide capital to cover approximately 95 percent of the greatest losses in common stock value over a two-year future period. This factor assumes capital losses are unrealized and not subject to favorable tax treatment at the time loss in fair value occurs.

Two adjustments are made to the 30 percent pre-tax factor to account for differences between the insurer's portfolio and the Standard and Poor's 500: first, the factor for publicly traded unaffiliated common stock is adjusted up or down by the weighted average beta of the insurer's portfolio, subject to a maximum of 45 percent and a minimum of 22.5 percent; and second, a common stock concentration component is calculated, adding an additional requirement equal to 50 percent of the beta adjusted basic requirement for the five largest holdings of common stock in the insurer's portfolio.

### *Specific Instructions for Application of the Formula*

#### Lines (1) through (6)

Column (1) amounts are from the Asset Valuation Reserve Default Component, Line 30, Column 1, Lines 10 through 15 of the annual statement. Since affiliated amounts are included for affiliated companies without an AVR in the Asset Valuation Reserve Default Component, Lines 10 through 15, these affiliated amounts should be deducted in Column (2). Affiliated companies with an AVR are reported on the Asset Valuation Reserve Default Component, Line 16 and should not be included in Column (2).

#### Line (7)

Column (1) should equal Annual Statement Assets, Page 2, Column 3, Line 2.1 less Asset Valuation Reserve Default Component, Column 1, Line 16. Column (2) should equal Schedule D Summary by Country, Column 1, Line 18 less Asset Valuation Reserve Default Component, Column 1, Line 16.

#### Line (21)

Amount should reflect any non-admitted unaffiliated common stock that was included in the book/adjusted carrying value of Schedule D Summary by Country, Line 25, Column 1 (Line (19) of this page).

Line (22)

Federal Home Loan Bank common stock reported on Schedule D, Part 2, Section 2 of the annual statement should be reflected on this line.

Line (24)

The pre-tax factor for other unaffiliated common stock should be equal to 30 percent adjusted in the case of publicly traded stock by the weighted average beta for the insurer's portfolio of common stock, subject to a minimum factor of 22.5 percent and a maximum factor of 45 percent. The calculation of the beta adjustment should follow the procedures laid out for the similar adjustment in the asset valuation reserve calculation. Insurers that choose not to calculate a beta for their portfolio should use the maximum factor of 45 percent.

Line (25)

Column (1) should equal Annual Statement Schedule D Summary by Country, Column 1, Line 25 less Schedule D Summary by Country, Column 1, Line 24 less line (21).

Lines (27) and (28)

To the extent that a modco or funds withheld transaction is backed by common stock included in Line (25) of the ceding company's RBC calculation, the ceding company's credit and assuming reinsurer's charge should include a beta adjustment that is calculated in a manner consistent with the **line (25)** calculation of the ceding insurer.

*Basis of Factors*

Separate Accounts with Guarantees

Guaranteed separate accounts are divided into two categories: indexed and non-indexed.

Guaranteed indexed separate accounts may invest using various approaches that are grouped into Class I or Class II strategies. Additional information on these types of accounts is provided in the "AAA Report on Separate Accounts that Guarantee an Index" adopted by the NAIC Life Risk Based Capital Working Group in New York, NY, June 2003.

Indexed Class I Strategies:

A company using a Class I strategy invests separate account assets in the same way it would for its general account. If the guaranteed index obligation is not similar in nature to a traditional general account fixed annuity, the company may transform the financial characteristics of the obligation, using an overlay strategy, to those characteristics that are similar to a traditional general account fixed annuity (e.g., the company swaps the guaranteed index return to an interest rate). General account C-1 factors apply to assets invested using a Class I strategy. If a company uses an overlay strategy, there is an additional charge for operational and other residual financial risk attributable to the use of the overlay strategy. Also, a Class I strategy is subject to a C-3 interest rate risk charge as described in LR027, Interest Rate Risk and Market Risk.

**SEPARATE ACCOUNTS**

LR006



## Indexed Class II Strategies:

A company using a Class II strategy does not follow a traditional general account investment strategy when investing deposits. Under this strategy, the company is buying securities that are either included in the underlying index or are highly correlated with these underlying securities. Alternatively, a mix of strategies that are market neutral in aggregate or that are not normally associated with general account investing could form the core investment strategy. This strategy may be combined with an overlay strategy that transforms the returns to the guaranteed index. The RBC factor derivation is described below. The factor determined in the calculation includes both C-1 and C-3 risk. A spreadsheet at [http://www.naic.org/documents/committees\\_e\\_capad\\_lrbc\\_rbc\\_june03.xls](http://www.naic.org/documents/committees_e_capad_lrbc_rbc_june03.xls) is available to do the calculation.

## Non-Indexed Separate Accounts:

Non-indexed separate accounts with guarantees are subject to the risk of the underlying assets; therefore, 100 percent of the calculated risk-based capital of these accounts is appropriate. Contracts reserved at book value are reported for the RBC calculation exactly as if they were general account funded.

For contracts valued using the fair value of assets and the fair value (at current interest rates) of liabilities, risk-based capital is calculated as the excess of the regular C-1 and C-3 standards over the applicable reserve margins. New York Regulation 128 and California CIC 10500 are two examples of state valuation laws regulating such business. The reserve margin is calculated as the excess of the book/adjusted carrying value of the assets supporting the reserve (including any supplemental general account reserves) over the present value of the guaranteed payments. The present value of guaranteed payments is calculated using the expected net portfolio rate of return, and is not to exceed 105 percent of U.S. Treasury spot rates. The excess, if any, of the asset value over the present value of guaranteed payments is first applied to reduce the C-3 requirement. The remainder is used to reduce the C-1 requirement. The risk-based capital amount to be entered in the worksheet is the C-1 and C-3 requirements for these contracts after these credits. Excess margins may not be applied to contracts for which these amounts are not available.

## Synthetic GICs

Synthetic GICs are contracts with provisions similar to separate accounts with guarantees, except that the insurance company does not own the assets. For business of this type, the C-1 and C-3 risk-based capital is determined to be the same as if the insurance company owned the assets and provided the same guarantees as in a guaranteed separate account.

## Surplus in Non-Guaranteed Separate Accounts

There are a variety of reasons why surplus appears in non-guaranteed separate accounts; e.g., remaining seed money, or as a margin for certain risks assumed by the insurance company. The risk-based capital for such separate accounts is 11 percent of surplus held in such separate accounts before taxes plus 11 percent of the Commissioners Reserve Valuation Method (CRVM) or the Commissioners Annuity Reserve Valuation Method (CARVM) expense allowance transfers before taxes if the current surrender charge is based on the fund balance. If the current surrender charge is based on fund commission, then the risk-based capital charge for the expense allowance component is 2.4 percent of the CRVM or CARVM expense allowance before taxes for each contract for which the fund balance exceeds the sum of the premiums less withdrawals; otherwise, it is an 11 percent factor pre-tax.

*Specific Instructions for Application of the Formula*

Line (1)

The amounts reported for Guaranteed Indexed Separate Accounts must be calculated manually.

Component 1 is calculated by applying the NAIC RBC C-1 factors to the assets supporting the Class I indexed separate accounts. However, this calculation does not include the size factor for bonds, the experience adjustments for mortgages or the concentration factor.

Component 2 is calculated if an overlay strategy is used with all or a portion of the Class I indexed separate accounts. This is calculated as the product of 0.004 times that portion of the assets using an overlay strategy.

Component 3 is the amount of RBC calculated for Class II indexed separate accounts using the procedure described below.

Class II indexed separate accounts base the RBC requirement on a factor from a prescribed calculation table as described below. The factor times the net separate account assets is the RBC Requirement.

1. Determine the series  $\{X(t)\}$  as actual net tracking error (fund performance minus guaranteed performance) for the most recent 60 months.
2. Convert each value  $X(t)$  to a value  $Y(t)$  using the formula,  $Y = (X - m) * K * (1 + .15)^{24 * m}$

Where  $m$  is the mean of the series  $\{X(t)\}$  and  $K$  is an adjustment factor to account for the variance of the distribution  $Y$  including serial correlation. More information on the  $K$  adjustment factor is described in the "AAA Report on Separate Accounts That Guarantee an Index" and is calculated in the associated supporting spreadsheet at [http://www.naic.org/documents/committees\\_e\\_capad\\_lrbc\\_rbc\\_june03.xls](http://www.naic.org/documents/committees_e_capad_lrbc_rbc_june03.xls). Correlation is set to 0 if the corresponding serial correlation is less than 0.20. The sample standard deviation in the terms above is increased 15 percent to allow for sampling error in the data series and to allow for the possibility of a shortfall during the first two years. The sample standard deviation is constrained so that it is not less than 50 percent or greater than 150 percent of the standard deviation calculated without correlation.

3. Order the series  $\{Y(t)\}$  in ascending order. Set any positive values to zero. Average the first six values. Change the sign and the result is the 90 CTE capital for C-1 and C-3.
4. Where there is less than 30 months of tracking error history, the capital charge for C-1 and C-3 is 4 percent. If there is 30 months or more of history, the 4 percent factor is gradually phased out. For 30 months, actual experience is weighted by the square root of 30/60 and the 4 percent factor is weighted by one minus the square root of 30/60. For 31 months, experience is weighted by the square root of 31/60 and the 4 percent factor is weighted by one minus the square root of 31/60. This pattern continues up to month 59 when experience is weighted by the square root of 59/60 and the 4 percent factor is weighted by one minus the square root of 59/60.
5. The actual experience-based calculation, under step (3) above, needs to be adjusted when there are fewer than 60 months of experience to gauge the 90 CTE. If the number of months divided by 10 is an integral number  $n$ , take the average of the first  $n$  values after the series is put in ascending order with positive values set to zero. If  $n$  is non-integral, then set  $n$  to the next highest integral number and interpolate, using each average of the first  $n-1$  and  $n$  values after the series is set in ascending order and positive values are set to zero. For example, if there are 37 values, the idea is to identify the worst 3.7 of them. This is done by interpolating, taking 30 percent of the average of the first three values and 70 percent of the average of the first four values.
6. The resulting RBC factor is subject to a minimum of 0.4 percent.

Lines (2) and (3)

The amounts to be reported for non-indexed separate accounts with guarantees [Line (2) and Line (3), Column (2)] must be calculated manually. Risk-based capital for these amounts should be calculated using the life company formula; however, the RBC calculation for non-indexed separate accounts should not include the size factor for bonds, the experience adjustment for mortgages or the concentration factor.

Line (11)

Report the CRVM or CARVM expense allowance transfers where the current surrender charge is based on the fund balance of all other expense allowance transfers. Exclude expense allowance transfers for contracts subject to the LR027 Line (37) market risk requirements.

Line (12)

Report the CRVM or CARVM expense allowance transfers where the current surrender charge is based on fund contributions for each contract for which the fund balance exceeds the sum of the premiums less withdrawals. Exclude expense allowance transfers for contracts subject to the LR027 Line (37) market risk requirements.

Line (14)

The total assets of separate accounts with guarantees and separate accounts without guarantees of the formula should be equal to total separate account assets on Page 2, Line 27, Column 3 of the annual statement.

**REAL ESTATE**

LR007

*Basis of Factors*

Companies that have developed their own risk-based capital factors for real estate have used a range of factors from 5 percent to 20 percent. One study indicated real estate volatility is about 60 percent of common stock, suggesting a factor in the range of 18 percent, resulting in a full tax effect for losses, a pre-tax factor of 15 percent was chosen. Foreclosed real estate would carry a somewhat higher risk at 23 percent pre-tax. Schedule BA real estate also has a 23 percent factor pre-tax because of the additional risks inherent in owning real estate through a partnership. The pre-tax factors were developed by dividing the post-tax factor by 0.65 (0.65 is calculated by taking 1.0 less 0.35). **The pre-tax factors are not changing for 2018 due to tax reform.**

Encumbrances have been included in the real estate base since the value of the property subject to loss would include encumbrances. Encumbrances receive a factor of 12 percent pre-tax for real estate encumbrances not in foreclosure and 20 percent pre-tax for real estate encumbrances in foreclosure and encumbrances on Schedule BA real estate.

All references to involuntary reserves as it relates to real estate are intended to comply with the codification of statutory accounting principles.

*Specific Instructions for Application of the Formula*

Column (1)

Calculations are done on an individual property or joint venture basis and then the summary amounts are entered in this column for each class of real estate investment. Refer to the real estate calculation worksheet (Figure 7) for how the individual property or joint venture calculations are completed.

- Line (1) should equal Page 2, Column 3, Line 4.1.
- Line (2) should equal Page 2, inside amount, Line 4.1.
- Line (4) should equal AVR Equity Component Column 1 Line 20.
- Line (5) should equal AVR Equity Component Column 3 Line 20.
- Line (7) should equal AVR Equity Component Column 1 Line 19.
- Line (8) should equal AVR Equity Component Column 3 Line 19.
- Line (14) should equal Schedule BA, Part 1, Column 12, Line 1799999 plus Line 1899999, in part.
- Line (15) should equal Schedule BA, Part 1, Column 12, Line 1799999 plus Line 1899999, in part.
- Line (17) should equal AVR Equity Component Column 1 Line 75.
- Line (18) should equal AVR Equity Component Column 1 Line 76.
- Line (19) should equal AVR Equity Component Column 1 Line 77.
- Line (20) should equal AVR Equity Component Column 1 Line 78.
- Line (21) should equal AVR Equity Component Column 1 Line 79.

Low income housing tax credit investments are reported in Column (1) in accordance with *SAFARI 93—Low Income Housing Tax Credit Property Investments*.

Column (2)

The average factor column is calculated as Column (3) divided by Column (1)

Column (3)

Summary amounts are entered for Column (3) based on calculations done on an individual property or joint venture basis. Refer to Column (8) of the real estate calculation worksheet (Figure 7).

Line (17)

Guaranteed federal low-income housing tax credit (LIHTC) investments are to be included in Line (17). There must be an all-inclusive guarantee from an ARO-rated entity that guarantees the yield on the investment.

Line (18)

Non-guaranteed federal LIHTC investments with the following risk mitigation factors are to be included in Line (18):

- a) A level of leverage below 50 percent. For a LIHTC fund, the level of leverage is measured at the fund level.
- b) There is a tax credit guarantee agreement from general partner or managing member. This agreement requires the general partner or managing member to reimburse investors for any shortfalls in tax credits due to error of compliance, for the life of the partnership. For an LIHTC fund, a tax credit guarantee is required from the developers of the lower-tier LIHTC properties to the upper-tier partnership.

Line (19)

State LIHTC investments that at a minimum meet the federal requirements for guaranteed LIHTC investments.

Line (20)  
State LIHTC investments that at a minimum meet the federal requirements for non-guaranteed LIHTC investments.

Line (21)  
State and federal LIHTC investments that do not meet the requirements of lines (17) through (20) would be reported on Line (21).

Not for Distribution

Real Estate Worksheet

(Figure 7)

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Description	Book/Adjusted Carrying Value	Encumbrances	Book/Adjusted Carrying Value Factor	Encumbrances Factor	Book/Adjusted Carrying Value Requirement†	Encumbrances Requirement§	RBC Requirement*
<u>Company Occupied Real Estate</u>							
(1) All Properties Without Encumbrances†		XXX	0.150	XXX		XXX	
(2) All Properties With Encumbrances:			0.150	0.120			
(3)			0.150				
(199) Total Company Occupied Real Estate							
<u>Foreclosed Real Estate</u>							
(1) All Properties Without Encumbrances†		XXX	0.230	XXX		XXX	
(2) All Properties With Encumbrances:			0.230	0.200			
(3)			0.230	0.200			
(299) Total Foreclosed Real Estate							
<u>Investment Real Estate</u>							
(1) All Properties Without Encumbrances†		XXX	0.150	XXX		XXX	
(2) All Properties With Encumbrances:			0.150	0.120			
(3)			0.150	0.120			
(399) Total Investment Real Estate							
Total Real Estate (Line (199) + (499) Line (299) + Line (399) )							
<u>Schedule BA Real Estate</u>							
(1) All Joint Ventures w/o Encumbrances†		XXX	0.230	XXX		XXX	
(2) All Properties With Encumbrances:			0.230	0.200			
(3)			0.230	0.200			
(899) Total Schedule BA Real Estate							

† For each category, Line (1) should also exclude properties of joint ventures that have a negative book/adjusted carrying value. These should be listed individually.

‡ Column (6) is calculated as Column (2) multiplied by Column (4).

§ Column (7) is calculated as Column (3) multiplied by Column (5).

\* Column (8) is calculated as the sum of Column (6) plus Column (7), but not less than zero or more than Column (2).

**OTHER LONG-TERM ASSETS**  
LR008

*Basis of Factors*

Recognizing the diverse nature of Schedule BA assets, the RBC is calculated by assigning different risk factors according to the different type of assets. Assets with underlying characteristics of bonds and preferred stocks designated by the NAIC Capital Markets and Investment Analysis Office have different factors according to the NAIC assigned classification. Unrated fixed-income securities will be treated the same as Other Schedule BA Assets and assessed a 30 percent non-tax charge. Rated surplus and capital notes have the same factors applied as Schedule BA assets with the characteristics of preferred stock. Where it is not possible to determine the RBC classification of an asset, a 30 percent pre-tax factor is applied.

*Specific Instructions for Application of the Formula*

Line (49.1)

Schedule BA affiliated common stock – all other should be included in C-1cs. Specifically this means that all subsidiaries with an affiliate code 13 in the current life-based framework and “holding company in excess of indirect subsidiaries” or subsidiaries with affiliate code 7 are to be included in C-1cs.

Line (57)

Total Schedule BA assets [LR008 Other Long-Term Assets Column (1) Line (57) plus LR007 Real Estate Column (1) Line (14) plus Lines (17) through Line (21) plus LR009 Schedule BA Mortgages Column (1) Line (20)] should equal the total Schedule BA assets reported in the Annual Statement Page 2, Column 3, Line 8.

## SCHEDULE BA MORTGAGES

LR009

### *Basis of Factors*

For Affiliated Mortgages, Line 10999999, the factors used are the same as for commercial mortgages and are defined in Figure 9. Risk categories and factors are determined using a company generated worksheet for In Good Standing (Figure 10) and (Figure 8) for Past Due or In Process of Foreclosure.

For Unaffiliated Mortgages, Line 09999999, the factors used are the same as for commercial mortgages and are defined in Figure 9. Risk categories and factors are determined as follows:

- 1) For Investments that contain covenants whereby factors of maximum LTV and minimum DSC, or equivalent thresholds must be complied with and it can be determined that the Investments are in compliance, these investments would use the process for directly held mortgages using the maximum LTV and minimum DSC using the company generated worksheet and transferred to LR009 line (2) for mortgages with covenants that are in compliance.
- 2) Investments that are defeased with government securities will be assigned to CM1.
- 3) Other investments comprised primarily of senior debt will be assigned to CM2.
- 4) All other investments in this category will be assigned CM3. This would include assets such as a mortgage fund that invests in mezzanine or sub debt, or investments that cannot be determined to be in compliance with the covenants.

### *Specific Instructions for Application of the Formula*

#### Column (1)

Except for Line (1), calculations are done on an individual mortgage basis and then the summary amounts are entered in this column for each class of mortgage investment. Refer to the Schedule BA mortgage calculation worksheets (Figure 8) and (Figure 10) for how the individual mortgage calculations are completed. Line (20) should equal Schedule BA Part 1, Column 12, Line 09999999 plus Line 10999999.

#### Column (2)

Companies are permitted to reduce the book/adjusted carrying value of mortgage loans reported in Schedule BA by any involuntary reserves. Involuntary reserves are equivalent to valuation allowances specified in the codification of statutory accounting principles. They are non-AVR reserves reported on Annual Statement Page 3, Line 25. These reserves are held as an offset for a particular troubled Schedule BA mortgage loan that would be required to be written down if the impairment was permanent.

#### Column (3)

Column (3) is calculated as the net of Column (1) less Column (2).

#### Column (4)

For Lines (12) through (14) and Lines (16) through (18), summary amounts of the individual mortgage calculations are entered in this column for each class of mortgage investments. Refer to the Schedule BA mortgage calculation worksheets (Figure 8).

#### Column (5)

For Line (1), the pre-tax factor is 0.0014.

See Figure 9 for computation of appropriate factors.



Column (6)

For Lines (1) through (10) the RBC subtotal is multiplied by the average factor to calculate Column (6). The categories and subtotals will be determined in the company developed worksheet Figure (10).

For Lines (12) through (14) and Lines (16) through (18), summary amounts are entered for Column (6) based on calculations done on an individual mortgage basis. Refer to the Schedule BA mortgage calculation worksheet (Figure 8).

Not for Distribution

(Figure 8)

Schedule BA Mortgage Worksheet A  
Other Than In Good Standing

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(7a)	(8)	(9)	(10)
Name / ID	Book/Adjusted Carrying Value	Involuntary Reserve Adjustment §	RBC Subtotal £	Cumulative Writedowns *	Category Factor	In Good Standing Factor	In Good Standing Category	Col (6) X Col (7) X Col (5) X Col (5)	Col (4) X Col (7)	RBC Requirement †
	<u>90 Days Overdue – Insured or Guaranteed</u>				†	†	†			
(1)	All Mortgages Without Cumulative Writedowns			XXX	0.0027	0.0014	N/A			
(2)	With Cumulative Writedowns:				0.0027	0.0014	N/A			
(3)	Total				0.0027	0.0014	N/A			
	<u>90 Days Overdue – Unaffiliated</u>									
(1)	All Mortgages Without Cumulative Writedowns			XXX	0.1800	†	†			
(2)	With Cumulative Writedowns:				0.1800	†	†			
(3)	Total				0.1800	†	†			
	<u>90 Days Overdue – Affiliated</u>									
(1)	All Mortgages Without Cumulative Writedowns			XXX	0.1800	†	†			
(2)	With Cumulative Writedowns:				0.1800	†	†			
(3)	Total				0.1800	†	†			
	<u>In Process of Foreclosure – Insured or Guaranteed</u>									
(1)	All Mortgages			XXX	0.0054	0.0014	N/A			



\* Cumulative writedowns include the total amount of writedowns, amounts non-admitted and involuntary reserves that have been taken or established with respect to a particular mortgage.

(Figure 9)

The mortgage factors are used in conjunction with the mortgage worksheets (Figures 8 and 10) to calculate the RBC Requirement for each individual mortgage in an affiliated structure. The factors are used in Columns (6) and (7) of the mortgage worksheet (Figure 8) and are dependent on which of the 14 mortgage categories below the mortgage falls into. Residential Mortgages and Commercial Mortgages Insured or Guaranteed are classified as Category CMI. The following factors are used for each category of mortgages:

LR009 Line Number	Schedule BA Mortgage Factors	Category Factor†	In Good Standing Factor
(3)	Unaffiliated – defeased with government securities	N/A‡	0.0090
(4)	Unaffiliated investments comprised primarily of Senior Debt	N/A‡	0.0175
(5)	Unaffiliated – all other unaffiliated mortgages	N/A‡	0.0300
(6)	Affiliated Mortgages – Category CMI	N/A‡	0.0090
(7)	Affiliated Mortgages – Category CM2	N/A‡	0.0175
(8)	Affiliated Mortgages – Category CM3	N/A‡	0.0300
(9)	Affiliated Mortgages – Category CM4	N/A‡	0.0500
(10)	Affiliated Mortgages – Category CM5	N/A‡	0.0750
(12)	90 Days Past Due - Insured or Guaranteed	0.0027	.0014
(13)	90 Days Past Due - Unaffiliated	0.1800	‡
(14)	90 Days Past Due – Affiliated	0.1800	‡
(16)	In Process of Foreclosure - Insured or Guaranteed	0.0054	.0014
(17)	In Process of Foreclosure - Unaffiliated	0.2300	‡
(18)	In Process of Foreclosure – Affiliated	0.2300	‡

† The category factor is a factor used for a particular category of mortgage loans that are not in good standing.

‡ The RBC Requirement for mortgage loans in good standing are not calculated on Figure (8). These requirements are calculated on the company's Schedule BA Mortgage Worksheet and transferred to LR009 Schedule BA Mortgage Loans Lines (12) – (14) and (16) – (18).



Primarily Senior positions? (43)	Rolling Average NOI (44)	RBC DCR (45)	Price Index at Valuation (46)	Contemporaneous Property Value (47)	RBC - Loan to Value Ratio (48)	RBC Risk Category (49)
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This worksheet is prepared on a loan-by-loan basis for each commercial mortgage – other or farm loan held in Schedule BA. The column (7) and (9) subtotals for each category are carried over and entered in Columns (1) and (2) of the Mortgages (LR009) in the risk-based capital formula in (2) and (10). Small mortgages aggregated into one line on Schedule BA can be treated as one mortgage on this worksheet. Amounts in Columns (7), (9) and (49) are carried individually to Worksheet A columns (2), (3) and (7a) for loans that are 90 Days Past Due and In Process of Foreclosure. NOTE: This worksheet will not be available in the risk-based capital filing software and must be developed by the Company.

Column #	Heading	Description / Explanation of Item
(1)	Name / ID	Price Index current is the value on 9/30 of the current year for the National Council of Real Estate Investor Fiduciaries Price Index for the United States.
(2)	Date of Origination	Identify each mortgage included as in the loan's closing documents. Enter the year and month that the loan was originated. If the loan has been restructured, extended, or otherwise re-written, enter that new date.
(3)	Maturity Date	Enter earlier of maturity of the loan or the date the lender can call the loan.
(4)	Property Type	Enter 1 for mortgages with an Office, Industrial, Retail or multifamily property as collateral. Enter 2 for mortgages with a Hotel and Specialty Commercial as property type. For properties that are multiple use, use the property type with the greatest square footage in the property. Enter 3 for Farm Loans.
(5)	Farm Sub-type	Sub-category – If Property Type=3 (Farm Loans), then you must enter a Sub Category: 1=Timber, 2=Farm and Ranch, 3=Agribusiness Single Purpose, 4=Agribusiness All Other. (See Note 8)
(6)	Postal Code	Enter zip code for property for US properties. If multiple properties or zip codes, enter multiple codes. If foreign, enter postal code. If not available, N/A.
(7)	Book / Adjusted Carrying Value	Enter the value that the loan is carried at on the company ledger.
(8)	Statutory Writedowns	Enter the value of any writedowns taken on this loan due to permanent impairment.
(9)	Involuntary Reserve	Enter the amount of any involuntary reserve amount. Involuntary reserves are reserves that are held as an offset to a particular asset that is clearly a troubled asset and are included on Page 3 Line 25 of the Annual Statement.
(10)	Original Loan Balance?	Enter the loan balance at the time of origination of the loan.
(11)	Principal Balance to Co.	Enter the value of the loan balance owed by the borrower.
(12)	Balloon Payment at Maturity	Enter the amount of any balloon or principal payment due at maturity.
(13)	Principal Balance Total	Enter the total amount of mortgage outstanding that is senior to or pari passu with the company's mortgage
(14)	NOI Second Prior	Enter the NOI from the year prior to the value in (15). See Note 1.
(15)	NOI Prior	Enter the NOI from the prior year to the value in (16). See Note 1.

(16)	NOI	Input	Enter the Net Operating Income for the most recent 12 month fiscal period with an end-date between July 1 of the year prior to this report and June 30 of the year of this report. The NOI should be reported following the guidance of the Commercial Real Estate Finance Council Investor Reporting Profile v.5.0. Section VII. See Notes 1, 2, 3, 4, 5 and 6 below.
(17)	Interest Rate	Input	Enter the annual interest rate at which the loan is accruing. -If the rate is floating, enter the larger of the current month rate or the average rate of interest for the prior 12 months, or -If the rate is fixed by the contract, not level over the year, but level for the next 12 months, use current rate. If the 'Total Loan Balance' consists of multiple loans, use an average loan interest rate weighted by principal balance.
(18)	Trailing 12 Month Debt Service	Input	Enter actual 12 months debt service for prior 12 months.
(19)	Original Property Value	Input	Enter the loan balance at the time of origination of the loan.
(20)	Property Value	Input	The value of the Property at time of loan origination—or at time of revaluation due to impairment underwriting, restructure, extension, or other re-writing.
(21)	Year of Valuation	Input	Year of the valuation date defining the value in (20). This will be either the date of origination, or time of restructure, refinance, or other event which precipitates a new valuation.
(22)	Quarter of Valuation	Input	Calendar quarter of the valuation date defining the value in (20).
(23)	Credit Enhancement	Input	Enter the full dollar amount of any credit enhancement. (see Note 5)
(24)	Senior Loan?	Input	Enter 'Yes' if senior position, 'No' if not. (see Note 7)
(25)	Construction Loan?	Input	Enter 'Yes' if this is a construction loan. (see Note 4)
(26)	Construction – not in balance	Input	Enter 'Yes' if this is a construction loan that is not in balance. (see Note 4)
(27)	Construction – Issues	Input	Enter 'Yes' if this is a construction loan with issues. (see Note 4)
(28)	Land Loan?	Input	Enter 'Yes' if this is a loan on non-income producing land. (see Note 6)
(29)	90 days past due?	Input	Enter 'Yes' if payments are 90 days past due.
(30)	In process of foreclosure?	Input	Enter 'Yes' if the loan is in process of foreclosure.
(31)	Is current payment lower than a payment based on the Loan Interest?	Input	Yes / No
(32)	Is loan interest a floating rate?	Input	Yes / No
(33)	If not floating, does loan reset during term?	Input	Yes / No – Some fixed rate loans define in the loan document a change to a new rate during the life of the loan, which may be a predetermined rate or may be the then current market rate. Generally any such changes are less frequent than annual.
(34)	Is negative amortization allowed?	Input	Yes / No
(35)	Amortization type?	Input	1 = fully amortizing 2 = amortizing with balloon 3 = full I/O 4 = partial I/O, then amortizing
(36)	Schedule BA mortgage?	Input	Yes / No

(37)	Affiliated Mortgage?	Input	Yes / No
(38)	Covenant Max LTV	Input	For mortgage investments with covenants, what is the maximum LTV allowed?
(39)	Covenant Min DCR	Input	For mortgage investments with covenants, what is the minimum DCR allowed?
(40)	Covenants in compliance?	Input	Yes / No – for mortgage investments with covenants, is the investment in compliance with the covenants?
(41)	Defeased with government securities	Input	Yes / No – has the mortgage loan been defeased using government securities?
(42)	Primarily Senior Mortgages	Input	Is the mortgage pool primarily senior mortgage instruments? $\blacktriangleright$ If yes, assign to CM2}
(43)	Rolling Average NOI	Computation	For 2012 – 100% of NOI For 2014 – 65% NOI + 35% NOI Prior For 2015 – 50% NOI + 30% NOI Prior + 20% NOI 2 <sup>nd</sup> Prior For loans originated or valued within the current year, use 100% NOI. For loans originated 2012 or later and within 2 years prior use 70% NOI and 35% NOI Prior.
(44)	RBC Debt Service	Computation	RBC Debt Service Amount is the amount of 12 monthly principal and interest payments required to amortize the Total Loan Balance (13) using a Standardized Amortization period of 300 months and the Annual Loan Interest Rate (17).
(45)	RBC - DCR	Computation	Debt Coverage Ratio is the ratio of the Net Operating Income (43) divided by the RBC Debt Service (44) rounded down to 2 decimal places. See Note 3 below for special circumstances. For loan pools with covenants, this will be the minimum DCR by covenant.
(46)	NCREIF Index at Valuation	Computation	Price index is the value of the NCREIF Price Index on the last day of the calendar quarter that includes the date defined in (21) and (22).
(47)	Contemporaneous Property Value	Computation	Contemporaneous Value is the Property Value (11) times the ratio (rounded to 4 decimal places) of the Price Index current to the Price Index (46).
(48)	RBC - LTV	Computation	The Loan to Value Ratio is the Loan Value (13) divided by the Contemporaneous Value (47) rounded to the nearest percent. For Loan Pools with covenants, this will be the max LTV by covenant.
(49)	CM Category	Computation	Commercial Mortgage Risk category is the risk category determined by applying the DCR (45) and the LTV (48) to the criteria in Figure (11), Figure (12) or Figure (13). See Notes 2, 3, 4, 5, and 6 below for special circumstances. If (41) = yes, CM1. If (42) = yes, CM2. If no LTV and DCR, and (41) = no and (42) = no, CM3.

Note 1: Net Operating Income (NOI): The majority of commercial mortgage loans require the borrower to provide the lender with at least annual financial statements. The NOI would be determined at the RBC calculation date based on the most recent annual period from financial statements provided by the borrower and analyzed based on accepted industry standards. The most recent annual period is determined as follows:

- If the borrower reports on a calendar year basis, the statements for the calendar year ending December 31 of the year prior to the RBC calculation date will be used. For example, if the RBC calculation date is 12/31/2012, the most recent annual period is the calendar year that ends 12/31/2011.
- If the borrower reports on a fiscal year basis, the statements for the fiscal year that ends after June 30 of the prior calendar year and no later than June 30 of the year of the RBC calculation date will be used. For example, if the RBC calculation date is 12/31/2012, the most recent annual period is the fiscal year that ends after 6/30/2011 and no later than 6/30/2012.
- The foregoing time periods are used to provide sufficient time for the borrower to prepare the financial statements and provide them to the lender, and for the lender to calculate the NOI.



The accepted industry standards for determining NOI were developed by the Commercial Mortgage Standards Association now known as CRE Financial Council (CREFC). The company must develop the NOI using the standards provided by the CREFC Methodology for Analyzing and Reporting Property Income Statements v. 5.1 ([www.crefc.org/irp](http://www.crefc.org/irp)). These standards are part of the CREFC Investor Reporting Package (CREFC IRP Section VII.) developed to support consistent reporting for commercial real estate loans owned by third party investors. This guidance is a standardized basis for determining NOI for RBC.

The NOI will be adjusted to use a 3 year rolling average for the DSC calculation. For 2013, a single year of NOI will be used. For 2014, 2 years will be used, weighted 65% most recent year and 35% prior year. Thereafter, 3 years will be used weighted 50% most recent year, 30% prior year, and 20% two years prior year. This will apply when there is a history of NOI values. For new originations, including refinancing, the above schedule would apply by duration from origination. For the special circumstances listed below, the specific instructions below will produce the NOI to be used, without further averaging.

Note 2: The calculation of debt service coverage and loan to value will include all debt secured by the property that is (1) senior to or pari passu with the insurer's investment; and (2) any debt subordinate to the insurer's investment that is not (a) subject to an intercreditor, standstill or subordination agreement with the insurer provided that the agreement does not grant the subordinate debt holder any rights that would materially affect the rights of the insurer and provided that the subordinate debt holder is prohibited from taking any action against the borrower that would materially affect the insurer's priority lien position with respect to the property, without the prior written consent of the insurer, or (b) subject to governing laws that provide that the insurer's investment holds a senior position to the subordinated debt holder and provide substantially similar protections to the insurer as in (2)(a) above.

Note 3: *Unavailable Operating Statements:*

There are a variety of situations where the most recent annual period's operating statement may not be available to assist in determining NOI. These situations will occur in distinct categories and each category requires special consideration. The categories are:

1. Loans on owner occupied properties
  - a. For properties where the owner is the sole or primary tenant (50% or more of the rentable space), property level operating statements may not be available or meaningful. If the property is occupied and the loan, taxes and insurance are current, it will be acceptable to derive income and a reasonable estimate of expenses from the most recent appraisal or equivalent and additional known actual expenses (e.g., real estate taxes and insurance).
  - b. For properties where the owner is a minority tenant (49% or less of the rentable space), the owner-occupied space should be underwritten at the average rent per square foot of the arm's length tenant leases. This income estimate should be added to the other tenant leases and combined with a reasonable estimate of expenses based on the most recent appraisal or equivalent and additional known actual expenses (e.g., real estate taxes and insurance).
2. Borrower does not provide the annual operating statement
  - a. Borrower refuses to provide the annual operating statements
    - i. If the leases are in place and evidenced by estoppels and inspections, NOI would be derived from normalized underwriting in accordance with the CREFC Methodology for Analyzing and Reporting Property Income Statements.
    - ii. If there is evidence from inspection that the property is occupied, but there is no evidence of in place leases (e.g., lease documents or estoppels), NOI would be set equal to the lesser of calculated debt service (DSC=1.0) or the NOI from the normalized underwriting.
    - iii. If there is no evidence from inspection that the property is occupied and no evidence of in place leases (e.g., lease documents or estoppels), assume NOI = \$0.
  - b. If the borrower does not have access to a complete previous year operating statement, determine NOI based on the CREFC guidelines for analyzing a partial year income statement.

#### Note 4: Construction loans

Construction loans would be categorized as follows, based on a determination by the loan servicer whether the loan is in balance and whether construction issues exist:

- a. In balance, no construction issues: DSC = 1.0, LTV determined as usual
- b. Not in Balance, no construction issues: CM4
- c. Construction issues: CM5

A loan is “*in balance*” if the committed amount of the construction loan plus any lender held reserves and unfunded borrower equity is sufficient to cover the remaining costs of the development project, including debt service not anticipated to be paid from property operations.

A “*construction issue*” is a problem that may reasonably jeopardize the completion of the project. Examples of construction issues include the abandonment of construction and construction defects that are not being addressed.

**Note 5: Credit enhancements:** Where the loan payments are secured by a letter of credit from an investment grade financial institution or an escrow account held at an investment grade financial institution, NOI less than the debt service may be increased by these amounts until it is equal to, but not exceeding the debt service. These situations are typically short term in nature, and are intended to bridge the lease-up following renovation or loss of a major tenant.

**Note 6: Non-income-producing land: NOI = \$0**

**Note 7: Non-senior financing**

- a. The company should first calculate DSC and LTV for non-senior financing using the standardized debt service and aggregate LTV of all financing *pari passu* and senior to the position held by the company.
- b. The non-senior piece should then be assigned to the next riskier RBC category. For example, if the DSC and LTV metrics determined in (a) indicate a category of CM2, the non-senior piece would be assigned to category CM3. However, it would not be required to assign a riskier category than CM5 if the loan is not at least 90-days delinquent or in foreclosure.

**Note 8: Definitions of each type of Farm Mortgage:**

**Timber:** A loan is classified as a timber loan if more than 50% of the collateral market value (land and timber) of the security is attributable to land supporting a timber crop that is or will be of commercial value.

**Farm & Ranch:** Farm and ranch land utilized in the production of agricultural commodities of all kinds, including grains, cotton, sugar, nuts, fruits, vegetables, forage crops and livestock of all kinds, including, beef, swine, poultry, food and fish. Loans included in this category are those in which agricultural land accounts for more than 50% of total collateral market value.

**Agribusiness Single Purpose:** Specialized collateral utilized in the production, further processing, adding value or manufacturing of an agricultural commodity or forest product. In order for a loan to be classified as such, the market value of the single-purpose (special use) collateral would account for more than 50% of total collateral market value.

This collateral is generally not multi-functional and can only be used for a specific production, manufacturing and/or processing function within a specific sub-sector of the food or agribusiness industry and whereby such assets are not strategically important in nature to the overall industry capacity. These assets can be shut down or replicated easily in other locations, or existing plants can be expanded to absorb shuttered capacity. The assets are not generally limited in nature by environmental or operational permits and/or regulatory requirements. An example would be a poultry processing plant located in the Southeast of the United States where there is excess capacity inherent to the industry and production capacity is easily replaceable.

Other loans included in this category are those collateralized by single purpose (special use) confinement livestock production facilities in which the special use facilities account for more than 50% of total collateral market value.

Agribusiness All Other: Multiple-use collateral utilized in the production, further processing, adding value or manufacturing of an agricultural commodity or forest product. In order for a loan to be classified as such, the market value of any single use portion may not be greater than 50% of total collateral market value.

This collateral is multi-functional in nature, adaptable to other manufacturing, processing, or servicing food or agribusiness industries or sub-industries. Assets could also be very strategic in nature and not easily replaceable either due to cost, location, environmental permitting and/or government regulations. These assets may be single purpose in nature, but so vital to the industry capacity needs that they will be generally purchased by another like processing company or strategic or financial buyer. An example of these types of assets are strategically located and highly automated cold storage facilities whereby they can be used for dry storage, distribution centers or converted into warehouse or other type uses. Another example may be a cheese processing plant that is strategically located within the heart of the dairy industry, limited permits, environmental restrictions that would limit added capacity, or high barriers to entry to build a like facility within the industry. For example, one of the largest cheese plants in the industry is located in California and it is not easily replicated within the cheese processing industry due to its location, capacity, costs, access to fresh milk supply and related feed and water, as well as highly regulated environmental and government restrictions.

Other loans included in this category are those in which more than 50% of the collateral market value is accounted for by chattel assets or other assets related to the business and financial operations of agribusinesses, including inventories, accounts, trade receivables, cash and brokerage accounts, machinery, equipment, livestock and other assets utilized for or generated by agribusiness operations.

(Figure 11)

For Office, Industrial, Retail and Multi-family

Risk Category	DSC Limits		LTV Limits
CM1	$1.50 \leq \text{DSC}$	and	$\text{LTV} < 85\%$
CM2	$0.95 \leq \text{DSC} < 1.50$	and	$\text{LTV} < 75\%$
CM2	$1.15 \leq \text{DSC} < 1.50$	and	$75\% \leq \text{LTV} < 100\%$
CM2	$1.50 \leq \text{DSC}$	and	$85\% \leq \text{LTV} < 100\%$
CM2	$1.75 \leq \text{DSC}$	and	$100\% \leq \text{LTV}$
CM3	$\text{DSC} < 0.95$	and	$\text{LTV} < 85\%$
CM3	$0.95 \leq \text{DSC} < 1.15$	and	$75\% \leq \text{LTV} < 100\%$
CM3	$1.15 \leq \text{DSC} < 1.75$	and	$100\% \leq \text{LTV}$
CM4	$\text{DSC} < 0.95$	and	$85\% \leq \text{LTV} < 105\%$
CM4	$0.95 \leq \text{DSC} < 1.15$	and	$100\% \leq \text{LTV}$
CM5	$\text{DSC} < 0.95$	and	$100\% \leq \text{LTV}$
CM6	Loans 90 days past due but not yet in process of foreclosure		
CM7	Loans in process of foreclosure		

(Figure 12)

For Hotels and Specialty Commercial

Risk category	DSC limits		LTV limits
CM1	$1.85 \leq \text{DSC}$	and	$\text{LTV} < 60\%$
CM2	$1.45 \leq \text{DSC} < 1.85$	and	$\text{LTV} < 70\%$
CM2	$1.85 \leq \text{DSC}$	and	$60\% \leq \text{LTV} < 115\%$
CM3	$0.90 \leq \text{DSC} < 1.45$	and	$\leq \text{LTV} < 80\%$
CM3	$1.45 \leq \text{DSC} < 1.85$	and	$70\% \leq \text{LTV}$
CM3	$1.85 \leq \text{DSC}$	and	$115\% \leq \text{LTV}$
CM4	$\text{DSC} < 0.90$	and	$\text{LTV} < 90\%$
CM4	$0.90 \leq \text{DSC} < 1.10$	and	$80\% \leq \text{LTV} < 90\%$
CM4	$1.10 \leq \text{DSC} < 1.45$	and	$80\% \leq \text{LTV}$
CM5	$1.45 \leq \text{DSC}$	and	$90\% \leq \text{LTV}$

(Figure 13)

For Farm Loans:

	<u>Timber</u>	<u>Farm &amp; Ranch</u>	<u>Agribusiness Single Purpose</u>	<u>Agribusiness All Other</u>
CM1	LTV <= 55%	LTV <= 60%	LTV <= 60%	LTV <= 60%
CM2	55% < LTV <= 65%	60% < LTV <= 70%	LTV <= 60%	60% < LTV <= 70%
CM3	65% < LTV <= 85%	70% < LTV <= 90%	60% < LTV <= 70%	70% < LTV <= 90%
CM4	85% < LTV <= 105%	90% < LTV <= 110%	70% < LTV <= 90%	90% < LTV <= 110%
CM5	105% < LTV	110% < LTV	90% < LTV	110% < LTV

## 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, NAIC 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-10 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 (23) through (28)

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 (24), Column (4) is calculated as Line (23), Column (2) multiplied by 0.2300 plus Line (24), Column (2) multiplied by 0.2000, but not greater than Line (23), Column (2).

Line (26), Column (4) is calculated as Line (25), Column (2) multiplied by 0.1500 plus Line (26), Column (2) multiplied by 0.1200, but not greater than Line (25), Column (2).

Line (28), Column (4) is calculated as Line (27), Column (2) multiplied by 0.2300 plus Line (28), Column (2) multiplied by 0.0000, but not greater than Line (27), Column (2).

Lines (29) through (60)

The Asset Concentration RBC Requirement for a particular mortgage plus the LR004 Mortgages RBC Requirement for LR009 Schedule BA Mortgages RBC Requirement for a particular mortgage can not 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 (38), Column (4) is calculated as the greater of 0.1800 multiplied by [(Line (37) plus Line (38)] less Line (39) 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 0.0140 multiplied by [(Line (39) plus Line (40)] less Line (41) or Line (39) multiplied by 0.0068.

Line (42), Column (4) is calculated as the greater of 0.1800 multiplied by [(Line (41) plus Line (42)] less Line (43) or Line (41) multiplied by the appropriate factor for the CM class to which the loan is assigned.

Line (44), Column (4) is calculated as the greater of 0.2200 multiplied by [(Line (43) plus Line (44)] less Line (45) or Line (43) multiplied by the appropriate factor for the CM class to which the loan is assigned.

Line (46), Column (4) is calculated as the greater of 0.0270 multiplied by [(Line (45) plus Line (46)] less Line (47) or Line (45) multiplied by 0.0068.

Line (48), Column (4) is calculated as the greater of 0.2200 multiplied by [(Line (47) plus Line (48)] less Line (49) or Line (47) multiplied by the appropriate factor for the CM class to which the loan is assigned.

Line (49), Column (4) is calculated as Line (49) multiplied by the appropriate factor for the CM class to which the loan is assigned.

Line (58), Column (4) is calculated as the greater of 0.1800 multiplied by [(Line (57) plus Line (58)] less Line (59) or Line (57) multiplied by the appropriate factor for the CM class to which the loan is assigned.

Line (60), Column (4) is calculated as the greater of 0.2200 multiplied by [(Line (59) plus Line (60)] less Line (61) or Line (59) multiplied by the appropriate factor for the CM class to which the loan is assigned.

## COMMON STOCK CONCENTRATION FACTOR

### LR011

#### *Basis of Factors*

The purpose of the common stock concentration factor is to reflect the additional risk of high concentrations in a single exposure to common stock. The common stock concentration factor increases by 50 percent the risk-based capital factor for the five largest common stock exposures. The 50 percent increase was chosen by comparing the total variance of particular holdings of common stock to the portion of the variance that can be explained by movements of the overall stock market. The risk-based capital of the assets included in the unaffiliated common stock concentration factor has already been counted once in the basic formula; the common stock concentration factor only serves to add in the additional risk-based capital required. The calculation is completed on a consolidated basis; however, the common stock 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 five largest common stock 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 five largest holdings should exclude common stock in the FHLB, investment companies (mutual funds) and common trust funds, that are diversified with the meaning of the Investment Company Act, and affiliated investments other than investments in non-insurance subsidiaries. For non-insurance subsidiaries, i.e., those with affiliate code 7 on LR042 (the portion of holding companies in excess of indirect subsidiaries) and those with affiliate code 13 (other subsidiaries), the total stock investment including both preferred and common stock should be used.

Replicated assets in the nature of common stock other than synthetically created indices should be included in the common stock concentration calculation in the same manner as other investments in common stock.

Assets should be aggregated by issuer before determining the five largest exposures.

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



## MISCELLANEOUS ASSETS

### LR012

#### *Basis of Factors*

#### Lines (1) through (3,5)

The pre-tax factor for cash is 0.39 percent. It is recognized that there is a small risk related to possible insolvency of the bank where cash deposits are held. The 0.39 percent pre-tax factor, equivalent to a NAIC 1 bond, reflects the short-term nature of this risk.

The short-term investments to be included here are those not reflected elsewhere in the formula. Commercial paper, purchase agreements, collateralized mortgage obligations (CMOs), mortgage participation certificates (MPCs), interest-only and principal-only certificates (IOs and POs), and equipment trust certificates should be included in appropriate bond classifications (NAIC 1 through NAIC 6) on LR002 Bonds and should be excluded from short-term investments. The 0.39 percent pre-tax factor is equal to the factor for cash.

#### Lines (4) through (7)

Premium notes, receivables for securities and write-ins for invested assets are generally a small proportion of total portfolio value. A pre-tax factor of 6.8 percent is consistent with other risk-based capital formulas studied by the working group. The total amount of derivatives cash collateral receivable (pledged to counterparty and/or central clearinghouse) included in Line (6.1) (from Line 11, page 2) should be included on Line (6.2) resulting in Line (6.3) including no derivative collateral receivable amounts. Pledged collateral is reported in LR017, Off-Balance Sheet and Other Items.

#### Lines (8) through (16)

Derivative instrument book/adjusted carrying value exposure net of collateral held on the balance sheet from Schedule DB Part D Section 1 Column 7 Line 0999999, for each NAIC designation, is subject to the bond RBC factor for that category to reflect the amount held on the balance sheet exposed to loss upon default of the Counter (OTC-bilateral) counterparty, central clearinghouse or exchange. For 2015, derivative balances subject to central clearing are to be included in Line (10) regardless of the category they are included in for the AVR. Acceptable collateral is subject to an RBC charge at the same level as NAIC 1 Bonds. The collateral from Schedule DB Part D Section 1 Column 4 Line 0999999 should be reported in Lines (8) and (9). The split between Lines (8) and (9) will be that Line (8) will include collateral not on the balance sheet, and will be subject to an RBC charge of 0.4%, while Line (9) will include collateral held on the balance sheet and subject to an RBC charge as an admitted asset. Amounts reported in line 9 will be assessed RBC based on their characteristics as an asset elsewhere in the RBC instructions. "Acceptable collateral" means cash, cash equivalents, securities issued or guaranteed by the United States or Canadian governments or their government-sponsored enterprises, publicly traded obligations designated 1 by the NAIC, government money market mutual funds, and such other items as may be defined as acceptable collateral in the *Purposes and Procedures Manual of the NAIC Investment Analysis Office*.

## REPLICATION (SYNTHETIC ASSET) TRANSACTIONS AND MANDATORY CONVERTIBLE SECURITIES

### LR013

#### *Basis of Factors*

A replication (synthetic asset) transaction is a derivative transaction entered into in conjunction with other investments in order to reproduce the investment characteristics of otherwise permissible investments. A derivative transaction entered into by an insurer as a hedging or income-generation transaction shall not be considered a replication (synthetic asset) transaction. All replication transactions must be reviewed and approved by the NAIC Capital Markets and Investment Analysis Office and assigned an RSAT number. The transactions are disclosed in Schedule DB, Part C.

A replication (synthetic asset) transaction increases the insurer's exposure to one type of asset, the replicated (synthetic) asset, and may reduce the insurer's exposure to the asset risk associated with the cash market components of the transaction. Both effects are captured and quantified in the worksheet for replication transactions.

A mandatory convertible security is defined as a type of convertible bond that has a required conversion or redemption feature. Either on or before a contractual conversion date, the holder must convert the mandatory convertible security into the underlying common stock. Mandatory convertible securities are subject to special reporting instructions and are therefore not assigned NAIC Designations or Unit Prices by the SVO. The balance sheet amount for mandatory convertible securities shall be reported at the lower of amortized cost or fair value during the period prior to conversion. This reporting method is not impacted by NAIC designation or information received from credit rating providers (CRPs). Upon conversion, these securities will be subject to the accounting guidance of the SSAP that reflects their revised characteristics. For further guidance regarding mandatory convertible securities refer to SSAP No. 26. This worksheet adjusts the RBC requirement upward if the security that results from the conversion is more risky than the original security.

#### *Specific Instructions for Application of Formula*

This worksheet should contain a line for each replicated (synthetic) asset and each cash instrument component of all replication (synthetic asset) transactions undertaken by the insurer. It should also contain a line for each mandatory convertible security and a line for the security that will result from the conversion. The assets should be sorted first by RSAT number, next by type (replicated assets, then cash instruments) and finally by CUSIP.

#### Column (1)

The RSAT number for each transaction should be that used in Schedule DB, Part C, Section 1. Leave this column blank for mandatory convertible securities.

#### Column (2)

Enter an R (for replicated asset) if the line describes one of the replicated (synthetic) assets, a CW (for cash instrument with RBC credit) if the line describes one of the cash instruments constituting the transaction and the transaction either (1) is a swap of prospectively determined interest rates, or (2) eliminates the asset risk associated with the cash instrument, and a CN (for cash instrument with no RBC credit) if the line describes one of the cash instruments constituting the transaction and the transaction does not eliminate the insurer's exposure to the asset risk associated with the instrument. Enter an MC for a mandatory convertible security and an MCC for the security that will result from the conversion.

#### Column (3)

Show the CUSIP for all cash instruments that are securities, all mandatory convertible securities and all securities that will result from a mandatory conversion.

#### Column (4)

Give the description of the replicated (synthetic) or cash instruments as found on Schedule DB, Part C, Section 1. Leave blank for mandatory convertible securities.

Column (5)

Give the NAIC designation or other description that will best identify the asset risk class of the asset. For replications (synthetic assets), this is contained in columns 3 or 14 of Schedule DB, Part C, Section 1.

Column (6)

Give the book/adjusted carrying value of the asset. For replications (synthetic assets), this is contained in columns 5, 10 or 15 of Schedule DB, Part C, Section 1.

Column (7)

For replicated (synthetic) assets and for the securities that will result from the conversion of a mandatory convertible security, multiply the risk-based capital factor appropriate to the asset class of the replicated (synthetic) asset times the book/adjusted carrying value contained in Column (6). For cash instrument components that qualify for an RBC credit and for mandatory convertible securities, the amount contained in this column is the product of:

- (a) the risk-based capital factor appropriate to the asset class of the cash instrument or mandatory convertible security, but not higher than the average risk-based capital factor for the replicated (synthetic) asset(s) or the securities that result from the conversion of the mandatory convertible security, times
- (b) the book/adjusted carrying value contained in Column (6), times
- (c) -1

For other cash instrument components, this column should contain zero.

## 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 enforced 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 should 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 charge for the hedged asset.

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

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 derivatives (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 one 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 perfect 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 Hedged 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, 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		Internal		NAIC		Internal		NAIC		Internal	
Designation	Factor	Designation	Factor	Designation	Factor	Designation	Factor	Designation	Factor	Designation	Factor
1	0.0000	1	0.0000	1	0.0000	1Z	0.0000	1	0.0000	1Z	0.0000
2	0.0039	2	0.0039	2	0.0039	2Z	0.0039	2	0.0039	2Z	0.0039
3	0.0126	3	0.0126	3	0.0126	3Z	0.0126	3	0.0126	3Z	0.0126
4	0.0446	4	0.0446	4	0.0446	4Z	0.0446	4	0.0446	4Z	0.0446
5	0.0970	5	0.0970	5	0.0970	5Z	0.0970	5	0.0970	5Z	0.0970
6	0.2231	6	0.2231	6	0.2231	6Z	0.2231	6	0.2231	6Z	0.2231
	0.3000		0.3000		0.3000		0.3000		0.3000		0.3000
5	0.0000	5*	0.0000	1	0.0000	1Z*	0.0000	1	0.0000	1Z*	0.0000
6	0.2231	6*	0.2231	2	0.0039	2Z*	0.0039	2	0.0039	2Z*	0.0039
	0.3000		0.3000	3	0.0126	3Z*	0.0126	3	0.0126	3Z*	0.0126
				4	0.0446	4Z*	0.0446	4	0.0446	4Z*	0.0446
1	0.0000	1F	0.0000	5	0.0970	5Z*	0.0970	5	0.0970	5Z*	0.0970
2	0.0039	2F	0.0039	6	0.2231	6Z*	0.2231	6	0.2231	6Z*	0.2231
3	0.0126	3F	0.0126		0.3000		0.3000		0.3000		0.3000
4	0.0446	4F	0.0446								
5	0.0970	5F	0.0970								
6	0.2231	6F	0.2231								
	0.3000		0.3000								
1	0.0000	1FE	0.0000	1	0.0000	1S	0.0000	Other Unaffiliated Public Common	0.4500		
2	0.0039	2FE	0.0039	2	0.0039	2S	0.0039	Money Market Mutual Funds	0.0040		
3	0.0126	3FE	0.0126	3	0.0126	3S	0.0126	Federal Home Loan Bank Common	0.0110		
4	0.0446	4FE	0.0446	4	0.0446	4S	0.0446	Unaffiliated Private Common Stock	0.3000		
5	0.0970	5FE	0.0970	5	0.0970	5S	0.0970				
6	0.2231	6FE	0.2231	6	0.2231	6S	0.2231				
	0.3000		0.3000		0.3000		0.3000				
				5	0.2231	5*GI	0.2231				

† - 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.



## REINSURANCE

LR016

### *Basis of Factors*

There is a risk associated with recoverability of amounts from reinsurers. The risk is deemed comparable to that represented by bonds between risk classes 1 and 2 and is assigned a pre-tax factor of 0.78 percent. To avoid an overstatement of risk-based capital, the formula gives a 0.78 percent pre-tax credit for reinsurance with non-authorized and certified companies, for reinsurance among affiliated companies, for reinsurance with funds withheld or reinsurance with authorized reinsurers that is supported by equivalent trustee collateral that meets the requirements stipulated in Appendix A-785 (Credit for Reinsurance), where there have been regular bona fide withdrawals from such trustee collateral to pay claims or recover payments of claims during the calendar year covered by the RBC report, and for reinsurance involving policy loans. Withdrawals from trustee collateral that are less than the amounts due the ceding company shall be deemed to not be bona fide withdrawals.

### *Specific Instructions for Application of the Formula*

#### Lines (1) through (7)

The first seven components of the reinsurance formula are charged against all reinsurance recoverable and ceded reserve credits as reported in Schedule S.

#### Lines (8) through (12)

A negative 0.78 percent pre-tax factor is applied to these five components. These adjustments should only be applied to business assumed from subsidiaries of the company. The adjustment should be multiplied by the proportion of the ceding company owned by the parent. The subsidiary's RBC is part of the individual company's RBC, and sister affiliate reinsurers should NOT be included. In addition, no adjustment should be made where an adjustment has already been taken in the re-established liability components above. This would be the case if the subsidiary reinsurer was unauthorized or the treaty with the company involved funds held.

#### Lines (13) through (16)

The last four components are Page 3 liabilities (including Line 24.02 – Reinsurance in Unauthorized and Certified Companies and Line 24.03 – Funds Held under Reinsurance Treaties with Unauthorized and Certified Reinsurers). A pre-tax factor of negative 0.78 percent is applied. This considers that these liabilities reported on Page 3 have been reestablished in the balance sheet offsetting the reinsurance ceded reserve credits taken elsewhere.

## OFF-BALANCE SHEET AND OTHER ITEMS

LR017

### *Basis of Factors*

The potential for risk exists in off-balance sheet items. For items other than derivative instruments, a 1.26 percent factor was chosen on a judgment basis. The 1.26 percent pre-tax factor will differentiate between the companies that have small and large exposures to this risk. Since there is no firm actuarial basis for assigning the 1.26 percent pre-tax factor to these risks, off-balance sheet items are included in the sensitivity analysis using a factor of 3 percent, and leases are added as an additional off-balance sheet item. For securities lending programs, a reduced charge may apply to certain programs that meet the criteria as outlined below.

**For assets pledged as collateral on funds of Federal Home Loan Bank (FHLB) liabilities included in the C3 Phase 1 Cash Flow Testing, the C3 calculation already provides adequate provision for potential risks up to the Statement Value of the associated FHLB liabilities tested therein. For any excess of assets pledged as collateral above this**

Statement Value (FHLB liabilities included in C3 Phase 1 Cash Flow Testing) the potential exposure is proportionate to the credit risk assessed for the FHLB counterparty, making the bond factor associated with the NAIC designation assigned to the FHLB an appropriate risk provision. For FHLB advances that are not subject to the C3 Phase 1 Cash Flow Testing, the full amount of pledged collateral supporting those advances shall receive a C-0 RBC factor based on the credit standing of the FHLB. Excess assets held by a FHLB but not associated with a FHLB advance (i.e. assets above the required collateral amount and therefore available to be recalled by the insurer), do not present non-controlled asset risk and should be excluded.

Collateral supporting certain FHLB funding agreement activities might be subject to a higher non-controlled asset charge. If the amount of FHLB funded liabilities associated with funding agreement activities is greater than 5% of the company's total net admitted assets, the full amount of pledged collateral supporting FHLB funding agreements in excess of this 5% will receive a higher factor equal to the factor for an NAIC 2 Corporate Bond asset factor.

For derivative instruments, the book/adjusted carrying value exposure net of collateral (the balance sheet exposure) is included under miscellaneous C-1o risks. Because collars, swaps, forwards and futures can have book/adjusted carrying values that are positive, zero or negative, the potential exposure to default by the counterparty or exchange for these instruments cannot be measured by the book/adjusted carrying values. Schedule DB, therefore, includes a calculation of the potential exposure that is based on the March 1987 research paper "Potential Credit Exposure on Interest Rate and Foreign Exchange Rate Related Instruments" supporting the 1988 Bank of International Settlements framework for banks. The off-balance sheet exposure (Schedule DB, Part D, Section 1, Column 12) will measure this potential exposure for risk-based capital purposes. The factors applied to the derivatives off-balance sheet exposure are the same as those applied to bonds.

#### *Specific Instructions for Application of the Formula*

##### Column (2)

Assets directly funding guaranteed separate accounts or synthetic GIC contracts should be excluded from the noncontrolled assets computation.

##### Line (1)

Securities lending programs that have all of the following elements are eligible for a lower off-balance sheet charge:

1. A written plan adopted by the Board of Directors that outlines the extent to which the insurer can engage in securities lending activities and how cash collateral received will be invested.
2. Written operational procedures to monitor and control the risks associated with securities lending. Safeguards to be addressed should, at a minimum, provide assurance of the following:
  - a. Documented investment guidelines, including, where applicable, those between lender and investment manager with established procedure for review of compliance.
  - b. Investment guidelines for cash collateral that clearly delineate liquidity, diversification, credit quality, and average life/duration requirements.
  - c. Approved borrower lists and loan limits to allow for adequate diversification.
  - d. Holding excess collateral with margin percentages in line with industry standards, which are currently 102% (or 105% for cross currency loans).
  - e. Daily mark-to-market of lent securities and obtaining additional collateral needed to ensure that collateral at all times exceeds the value of the loans to maintain margin of 102% of market.
  - f. Not subject to any automatic stay in bankruptcy and may be closed out and terminated immediately upon the bankruptcy of any party.
3. A binding securities lending agreement (standard "Master Lending Agreement" from Securities Industry and Financial Markets Association) is in writing between the insurer, or its agent on behalf of the insurer, and the borrowers.

4. Acceptable collateral is defined as cash, cash equivalents, direct obligations of, or securities that are fully guaranteed as to principal and interest by, the government of the United States or any agency of the United States, or by the Federal National Mortgage Association or the Federal Home Loan Mortgage Corporation and NAIC 1-designated securities. Affiliate-issued collateral would not be deemed acceptable. In all cases the collateral held must be permitted investments in the state of domicile for the respective insurer.

Collateral included in General Interrogatories, Part 1, Line 24.05 of the annual statement should be included on Line (14).

Line (2)  
Collateral from all other securities lending programs should be reported General Interrogatories, Part 1, Line 24.06 and included in Line (2).

Lines (3) through (14)

Noncontrolled assets are the amount of all assets not exclusively under the control of the company, or assets that have been sold or transferred subject to a put option contract currently in force. For Line (12.1) and (13) include assets pledged as collateral reported in the General Interrogatories Part 1 Line 25.30 and 25.31 other than assets related to the Federal Reserve's Term Asset Loan Facility (TALF). For Line (12.2), include all collateral pledged, but not cash and securities, to derivative counterparties and/or central clearinghouses for initial margin and variation margin. In addition, include securities collateral pledged as initial margin for futures. Line (12.2) should agree to Schedule DB Part D Section 2 Column 7, Line 0199999. Line (12.3) should equal Line (12.1) minus Line (12.2). **For Line (13) Column 2 include excess assets held by a FHLB but not associated with a FHLB advance (i.e. assets above the required collateral amount and therefore available to be recalled by the insurer). For Line (13) column 2 also include an amount equal to the lessor of Statement Value of FHLB liabilities subject to C3PI Cash Flow Testing or 5% of total net admitted assets. For Line (13) column (4), the Factor will be manually input. In most instances, the Factor will be based on the NAIC ratings category equivalent to an unsecured debt obligation of the FHLB. A higher Factor applies if FHLB funded advance liabilities associated with funding agreement prorated such that collateral in column 3 supporting FHLB funding agreement liabilities in excess of the limit is subject to the factor for an NAIC 2 corporate bond (Line 14 Column 4). All other collateral in column 3 is subject to the factor based on the NAIC ratings category equivalent to an unsecured debt obligation of the FHLB.**

Lines (16) through (23)

The off-balance sheet exposure for derivative instruments reported on Schedule DB, Part D, Section 1, Column 12, Lines 0199999 through 0899999. Off-balance sheet exposure is reported for aggregate exchange traded derivatives, OTC – bilateral derivatives aggregated by counterparty brought into each individual NAIC designation 1-6, and aggregated centrally cleared derivatives. For 2015, derivative balances subject to central clearing are to be included in Line (16) regardless of the category they are included in for Schedule DB, Part D, Section 1.

Line (24)

Guarantees for affiliates include guarantees for the benefit of an affiliate that result in a material<sup>†</sup> contingent exposure of the company's assets to liability.

Line (26)

The exposure amount for long-term leases is the annual total amount of all leases that could have a material<sup>†</sup> financial effect. If the rent expense is shared with affiliates, it should be allocated by company.

Line (31)

“Yes” means the entity which files the US Federal income tax return which includes the reporting entity is a regulated insurance company (including where the reporting entity is the direct filer of the tax return). “No” means the reporting entity which files the US Federal income tax return which includes the reporting entity is not a regulated insurance company (e.g. a non-insurance entity or holding company makes the filing). “N/A” means the entity is exempt from filing a US federal income tax return; lines (32) and (33) should be zero in this case.

Lines (32) and (33)

Apply a one-percent (1%) charge in the RBC formula, placed outside of the covariance adjustment, to admitted adjusted gross deferred tax assets (DTAs) as described in SSAP No. 101, paragraphs 11a and 11b (lesser of paragraph 11b(i) and 11b(ii)). For the period for which the paragraph 11a component is determined, the charge is reduced to one-half percent (0.5%) when the insurance company either filed its own separate Federal income tax return or it was included in a consolidated Federal income tax of which the common parent is an insurance company. The source for the DTA amounts to use in the calculation is found in the Annual Statement, Notes to Financial Statements, Note 9, Part A, Section 2, Admission Calculation Components for SSAP No. 101. Paragraph 11a is found in Section 2, subpart (a), Paragraph 11b is found in Section 2, subpart (b).

† The definition of “material” exposure or financial effect is the same as for annual statement disclosure requirements.

**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.

## HEALTH PREMIUMS and HEALTH CLAIMS RESERVES

LR019, LR023 and LR024

### *Basis of Factors*

Risk-based capital factors for health insurance are applied to medical and disability income, long-term care insurance and other types of health insurance premiums and Exhibit 6 claim reserves with an offset for premium stabilization reserves. For health coverage that does not fit into one of the defined categories for risk-based capital, the “Other Health” category is to be used.

### Medical Insurance Premium

The business is subdivided by product into categories for individual coverages and for group and credit coverages depending on the risk related to volatility of claims. The factors were developed from a model that determines the minimum amount of surplus needed to protect the company against a worst-case scenario for each type of coverage. The results of the model were then translated into either a uniform percentage or a two-tier formula to be applied to premium. The two-tier formula reflects the decreased risk of a larger in-force block. The formula includes several changes starting in 1998 for some types of health insurance. These changes are several worksheets and are designed to keep the RBC amounts for health coverage consistent regardless of the RBC formula used. If the company has comprehensive medical business, medicare supplement, dental business, or Stand-Alone Medicare Part D coverage through a PDP arrangement, it will be directed to these additional worksheets. The instructions for including paid health claims in the various categories of the Managed Care Discount Factor Calculation can be found in the instructions to LR022 Underwriting Risk – Managed Care Credit. Appendix 2 of these instructions lists commonly used health insurance terms. Appendix 3 of these instructions lists commonly used terms specific to Stand-Alone Medicare Part D coverage. If the company has any of the four mentioned types of medical insurance, it will also be required to complete additional parts of the formula for C-3 Health Credit Risk and C-4 Health Administrative Expenses Risk portion of the Business Risk.

### Disability Income Premium

Prior to 2001, the individual disability income factors were based on models of the probability risk completed by several companies with significant experience in this line. The group long-term disability income risk was modeled based on methodology similar to that used by one of the largest writers of this business. The pricing risk was addressed principally as the delayed reaction to increases in incidence of new claims and to the lengthening of claims from slower recoveries than assumed.

Starting in 2001, new categories and new factors are applicable to all types of disability income premiums. These factors are based on new data and apply a model similar to that used for other health premium risk to that data.

### Long-Term Care Insurance Premium

Prior to 2005, factors equal to the original disability income factors were used. Starting in 2005, factors based on LTC experience replaced those factors. The difference in the factors used in 2004 and prior years for noncancellable LTC versus other LTC has been retained as a rate risk factor applied to the NC premium. The morbidity risk is partially applied directly to premium with a higher factor applied to amounts up to \$50,000,000 and a lower factor applied to premiums in excess of \$50,000,000. In addition, the earned premiums and incurred claims for the last two years are used to determine an average loss ratio (incurred claims divided by earned premiums). This average loss ratio times the current year’s premium is called Adjusted LTC Claims for RBC. A higher factor is applied to claims up to \$35,000,000 and a lower factor is applied to claims above \$35,000,000.

### Claim Reserves

Additional risk-based capital of 5 percent of claim reserves for both individual and group and credit is required to recognize the risk of the level of recoveries and other claim terminations falling below that assumed in the development of claim reserves. However, claims reserves for workers’ compensation carve-out are excluded from this charge and are separately assessed risk-based capital on the Stand-Alone Underwriting Risk – Other, Line (5); reserves entered for this exclusion should be reported in net balance sheet reserves in Schedule P, Part 1 of the Workers Compensation Carve-Out Supplement.

Pre-Tax and Post-Tax Factors

The formula uses pre-tax factors for all types of health insurance. Because many insurers of some types of health insurance write very little other business, it was determined that there would be no difference between pre-tax and post-tax factors except where substantial investment income is assumed as part of the product pricing. Thus, for disability income, the pre-tax factors in the table below and in LR023 Long-Term Care will be adjusted to post-tax by applying a tax-effect change to RBC in LR030 Calculation of Tax Effect for Life Risk-Based Capital. For reasons of practicality and simplicity, credit disability is included with other disability income and adjusted to post-tax. The pre-tax RBC values for other types of health insurance will not be adjusted.

*Specific Instructions for Application of the Formula*

The total of all earned premium categories LR019 Health Premiums, Line (31), Column (1) should equal the total in Schedule H, Part 1, Line 2, Column 1 of the annual statement. Earned premium for each of these coverages should be from underlying company records. Earned premium may be reported in Schedule H for Administrative Services Contracts (ASC) and/or the Federal Employees Health Benefits Plan (FEHBP) and/or Workers Compensation Carve-Out, which are included in order that Line (31) will equal the total in Schedule H. As such, there is no RBC factor applied to any premium reported on Lines (18), (28) or (29). For some of the coverages, two-tier formulas apply. The calculations for these coverages shown below will not appear on the RBC filing software but will automatically be calculated by the software.

Line (1)

Health premiums for usual and customary major medical and hospital (including comprehensive major medical and expense reimbursement hospital/medical coverage) written on individual contracts are entered in Column (1) for this line, but no RBC Requirement is calculated in Column (2). The premiums are carried forward to LR020 Underwriting Risk – Experience Fluctuation Risk, Column (1), Line (1.1).

Line (2)

Health premiums for Medicare supplement written on individual contracts are entered in Column (1) for this line, but no RBC Requirement is calculated in Column (2). The premiums are carried forward to LR020 Underwriting Risk – Experience Fluctuation Risk, Column (2), Line (1.1).

Line (3)

Health premiums for dental or vision coverage written on individual contracts are entered in Column (1) for this line, but no RBC Requirement is calculated in Column (2). The premiums are carried forward to LR020 Underwriting Risk – Experience Fluctuation Risk, Column (3), Line (1.1).

Line (4)

Health premium for Stand-Alone Medicare Part D coverage written on individual contracts - includes beneficiary premium (standard coverage portion), direct subsidy, low-income subsidy (premium portion), Part D Payment Demonstration (MOP) and Risk Corridor payment adjustments. See Appendix 3 for definition of these terms. This does not include Medicare-Advantage prescription drug coverage (MA-PD) premium, which are to be included in Line (1). No RBC requirement is calculated in Column (2). The premium is carried forward to page LR020 Underwriting Risk – Experience Fluctuation Risk Column (4) Line (1.1).

Line (5)

Health incurred claims for Supplemental benefits within Stand-Alone Medicare Part D coverage written on individual contracts that is beneficiary payment (supplemental benefit portion) – e.g., coverage in the coverage gap, use of co-pays of less value than the minimum regulatory coinsurance and reduced deductible. This does not include the low-income subsidy (cost sharing portion), which is not a component of reported revenue. RBC is calculated for Supplemental benefits within Stand-Alone Medicare Part D Coverage on LR019.

Line (6) and (16)

**Medicaid pass-through payments reported as premium and excluded from Line (1) should be reported in Line (6) or (16).**

Line (7) and Line (17)

There is a factor for certain types of limited benefit coverage (hospital indemnity, which includes a per diem for intensive care facility stays, and specified disease) which includes both a percent of earned premium on such insurance (3.5 percent) and a flat dollar amount (\$50,000) to reflect the higher variability of small amounts of business.

Line (8) and Line (18)

The factor for accidental death and dismemberment (AD&D) insurance (where a single lump sum is paid) depends on several items:

1. Three times the maximum amount of retained risk for any single claim;
2. \$300,000 if three times the maximum amount of retained risk is larger than \$300,000;
3. 5.5 percent of earned premium to the extent the premium for AD&D is less than or equal to \$10,000,000; and
4. 1.5 percent of earned premium in excess of \$10,000,000.

There are places for reporting the total amount of earned premium and the maximum retained risk on any single claim. The actual RBC Requirement will be calculated automatically as the sum of (a) the lesser of items 1 and 2 plus (b) items 3 plus 4.

Line (9) and Line (19)

The factor for Other Accident coverage provides for any accident-based contingency other than those contained in Lines (8) or (18). For example, this line should contain all the premium for policies that provide coverage for accident-only disability or accident-only hospital indemnity. The premium for policies that contain AD&D in addition to other accident-only benefits should also be shown on this line.

Line (10)

Health premiums for usual and customary major medical and hospital (including comprehensive major medical and expense reimbursement hospital/medical coverage) written on group contracts are entered in Column (1) for this line, but no RBC Requirement is calculated in Column (2). The premiums are carried forward to LR020 Underwriting Risk – Experience Fluctuation Risk, Column (1), Line (1.2).

Line (11)

Health premiums for dental or vision coverage written on group contracts are entered in Column (1) for this line, but no RBC Requirement is calculated in Column (2). The premiums are carried forward to LR020 Underwriting Risk – Experience Fluctuation Risk, Column (3), Line (1.2).

Line (12)

The American Academy of Actuaries submitted a report to the Health Risk Based Capital Working Group in 2016 to apply a tiered risk factor approach to the Stop-Loss Premium. The premiums for this coverage should not be included within Comprehensive Medical. It is not expected that the transfer of risk through the various managed care credits will reduce the risk of stop-loss coverage. Medical Stop Loss exhibits a much higher variability than Comprehensive Medical. A factor of 35 percent will be applied to the first \$25,000,000 in premium and a factor of 25 percent will be applied to the premium in excess of \$25,000,000.

Line (13)

Health premiums for Medicare supplement written on group contracts are entered in Column (1) for this line, but no RBC Requirement is calculated in Column (2). The premiums are carried forward to LR020 Underwriting Risk – Experience Fluctuation Risk, Column (2), Line (1.2).



Line (14)

Health premium for Stand-Alone Medicare Part D coverage written on group contracts only if the plan sponsor has risk corridor protection for the contracts - includes beneficiary premium (standard coverage portion), direct subsidy, low-income subsidy (premium portion), Part D Payment Demonstration amounts and risk corridor protection payments. See Appendix 3 for definition of these terms. Stand-Alone Medicare Part D coverage written on group contracts without risk corridor protection is reported in Line (30) Other Health. This does not include Medicare-Advantage prescription drug coverage (MA-PD) premiums which are to be included in Line (9). The RBC requirement is calculated in Column (2). The premium is carried forward to page LR020 Underwriting Risk – Experience Fluctuation Risk Column (4) Line (1.2).

Not for Distribution

Line (15)

Health incurred claims for Supplemental benefits within Stand-Alone Medicare Part D coverage written on group contracts that is beneficiary payment (supplemental benefit portion) – e.g., coverage in the coverage gap, use of co-pays of less value than the minimum regulatory coinsurance and reduced deductible whereas the plan sponsor has risk corridor protection for the group contract’s standard benefit design coverage. This does not include the low-income subsidy (cost-sharing portion) which is not a component of reported revenue. RBC is calculated for Supplemental benefits within Part D Coverage on LR019.

Lines (21) through (27)

Disability income premiums are to be separately entered depending upon category (individual and group). For Individual, further split is between noncancellable (NC) or other (GR, etc.) For group, the further splits are between Credit Monthly Balance, Credit Single Premium (with additional reserves), Credit Single Premium (without additional reserves), Group Long-Term (benefit periods of two years or longer) and Group Short-Term (benefit periods less than two years). The RBC factors vary by the amount of premium reported such that a higher factor is applied to amounts below \$50,000,000 for similar types. Starting in 2001, in determining the premiums subject to the higher factors, individual disability income noncancellable and other is combined. All types of group and credit are combined in a different category from individual.

The following table describes the calculation process used to assign RBC charges to disability income business. The reference to line numbers (e.g., Line 19) represent the actual line numbers used in the formula page, but the subdivisions of those lines [e.g., a), b) etc.] do not exist in the formula page. The total RBC Requirement shown in the last (Total) subdivision of each line will be included in Column (2) for that line in the formula page.

	<u>Disability Income Premium</u>	<u>Annual Statement Source</u>		<u>RBC Requirement</u>
		(1) <u>Statement Value</u>	Factor	
<u>Line (21)</u>	Noncancellable Disability Income - Individual Morbidity			
a)	First \$50 Million Earned Premium of Line (21)		X <b>0.4435</b> =	
b)	Over \$50 Million Earned Premium of Line (21)		X <b>0.1901</b> =	
c)	Total Noncancellable Disability Income - Individual Morbidity			
<u>Line (22)</u>	Other Disability Income - Individual Morbidity			
a)	Earned Premium in Line (22) [up to \$50 million less premium in a) of Line (21)]		X <b>0.3168</b> =	
b)	Earned Premium in Line (22) not included in a) of Line (22)		X <b>0.0889</b> =	
c)	Total Other Disability Income - Individual Morbidity			

<u>Line (23)</u>	Disability Income - Credit Monthly Balance	Earned Premium included in Schedule H, Part 1, Line 2, in part	
a)	First \$50 Million Earned Premium of Line (23)	Company Records	X <b>0.2534</b> =
b)	Over \$50 Million Earned Premium of Line (23)	Company Records	X <b>0.0378</b> =
c)	Total Disability Income - Credit Monthly Balance	a) of Line (23) + b) of Line (23), Column (2)	
<u>Line (24)</u>	Disability Income - Group Long-Term	Earned Premium included in Schedule H, Part 1, Line 2, in part	
a)	Earned Premium in Line (24) [up to \$50 million less premium in a) of Line (23)]	Company Records	X <b>0.1901</b> =
b)	Earned Premium in Line (24) not included in a) of Line (24)	Company Records	X <b>0.0378</b> =
c)	Total Disability Income - Group Long-Term	a) of Line (24) + b) of Line (24), Column (2)	
<u>Line (25)</u>	Disability Income - Credit Single Premium with Additional Reserves	Earned Premium included in Schedule H, Part 1, Line 2, in part. This amount to be reported on LR019 Health Premiums, Line (25)	
a)	Additional Reserves for Credit Disability Plans	LR019 Health Premiums Column (1) Line (34)	
b)	Additional Reserves for Credit Disability Plans, Prior Year	LR019 Health Premiums Column (1) Line (35)	
c)	Subtotal Disability Income - Credit Single Premium with Additional Reserves	Line (25) - a) of Line (25) + b) of Line (25)	
d)	Earned Premium in c) [up to \$50 million less premium in a) of Line (23) + a) of Line (24)]	Company Records	X <b>0.1901</b> =
e)	Earned Premium in c) of Line (25) not included in d) of Line (25)	Company Records	X <b>0.0378</b> =
f)	Total Disability Income - Credit Single Premium with Additional Reserves	d) of Line (25) + e) of Line (25), Column (2)	
<u>Line (26)</u>	Disability Income - Credit Single Premium without Additional Reserves	Earned Premium included in Schedule H, Part 1, Line 2, in part	
a)	Earned Premium in Line (26) [up to \$50 million less premium in a) of Line (23) + a) of Line (24) + d) of Line (25)]	Company Records	X <b>0.1267</b> =
b)	Earned Premium in Line (26) not included in a) of Line (26)	Company Records	X <b>0.0378</b> =
c)	Total Disability Income - Credit Single Premium without Additional Reserves	a) of Line (26) + b) of Line (26), Column (2)	

- Line (27) Disability Income – Group Short-Term \_\_\_\_\_ Earned Premium included in Schedule H, Part 1, Line 2, in part \_\_\_\_\_
- a) Earned Premium in Line (27) [up to \$50 million less premium in a) of Line (23) + a) of Line (24) + d) of Line (25) + a) of Line (26)] \_\_\_\_\_ X **0.0634** = \_\_\_\_\_  
 Company Records \_\_\_\_\_
- b) Earned Premium in Line (27) not included in a) of Line (27) \_\_\_\_\_ X **0.0378** = \_\_\_\_\_  
 Company Records \_\_\_\_\_
- c) Total Disability Income – Group Short-Term a) of Line (27) + b) of Line (27), Column (2) \_\_\_\_\_

Lines (28) and (29)

Premiums for noncancellable long-term care insurance are included on Line (28) to reflect the additional risk when rate increases are not permitted. Line (29) includes premiums for Other LTC coverage but with no RBC value on this page (the RBC is determined on LR023 Long-Term Care) so that the validation check to Schedule H can still be performed.

Line (31)

Premiums for Workers' Compensation Carve-Out are entered in Column (1) for this line, but no RBC Requirement is calculated in Column (2). The RBC Requirement assessed on these premiums can be found on page LR021 Underwriting Risk – Other, Line (4).

Line (32)

It is anticipated that most health premium will have been included in one of the other lines. In the event that some coverage does not fit into any of these categories, the "Other Health" category continues the RBC factor from the 1998 and prior formula for Other Limited-Benefit Anticipating Rate Increases.

**Stop Loss Electronic Only Tables**

The Health Risk-Based Capital (E) Working Group revised the stop loss factors in 2017. The American Academy of Actuaries submitted a report to the Health Risk-Based Capital (E) Working Group and suggested that the factors be revised based on data from 1998-2008. The Health Risk-Based Capital (E) Working Group agreed to continue analyzing the stop loss factors as a result of the changes to life time maximum amounts included in the Federal Affordable Care Act.

**Electronic Table 1 – Stop Loss Interrogatories**

The interrogatories are designed to gather the information by product type and will be reviewed on a go forward basis. The data will be used in the continued evaluation of the factors. The data collected will be collected on a one-year run-out basis. For example, the RBC filed at year-end 2018, will reflect the incurred data for calendar year 2017 run-out through December 31<sup>st</sup>, 2018.

For those insurers where the stop loss gross premium written is both under \$2,000,000 and is less than 10% of the insurer's total gross premium written are exempt from completing Table 1.

The categories used in the interrogatories are separated as follows:

**Product Type**

**Specific Stop Loss = (including aggregated specific). This coverage was included in the 1998 to 2008 factor development.**  
**Aggregate Stop Loss = This coverage was included in the 1998 to 2008 factor development.**

HMO Reinsurance = specific reinsurance of an HMO's commercial, Medicare, Medicaid or Point of Service products. This coverage was not included in the 1998 to 2008 factor development.  
Provider Excess = specific excess written on Providers including IPAs, hospitals, clinics. This coverage was not included in the 1998 to 2008 factor development.  
Medical Excess Reinsurance = specific reinsurance of an insurance company's medical business (first dollar or self-insured). This coverage was not included in the 1998 to 2008 factor development.

Please do not include quota share or excess reinsurance written on Stop Loss business.

Calendar Year - Submit experience information for the calendar year preceding the year for which the RBC report is being filed; e.g., the RBC report filed for 2018 should provide experience information for calendar year 2017 with run-out through December 31<sup>st</sup>, 2018.

Total [Gross/Net] Premium - This is the [gross/net] premium revenue, [before/after] ceded reinsurance and including commissions. Report the data as reported for the prior calendar year including amounts paid for the prior year through the end of the current calendar year. Do not adjust for any anomalies in the experience.

Total Gross Claims + Expenses =

Total Gross Claims - These are the gross incurred claims, before ceded reinsurance. Do not adjust for any anomalies in the experience. Claims are defined as claims incurred during prior calendar year and paid through the end of the current calendar (reporting) year, plus any remaining gross claim liability.

+

Expenses - These are the gross incurred expense during the prior calendar year and paid through the end of the current reporting year plus any incurred expenses that are unpaid as of the end of the run-out period. Premium tax amounts should be included in the expense amounts; however, income taxes would be excluded.

Gross Combined Ratio - This is equal to (Total Gross Claims + Expenses) / Total Gross Premium.

Premiums Net of Reinsurance - This is the net premium revenue, net of reinsurance. Report data as reported in the annual statement and do not adjust for any anomalies in the experience.

Total Net Claims + Expenses =

Total Net Claims - These are the net incurred claims after ceded reinsurance. Do not adjust for any anomalies in the experience. Claims are defined as claims incurred during prior calendar year and paid through the end of the current calendar (reporting) year, plus any remaining net claim liability.

+

Expenses - These are the net incurred expenses during the prior calendar year and paid through the end of the current reporting year plus any incurred expenses that are unpaid as of the end of the run-out period. Premium tax amounts should be included in the expense amounts; however, income taxes would be excluded.

Net Combined Ratio - This is equal to I(Total Net Claims + Expenses)/Premiums Net of Reinsurance.

Table 2 - Calendar Year Stop Loss Contracts By Group Size

For those insurers where the stop loss gross premium written is both under \$2,000,000 and is less than 10% of the insurer's total gross premium written are exempt from completing Table 2.

Report the number of groups, average specific attachment point and average aggregate attachment as of December 31<sup>st</sup> of the calendar (reporting) year.

The number of covered lives in a group (group size) should be based on the size of the group as of December 31 of the calendar year. The number of covered lives counted should include all enrolled members (that is, employees plus dependents).

Number of Groups – list the number of groups for each stop loss contract based on the number of covered lives in the group.

Average Specific Attachment Point - The average should be weighted by the number of covered lives in the respective group size bracket, excluding the count of covered lives within the denominator where specific/aggregate coverage was not provided.

Average Aggregate Attachment Percentage – Is based on expected claims. Subgroups of groups that have separate stop loss contracts should be aggregated in terms of determining the group size. The average should be weighted by the number of covered lives in the respective group size bracket, excluding the count of covered lives within the denominator where specific/aggregate coverage was not provided.

Not for Distribution

## UNDERWRITING RISK – EXPERIENCE FLUCTUATION RISK

### LR020

The underwriting risk generates the RBC requirement for the risk of fluctuations in underwriting experience. The credit that is allowed for managed care in this worksheet comes from LR022 Underwriting Risk – Managed Care Credit.

Underwriting risk is present when the next dollar of unexpected claims payments comes directly out of the company's capital and surplus. It represents the risk that the portion of premiums intended to cover medical expenses will be insufficient to pay such expense. For example, an insurer may charge an individual \$100 in premium in exchange for a guaranty that all medical costs will be paid by the insurer. If the individual incurs \$101 in claims costs, the company's surplus will decline because it did not charge a sufficient premium to pick up the additional risk for that individual.

There are other arrangements where the insurer is not at risk for excessive claims payments, such as when an insurer agrees to serve as a third-party administrator for a self-insured employer. The self-insured employer pays for actual claims costs, so the risk of excessive claims experience is borne by the self-insured employer, not the insurer. The underwriting risk section of the RBC formula, therefore, requires some adjustments to remove non-risk business (premiums and claims) before the RBC requirement is calculated.

For Stand-Alone Medicare Part D Coverage, the reduction in uncertainty comes from two federal supports. The reinsurance coverage is optional in that a plan sponsor may elect to participate in the Part D Payment Demonstration. The risk corridor protection is expected to have less impact after the first few years. To allow flexibility within the RBC formula, Lines (10) through (13) of LR022 will be used to give credit for the programs in which the plan sponsor participates. While all PDPs will have formularies and may utilize other methods to reduce uncertainty, for the near future no other managed care credits are allowed for the coverage.

### Claims Experience Fluctuation

The RBC requirement for claims experience fluctuation is based on the greater of the following calculations:

- A. Underwriting risk revenue times the underwriting risk claims ratio times a set of factors.  
or
- B. An alternate risk charge that addresses the risk of catastrophic claims on any single individual. The alternate risk charge is calculated for each type of health coverage, but only the largest value is compared to the value from A. above for that type. The alternate risk charge is equal to a multiple of the maximum retained risk on any single individual in a claims year. The maximum retained risk (level of potential claim exposure) is capped at two times the maximum or \$1,500,000 for Comprehensive Medical; two times the maximum or \$50,000 for each of Medicare Supplement business and dental coverage and six times the maximum or \$150,000 for Stand-Alone Medicare Part D coverage.

### Line (1) through Line (18)

There are four lines of business used in the life RBC formula for calculating the RBC requirement in this worksheet. Other health coverages will continue to use the factors on LR019 Health Premiums. The four lines of business are: Column (1) Comprehensive Medical and Hospital; Column (2) Medicare Supplement; Column (3) Dental & Vision; and Column (4) Stand-Alone Medicare Part D coverage. Each of the four lines of business has its own column in the Underwriting Risk - Experience Fluctuation Risk table. The categories listed in the columns of this worksheet include premium plus all risk revenue that is received from another reporting entity in exchange for medical services provided to its members.

The descriptions of the items are as follows:

Comprehensive Medical & Hospital

Includes policies providing for medical coverages, including hospital, surgical, major medical, Medicare risk coverage (but NOT Medicare supplement) and Medicaid risk coverage. This includes Medicare Advantage, with or without prescription drug benefits. This category DOES NOT include administrative services contracts (ASC) or administrative services only (ASO) contracts. These programs are reported in the Business Risk section of the form. Whether does it include Federal Employees Health Benefits Program (FEHBP) business, which is reported on LR021 Underwriting Risk – Other, Line (3). The alternative risk charge, which is twice the maximum retained risk after reinsurance on any single individual, cannot exceed \$1,500,000.

Medical Only (non-hospital professional services)

Include in Comprehensive Medical.

Medicare Supplement

This is business reported in the Medicare Supplement Insurance Experience Exhibit of the annual statement. Medicare risk business is reported under comprehensive medical and hospital.

Dental & Vision

These are premiums for policies providing for dental or vision-only coverage issued as stand-alone dental or as a rider to a medical policy that is not related to the medical policy through deductibles or out-of-pocket limits.

Stand-Alone Medicare Part D Coverage

Includes policies and contracts providing the standard coverage for individuals enrolled in Stand-Alone Medicare Part D and the insurance is a federally approved PDP with risk corridor protection. It does not include risk revenue for Supplemental benefits within Stand-Alone Medicare Part D coverage that is a portion of the PDP's approved package. It does not include employer coverage unless the coverage meets the above criteria. Where there is a federal subsidy to the employer in lieu of risk corridor protection, the premiums are to be reported as "Other Health."

Other Health Coverages

Include in the appropriate line on LR019 Health Premiums.

The following paragraphs explain the meaning of each line of the worksheet table for computing the experience fluctuation underwriting risk RBC.

Line (1) Premium

This is the amount of money charged by the insurer for the specified benefit plan. It is the earned premium, net of reinsurance. It does not include receipts under administrative services only (ASO) contracts; or administrative services contracts (ASC); or any non-risk business; or premium for the Federal Employees Health Benefit Programs (FEHBP), which has a risk factor relating to incurred claims reported separately under LR021 Underwriting Risk – Other, Line (3).

NOTE: Where premiums are paid on a monthly basis, they are generally fully earned at the end of the month for which coverage is provided. In cases where the mode of payment is less frequent than monthly, a portion of the premium payment will be unearned at the end of any given reporting period.

For Stand-Alone Medicare Part D Coverage, this will include only certain amounts paid by the individual, an employer or CMS. See Appendix 3 for details of what is and is not premium income.



Line (2) Title XVIII Medicare

This is the earned amount of money charged by the insurer (net of reinsurance) for Medicare risk business where the insurer, for a fee, agrees to cover the full medical costs of Medicare subscribers. This includes the premium and federal government's direct subsidy for prescription drug coverage under MA-PD-plans.

Line (3) Title XIX Medicaid

This is the earned amount of money charged by the insurer for Medicaid risk business where the insurer, for a fee, agrees to cover the full medical costs of Medicaid subscribers. Revenue from Stand-Alone Medicare Part D coverage under the low-income subsidy (cost sharing portion) and low-income subsidy (premium portion) are not included in this line.

Line (4) Other Health Risk Revenue

Earned amounts charged by the reporting company as a provider or intermediary for specified medical (e.g., full professional, dental, radiology, etc.) services provided to the policyholders or members of another insurer or managed care organization (MCO). Unlike premiums, which are collected from an employer group or individual member, risk revenue is the prepaid (usually on a capitated basis) payments, made by another insurer or MCO to the company in exchange for services to be provided or offered by such organization. Payments to providers under risk revenue arrangements are included in the RBC calculation as underwriting risk revenue and are included in the calculation of managed care credits. Exclude fee-for-service revenue received by the company from another reporting entity. This revenue is reported in the business risk section of the formula as health ASO/ASC and limited risk revenue.

Line (5) Underwriting Risk Revenue

The sum of Lines (1.3) through (4).

Line (6) Net Incurred Claims

Claims incurred (paid claims + change in unpaid claims) during the reporting year (net of reinsurance) that are arranged for or provided by the insurer. Paid claims includes capitation and all other payments to providers for services to covered lives, as well as reimbursement directly to insureds (or their providers) for covered services. Paid claims also include salaries paid to company employees that provide medical services to covered lives and related expenses. Line (6) does not include ASC payments or Federal Employees Health Benefit Program (FEHBP) claims.

Column (1) claims come from Schedule H, Part 5, Column 1 Line 13 less the amounts reported as incurred claims for administrative services contracts (ASC) in Line (51) of LR029 Business Risk and Federal Employee Health Benefit Program (FEHBP) in Line (3) LR021 Underwriting Risk – Other. Note that Medicare supplement claims could be double-counted if included in Column 1 of Schedule H, Part 5 rather than Column 3. Column (2) for Medicare supplement should be net of reinsurance, the same as the other columns. Column (2) for Medicare supplement should use the direct claims from General Interrogatories Part 2, Line 1.5 after adjusting them for reinsurance. Column (3) dental claims come from Schedule H, Part 5, Column 2, Line 13.

For Stand-Alone Medicare Part D Coverage, net incurred claims should reflect claims net of reinsurance coverage (as defined in Appendix 3). Where there has been prepayment under the reinsurance coverage, paid claims should be offset from the cumulative deposits. Unpaid claim liabilities should reflect expected recoveries from the reinsurance coverage – for claims unpaid by the PDP or for amounts covered under the reinsurance coverage that exceed the cumulative deposits. Where there has not been any prepayment under the reinsurance coverage, unpaid claim liabilities should reflect expected amounts still due from CMS.

Line (7) Fee-for-Service Offset

Report fee-for-service revenue that is directly related to medical expense payments. The fee-for-service line does not include revenue where there is no associated claim payment (e.g., fees or charges to non-member/insured of the company where the provider of the service receives no additional compensation from the company) and when such revenue was excluded from the pricing of medical benefits.

Line (8) Underwriting Risk Incurred Claims

Line (6) minus Line (7).

Line (9) Underwriting Risk Claims Ratio

Line (8) / Line (5). If either Line (5) or Line (8) is zero or negative, Line (9) is zero.

Line (10) Underwriting Risk Factor

A weighted average factor based on the amount reported in Line (5), Underwriting Risk Revenue.

	\$0 - \$3 Million	\$3 - \$25 Million	Over \$25 Million
Comprehensive Medical	0.150	0.150	0.090
Medicare Supplement	0.105	0.067	0.067
Dental	0.120	0.076	0.076
Stand-Alone Medicare Part D Coverage	0.251	0.251	0.151

Line (11) Base Underwriting Risk RBC

Line (5) x Line (9) x Line (10.3).

Line (12) Managed Care Discount

For Comprehensive Medical & Hospital, Medicare Supplement (including Medicare Select) and Dental managed care discount, based on the type of managed care arrangements an organization has with its providers, is included to reflect the reduction in the uncertainty about future claims payments attributable to the managed care arrangements. The discount factor is from Column (3) Line (17) of LR022 Underwriting Risk – Managed Care Credit. An average factor based on the combined results of these three categories is used for all three.

For Stand-Alone Medicare Part D Coverage, a separate managed care discount (or federal program credit) is included to reflect only the reduction in uncertainty about future claims payments attributable to federal risk arrangements. The discount factor is from Column (3), Line (17) of LR022 Underwriting Risk – Managed Care Credit.

Line (13) Base RBC After Managed Care Discount

Line (11) x Line (12).

Line (14) RBC Adjustment for Individual

The average experience fluctuation risk charge is increased by 20 percent for the portion relating to individual medical expense premiums in Column (1). Other types of health coverage do not differentiate individual and group. The additional time necessary to develop sufficient data to make a premium filing with states and then to implement the premium increase was modeled to calculate this factor.

Line (15) Maximum Per-Individual Risk After Reinsurance

This is the maximum loss after reinsurance for any single individual. Where specific stop-loss reinsurance protection is in place, the maximum per-individual risk after reinsurance is equal to the highest attachment point on such stop-loss reinsurance, subject to the following:

- Where coverage under non-cessional reinsurance or stop-loss protection with the highest attachment point is capped at less than \$750,000 per insured for comprehensive medical and \$25,000 for the other three lines, the maximum retained loss will be equal to such attachment point plus the difference between the coverage maximum per claim and \$750,000 or \$25,000, whichever is applicable.

- Where the non-proportional reinsurance or stop-loss protection is subject to participation by the company, the maximum retained risk as calculated above will be increased by the company's participation in claims in excess of the attachment point, but not to exceed \$750,000 for comprehensive medical and \$25,000 for the other three coverages.

If there is no specific stop-loss or reinsurance in place, enter the largest amount payable (within a calendar year), or \$9,999,999, if there is no limit.

Examples of the calculation are presented below:

EXAMPLE 1 (Insurer provides Comprehensive Care):

Highest Attachment Point (Retention) Reinsurance Coverage	\$100,000
Maximum Reinsured Coverage	90% of \$500,000 in excess of \$100,000 \$600,000 (\$100,000 + \$500,000)
Maximum Retained Risk =	\$100,000 deductible +\$150,000 (\$750,000 - \$600,000) +\$50,000 (10% of \$500,000 coverage layer) =\$300,000

EXAMPLE 2 (Insurer provides Comprehensive Care):

Highest Attachment Point (Retention) Reinsurance Coverage	\$75,000
Maximum Reinsured Coverage	90% of \$1,000,000 in excess of \$75,000 \$1,075,000 (\$75,000 + \$1,000,000)
Maximum Retained Risk =	\$75,000 deductible + 0 (\$750,000 - \$1,075,000) +\$67,500 (10% of \$675,000 coverage layer) =\$142,500

Line (16) Alternate Risk Charge

Twice the amount in Line (15), subject to a maximum of \$1,500,000 for comprehensive medical and \$50,000 for Medicare Supplement and Dental. Six times the amount in Line (15), subject to a maximum of \$150,000 for Stand-Alone Medicare Part D coverage.

Line (17) Net Alternate Risk Charge

The largest value from Line (16) is retained for that column in Line (17) and all others are ignored.

Line (18) Net Underwriting Risk RBC

The maximum of Line (14) and Line (17)

## UNDERWRITING RISK - OTHER

LR021

### Lines (1) and (2)

In addition to the general risk of fluctuations in the claims experience, there is an additional risk generated when insurers guarantee rates for extended periods beyond one year. If rate guarantees are extended between 15 and 36 months from policy inception, a factor of 0.024 is applied against the direct premiums earned for those guaranteed policies. Where a rate guaranty extends beyond 36 months, the factor is increased to 0.064. This calculation only applies to those lines of accident and health business that include a medical trend risk (i.e., comprehensive medical, Medicare supplement, dental, Stand-Alone Medicare Part D Coverage, stop-loss and multiple premium and other limited benefits anticipating rate increases). Premiums entered should be the earned premium for the current calendar year period and not for the entire period of the rate guarantee. Premium amounts should be shown net of reinsurance only when the reinsurance ceded premium is also subject to the same rate guarantee.

### Line (3)

A separate risk factor has been established to recognize the reduced risk associated with safeguards built into the Federal Employees Health Benefit Program (FEHBP) created under Section 8909(f)(1) of Title 5 of the United States Code. Claims incurred are multiplied by 2 percent to determine total underwriting RBC on this business.

### Lines (4) through (6)

Separate risk factors have been established for Workers' Compensation Carve-Out business. RBC factors for the Workers' Compensation Carve-Out was phased in over three years in even increments beginning in 2004 and concluding in 2006. A factor of 0.364 is applied against net premiums written as shown in the Workers' Compensation Carve-Out Supplement. A factor of 0.347 is applied against total net losses and expenses unpaid as shown in Schedule P, Part 1 of the Workers' Compensation Carve-Out Supplement. These factors are taken from the industry component used in the P&C RBC formula for workers compensation reinsurance assumed.

A factor of 0.060 is applied against reinsurance recoverable balances on reinsurance ceded non-affiliated companies (except certain pools), as shown in Schedule F, Part 2 of the Workers' Compensation Carve-Out Supplement. This factor represents the difference between the total charge for reinsurance recoverables in the P&C RBC formula and the effective post-tax factor already reflected in the Life formula on LR016 Reinsurance. The following types of cessions are exempt from this charge: cessions to State Mandated Involuntary Pools and Associations or to Federal Insurance Programs, cessions to qualifying Voluntary Market Mechanism Pools and Associations (where there is joint liability for pool members along with adequate spread of risk, such that the risk of the pool collapsing from one or a few individual member solvency problems is immaterial), and cessions to U.S. Parents, Subsidiaries and Affiliates. Qualifying Voluntary Market Mechanism Pools must be manually entered on Line (6.1) to receive the exemption.

## UNDERWRITING RISK - MANAGED CARE CREDIT

LR022

This worksheet LR022 Underwriting Risk - Managed Care Credit is optional. It may be completed for only part of the comprehensive medical dental business, Stand-Alone Medicare Part D Coverage or all of them. Line (1) will be filled in as a balancing item if any of Lines (2) through (8) are entered (and then Line (9) will be required).

The effect of managed care arrangements on the variability of underwriting results is the fundamental difference between coverages subject to the managed care credit and pure indemnity insurance. The managed care credit is used to reduce the RBC requirement for experience fluctuations. It is important to understand that the managed care credit is based on the reduction in uncertainty about future claims payments, not on any reduction in the actual level of cost. Those managed care arrangements that have the greatest reduction in the uncertainty of claims payments receive the greatest credit, while those that have less effect on the predictability of claims payments engender less of a discount.

There are five levels of managed care that are used in the RBC formulas other than for Stand-Alone Medicare Part D Coverage, although in the future as new managed care arrangements evolve, the number of categories may increase or new arrangements may be added to the existing categories. The managed care categories are:

- Category 0 - Arrangements not Included in Other Categories
- Category 1 - Contractual Fee Payments
- Category 2 - Bonus / Withhold Arrangements
- Category 3 - Capitation
- Category 4 - Non-contingent Expenses and Aggregate Cost Arrangements and Certain PSO Capitated Arrangements

For Stand-Alone Medicare Part D Coverage, the reduction in uncertainty comes from two federal supports. The reinsurance coverage is optional in that a plan sponsor may elect to participate in the Part D Payment Demonstration. The risk corridor protection is expected to have less impact after the first few years. To allow flexibility within the RBC formula, Lines (10) through (13) will be used to give credit for the programs in which the plan sponsor participates. While all PDPs will have formularies and may utilize other methods to reduce uncertainty, for the near future no other managed care credits are allowed for this coverage.

The managed care credit is based on the percentage of paid claims that fall into each of these categories. Total claim payments are allocated among these managed care “buckets” to determine the weighted average discount, which is then used to reduce the Underwriting Risk-Experience Fluctuation RBC. Paid claims are used instead of incurred claims due to the variability of reserves (unpaid claims) in incurred claim amounts and the difficulty in allocating reserves (unpaid claims) by managed care category.

In some instances, claims payments may fit into more than one category. If that occurs, enter the claims payments into the highest applicable category. CLAIMS PAYMENTS CAN ONLY BE ENTERED INTO ONE OF THESE CATEGORIES! The total of the claims payments reported in the managed care worksheet should equal the total year’s paid claims. Category 2a, Category 2b and Category 3c are not allowed to include non-regulated intermediaries who are affiliated with the reporting company in order to insure that true risk transfer is accomplished.

Line (1)

Category 0 - Arrangements not Included in Other Categories. There is a zero managed care credit for claim payments in this category, which includes:

- Fee for service (charges).
- Discounted fee for service (based upon charges).
- Usual customary and reasonable (UCR) schedules.
- Relative value scale (RVS), where neither payment base nor RV factor is fixed by contract or where they are fixed by contract for one year or less.
- Retroactive payments to capitated providers or intermediaries, whether by capitation or other payment method (excluding retroactive withholds later released to the provider and retroactive payments made solely because of a correction to the number of members within the capitated agreement).
- Capitation paid to providers or intermediaries that have received retroactive payments for previous years (including bonus arrangements on capitation programs).
- Claim payments not included in other categories.

Line (2)

Category 1 - Payments Made According to Contractual Arrangements. There is a 15 percent managed care credit for payments included in this category:

- Hospital per diems, diagnostic related groups (DRGs) or other hospital case rates.
- Non-adjustable professional case and global rates.
- Provider fee schedules.
- Relative value scale (RVS), where the payment base and RV factor are fixed by contract for more than one year.

Line (3)

Category 2a - Payments Made Subject to Withholds or Bonuses with No Other Managed Care Arrangements. This category may include business that would have otherwise fit into Category 0. That is, there may be a bonus/withhold arrangement with a provider who is reimbursed based on a UCR schedule (Category 0).

The maximum Category 2a managed care credit is 25 percent. The credit is based upon a calculation that determines the ratio of withholds returned and bonuses paid to providers during the prior year to total withholds and bonuses available to the providers during that year. That ratio is then multiplied by the average provider withhold ratio for the prior year to determine the current year's Category 2a managed care credit factor. Bonus payments that are not related to financial results are not included (e.g., patient satisfaction). Therefore, the credit factor is equal to the result of the following calculation:

EXAMPLE - 1998 Reporting Year

1997 withhold / bonus payments	750,000
1997 withholds / bonuses available	1,000,000
A. MCC Factor Multiplier 75% - Eligible for credit	750,000
1997 withholds / bonuses available	1,000,000
1997 claims subject to withhold -gross†	5,000,000
B. Average Withhold Rate 20%	
Category 2 Managed Care Credit Factor (A x B)	15%

The resulting factor is multiplied by claims payments subject to withhold - net‡ in the current year.

† These are amounts due before deducting withhold or paying bonuses.

‡ These are actual payments made after deducting withhold or paying bonuses.

Enter the paid claims for the current year where payments to providers were subject to withholds and bonuses, but otherwise had no managed care arrangements.

Line (4)

Category 2b - Payments Made Subject to Withholds or Bonuses That Are Otherwise Managed Care Category 1. Category 2b may include business that would have otherwise fit into Category 1. That is, there may be a bonus/withhold arrangement with a provider who is reimbursed based on a provider fee schedule (Category 1). The Category 2 discount for claims payments that would otherwise qualify for Category 1 is the greater of the Category 1 factor or the calculated Category 2 factor.

The maximum Category 2b managed care credit is 25 percent. The minimum of Category 2b managed care credit is 15 percent (Category 1 credit factor). The credit calculation is the same as found in the previous example for Category 2a.

Enter the paid claims for the current year where payments to providers were subject to withholds and bonuses AND where the payments were made according to one of the contractual arrangements listed for Category 1.

Line (5)

Category 3a - Capitated Payments Directly to Providers. There is a managed care credit of 60 percent for claims payments in this category, which includes:

- All capitation or percent of volume payments directly to licensed providers.

Enter the amount of claims payments paid DIRECTLY to licensed providers on a capitated basis.

Line (6)

Category 3b - Capitated Payments to Regulated Intermediaries. There is a managed care credit of 60 percent for claims payments in this category, which includes:

- All capitation or percent of premium payments to regulated intermediaries that, in turn, pay licensed providers.

Enter the amount of medical expense capitations paid to regulated intermediaries (see Appendix 2 for definition). In those cases where the capitated regulated intermediary employs providers and pays them non-contingent salaries or otherwise qualifies for Category 4, the insurer may include that portion of such capitated payments in Category 4.

Line (7)

Category 3c - Capitated Payments to Non-Regulated Intermediaries. There is a managed care credit of 60 percent for claims payments in this category, which includes:

- All capitated or percent of premium payments to non-affiliated intermediaries that, in turn, pay licensed providers (subject to a 5 percent limitation on payments to providers or other corporations that have no contractual relationship with such intermediaries). Amounts greater than the 5 percent limitation should be reported in Category 0).

Enter the amount of medical expense capitations paid to non-regulated intermediaries not affiliated with the reporting company. Do not include the amount of medical expense capitations paid to non-regulated intermediaries affiliated with the reporting company. These amounts should be reported in Category 0. Non-regulated intermediaries are those organizations that meet the definition in Appendix 2 for Intermediary but not regulated intermediary. In those cases where the capitated non-regulated intermediary (even if affiliated) employs providers and pays them non-contingent salaries or otherwise qualifies for Category 4, the insurer may include that portion of such capitated payments in Category 4.

IN ORDER TO QUALIFY FOR ANY OF THE CAPITATION CATEGORIES, SUCH CAPITATION MUST BE FIXED (AS A PERCENTAGE OF PREMIUM OR FIXED DOLLAR AMOUNT PER MEMBER) FOR A PERIOD OF AT LEAST 12 MONTHS. Where an arrangement contains a provision for prospective revision within a 12-month period, the entire arrangement shall be subject to a managed care credit that is calculated under Category 1 for a provider, and for an intermediary at the greater of Category 1 or a credit calculated using the underlying payment method(s) to the providers of care. Where an arrangement contains a provision for retroactive revisions either within or beyond a 12 month period, the entire arrangement shall be subject to a managed care credit that is calculated under Category 0 for both providers and intermediaries.

Line (8)

Category 4 - Medical & Hospital Expense Paid as Salary to Providers. There is a managed care credit of 75 percent for claims payments in this category. Once claims payments under this managed care category are totaled, any fee for service revenue from insured plans (i.e., ASO or ASC) that was included on Line (7) in the underwriting risk section should be deducted before applying the managed care credit factor.

- Non-contingent salaries to persons directly providing care.
- The portion of payments to affiliated entities passed on as non-contingent salaries to persons directly providing care where the entity has a contract only with the company.
- All facilities-related medical expenses and other provider medical costs generated within health facility that is owned and operated by the insurer.
- Aggregate cost payments.

Salaries paid to doctors and nurses whose sole corporate purpose is utilization review are also included in this category if such payments are classified as “medical expense” payments (paid claims) rather than administrative expenses. The Aggregate Cost method of reimbursement means where a health plan has a reimbursement plan with a corporate entity that directly provides care, where (1) the health plan is contractually required to pay the total operating costs of the corporate entity, less any income to the entity from other users of services; and (2) there are mutual unlimited guarantees of solvency between the entity and the health plan, which put their respective capital and surplus at risk in guaranteeing each other.

Line (9)

Subtotal Paid Claims – The total of Column (2) paid claims should equal the total claims paid for the year as reported in Schedule H, Part 5, Columns 1 and 2, Line A.4 of the annual statement.

Line (10)

Category 0 for Stand-Alone Medicare Part D Coverage would be all claims during a period where neither the reinsurance coverage or risk corridor protection is provided.

Line (11)

Category 1 for Stand-Alone Medicare Part D Coverage would be for all claims during a period when only the reinsurance coverage is provided. This is designed for some future time period and is not to be interpreted as including employer-based Part D coverage that is not subject to risk corridor protection.

Line (12)

Category 2a for Stand-Alone Medicare Part D Coverage would be for all claims during a period when only the risk corridor protection is provided.

Line (13)

Category 3a for Stand-Alone Medicare Part D Coverage would be for all claims during a period when both reinsurance coverage and risk corridor protection are provided.

Line (16)

Weighted Average Managed Care Discount – The amounts in Column (3) and Column (4) are calculated by dividing the total weighted claims in Column (3) by the total claims paid in Column (2) for Lines (9) and (14) respectively.

Line (17)

Weighted Average Managed Care Risk Adjustment Factor – These are the credit factors that are carried back to the underwriting risk calculation. They are one minus the Weighted Average Managed Care Discount (Line (16)).

Lines (18) through (24)

Lines (18) through (24) are the calculation of the weighted average factor for the Category 2 claims payments subject to withholds and bonuses. This table requires data from the PRIOR YEAR to compute the current year’s discount factor.

Line (18)

Enter the prior year’s actual withhold and bonus payments.

Line (19)

Enter the prior year’s withholds and bonus payments that were available for payment in the prior year.



Line (20)  
Divides Line (18) by Line (19) to determine the portion of withholdings and bonuses that were actually returned in the prior year.

Line (21)  
Equal to Line (19) and is automatically pulled forward.

Line (22)  
Claims payments that were subject to withholdings and bonuses in the prior year. Equal to Line (3) + Line (4) of LR022 Underwriting Risk – Managed Care Credit FOR THE PRIOR YEAR.

Line (23)  
Divides Line (21) by Line (22) to determine the average withhold rate for the prior year.

Line (24)  
Multiplies Line (20) by Line (23) to determine the discount factor for Category 2 claims payments in the current year, based on the performance of the insurer's withhold/bonus program in the prior year.

Not for Distribution

## LONG-TERM CARE LR023

The long-term care morbidity risk is calculated in part based on the current year's earned premium. The premium is separated into the total not to exceed \$50,000,000 to which a larger factor is applied and amounts in excess of \$50,000,000, to which a lower factor is applied. This is done in Lines (1) through (5) of the R023 Long-Term Care.

Another portion of the morbidity risk is applied to incurred claims. This is done in Lines (4.1) through (6). To reduce the volatility of claims, the current and prior year's results are averaged using loss ratios. This is done in Lines (4.1) through (4.3). The average loss ratio is applied to the current year's earned premium to get Adjusted LTC Claims for RBC in Line (5). To allow for those situations where either there is no positive earned premium or one of the loss ratios is negative, the RBC formula uses the actual incurred claims for the current year. The claims-based RBC is separated into amounts up to \$35,000,000, to which a higher factor is applied in Line (6.1) and amounts in excess of \$35,000,000 in Line (5.2). In addition, if Line (1), Column (1) is not positive, a larger factor is applied to actual incurred claims (if positive) to reflect the fact that there is no premium-based RBC.

## LIFE INSURANCE LR025

### *Basis of Factors*

The factors chosen represent surplus needed to provide for excess claims over expected, based on random fluctuations and from inaccurate pricing for future levels of claims. For a large number of trials, each insured either lives or dies based on a "roll of the dice" reflecting the probability of death from both normal and excess claims. The present value of the claims generated by this process, less expected claims, will be the amount of surplus needed under a random trial. The factors chosen under the formula produce a level of surplus at least as much as needed in 95 percent of the trials.

The model was developed for portfolios of 10,000, 100,000 and one million lives, and it was found that the surplus needs decreased with larger portfolios, consistent with the law of large numbers.

Net amount at risk was chosen as a base because expected claims are difficult to calculate on a consistent basis from company to company.

*Specific Instructions for Application of the Formula*

Annual statement reference is for the total net amount at risk for the category (e.g., Individual & Industrial is one category). The net amount at risk is then further broken down by size as in a tax table to reflect the decrease in risk for larger blocks of life insurance. This breakdown will not appear on the RBC filing software or on the printed copy, as the application of factors to amounts in force is completed automatically. The calculation is as follows:

<p><u>Line (8)</u></p> <p><u>Individual &amp; Industrial</u></p> <p>First 500 Million</p> <p>Next 4,500 Million</p> <p>Next 20,000 Million</p> <p>Over 25,000 Million</p> <p>Total Individual &amp; Industrial Net Amount at Risk</p>	<p>(1)</p> <p><u>Statement Value</u></p> <p>X <b>0.00223</b> =</p> <p>X <b>0.00146</b> =</p> <p>X <b>0.00116</b> =</p> <p>X 0.0009 =</p>	<p><u>RBC Requirement</u></p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>
<p><u>Line (20)</u></p> <p><u>Group &amp; Credit</u></p> <p>First 500 Million</p> <p>Next 4,500 Million</p> <p>Next 20,000 Million</p> <p>Over 25,000 Million</p> <p>Total Group &amp; Credit Net Amount at Risk (less FEGLI &amp; SGLI in force)</p>	<p>(2)</p> <p><u>Statement Value</u></p> <p>X <b>0.00175</b> =</p> <p>X <b>0.00116</b> =</p> <p>X <b>0.00087</b> =</p> <p>X <b>0.00078</b> =</p>	<p><u>RBC Requirement</u></p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p> <p>_____</p>

All amounts should be entered as required. The risk-based capital software will calculate the RBC requirement for individual and industrial and for group and credit.

## PREMIUM STABILIZATION RESERVES

LR026

### *Basis of Factors*

Premium stabilization reserves are funds held by the company in order to stabilize the premium a group policyholder must pay, from year to year. Usually, experience rating refunds are accumulated in such a reserve so they can be drawn upon in the event of poor future experience. This reduces the insurer's risk. Amounts held as prepayments from the federal government for reinsurance coverage or low-income subsidy (cost-sharing portion) under Stand-Alone Medicare Part D Coverage are not considered premium stabilization reserves as they relate to an uninsured plan.

For group life and health insurance, 50 percent of premium stabilization reserves held in the annual statement as a liability (not as appropriated surplus) are permitted as an offset up to the amount of risk-based capital. The 50 percent factor was chosen to approximate the portion of premium stabilization reserves that would be an appropriate offset if the formula were applied on a contract-by-contract basis, and the reserve offset was limited to the amount of risk-based capital required for each contract. Life and health coverages are aggregated due to many companies combining these coverages.

No credit should be given here for any premium stabilization reserves held in connection with stand-alone Medicare Part D Coverage (i.e., amounts held as liabilities to the federal government under the risk-corridor mechanism), since Medicare Part D Coverage premium is already subject to a lower factor in the underwriting risk calculation to reflect the reduced net level of risk. As such, the company must exclude all amounts relating to stand-alone Medicare Part D Coverage in determining the amount of reserves to be reported here.

### *Specific Instructions for Application of the Formula*

There is some variance for reporting liabilities that are appropriately considered premium stabilization reserves. These possible annual statement sources are noted.

The sum of these various types of premium stabilization reserves equals the preliminary premium stabilization reserve credit. The final premium stabilization reserve credit is limited to the risk-based capital previously calculated. Since the limitation is applied on an aggregate basis, there is no need to differentiate the premium stabilization reserve between life and health.

## INTEREST RATE RISK AND MARKET RISK

### LR027

The following instructions for the Interest Rate Risk and Market Risk will remain effective independent of the status of the sunset provisions provided in Section 8, of AG 48 in a particular state or jurisdiction. This instruction will be considered for change once the amendment referenced in AG 48, Section 8, regarding credit reinsurance, is adopted by the NAIC.

#### *Basis of Factors*

The interest rate risk is the risk of losses due to changes in interest rate levels. The factors chosen represent the surplus necessary to provide for a lack of synchronization of asset and liability cash flows.

The impact of interest rate changes will be greatest on those products where the guarantees are most in favor of the policyholder and where the policyholder is most likely to be responsive to changes in interest rates. Therefore, risk categories vary by withdrawal provision. Factors for each risk category were developed based on the assumption of well matched asset and liability durations. A loading of 50 percent was then added on to represent the extra risk of less well-matched portfolios. Companies must submit an unqualified actuarial opinion based on asset adequacy testing to be eligible for a credit of one-third of the RBC otherwise needed. The interrogatory on Line (1.1) should be answered Yes if the opinion is unqualified. It should also be answered Yes if the opinion is qualified but the only reason for qualification of the opinion is because of the direction provided in Actuarial Guideline XLVIII.

Consideration is needed for products with credited rates tied to an index, as the risk of synchronization of asset and liability cash flows is tied not only to changes in interest rates but also to changes in the underlying index. In particular, equity-indexed products have recently grown in popularity with many new product variations evolving. The same C-3 factors are to be applied for equity-indexed products as for their non-indexed counterparts; i.e., based on guaranteed values ignoring those related to the index.

In addition, some companies may choose to or be required to calculate part of the RBC on Certain Annuities and Single Premium Life Insurance under a method using cash flow testing techniques. Refer to LR049 Exemption Test: Cash Flow Testing for C-3 RBC for determination of exemption from this cash flow testing requirement.

Reserves on Certain Annuities and Single Premium Life Insurance that were Cash Flow Tested for Asset Adequacy – Factor-Based RBC  
See Appendix 1 of the instructions for more details.

The risk categories are:

- (a) **Low-Risk Category**  
The basic risk-based capital developed for annuities and life insurance in the low-risk category was based on an assumed asset/liability duration mismatch of 0.125 (i.e., a well matched portfolio). This durational gap was combined with a possible 4 percent one-year swing in interest rates (the maximum historical interest rate swing 95 percent of the time) to produce a pre-tax factor of 0.0077. In addition to the 50 percent loading discussed above, the risk-based capital pre-tax factor is 0.0115.
- (b) **Medium and High-Risk Category**  
The factors for the medium and high-risk categories were determined by measuring the value of the additional risk from the more discretionary withdrawal provisions based on assumptions of policyholder behavior and 1,000 random interest rate scenarios. Supplementary contracts not involving life contingencies and dividend accumulations are included in the medium risk category due to the historical tendency of these policyholders to be relatively insensitive to interest rate changes.

Additional Component for Callable/Pre-Payable Assets

Identify the amount of callable/pre-payable assets (including IOs and similar investments) supporting reserves classified in this section. The C-3 requirement after taxes is 50 percent of the excess, if any, of book/adjusted carrying value above current call price. The calculation is done on an asset-by-asset basis. NOTE: If a company is required to calculate part of the RBC based on cash flow testing for C-3 RBC, the factor based requirements for callable/pre-payable assets used in that testing is zero.

All Other Reserves

This captures all reserves not included in Reserves on Certain Annuities and Single Premium Life Insurance that were Cash Flow Tested or products included under the “Recommended Approach for Setting Risk-Based Capital Requirements for Variable Annuities and Similar Products.”

The risk categories are:

(a) Low-Risk Category

The basic risk-based capital developed for annuities and life insurance in the low-risk category was based on an assumed asset/liability duration mismatch of 0.125 (i.e., a well-matched portfolio). This durational gap was combined with a possible 4 percent one-year swing in interest rates (the maximum historical interest rate swing 95 percent of the time) to produce a pre-tax factor of 0.0077. In addition to the 50 percent loading discussed above, the risk-based capital pre-tax factor is 0.0115.

(b) Medium and High-Risk Category

The factors for the medium and high-risk categories were determined by measuring the value of the additional risk from the more discretionary withdrawal provisions based on assumptions of policyholder behavior and 1,000 random interest rate scenarios. Supplementary contracts not involving life contingencies and dividend accumulations are included in the medium-risk category due to the historical tendency of these policyholders to be relatively insensitive to interest rate changes.

Additional Component for Callable/Pre-Payable Assets

Identify the amount of callable/pre-payable assets (including IOs and similar investments) not reported elsewhere in this schedule. This excludes callable/pre-payable assets supporting Reserves on Certain Annuities and Single Premium Life Insurance that were Cash Flow Tested or supporting the Interest Rate Risk Component for products included under the “Recommended Approach for Setting Risk-Based Capital Requirements for Variable Annuities and Similar Products.” This includes callable/pre-payable assets supporting other reserves and capital and surplus. The C-3 requirement after taxes is 50 percent of the excess, if any, of book/adjusted carrying value above current call price. The calculation is done on an asset-by-asset basis and reported in aggregate.

Cash Flow Testing for C-3 RBC

A company may be required or choose to perform cash flow testing to determine its RBC requirement. Because of the widespread use of increasingly well-disciplined scenario testing for actuarial opinions based upon an asset adequacy analysis involving cash flow testing, it was determined that a practical method of measuring the degree of asset/liability mismatch existed. It involves further cash flow testing. See Appendix 1 “Cash Flow Testing for C-3 RBC for details.

Specific Instructions for Application of the Formula

Lines (2) through (16)

These lines deal with Certain Annuities and Single Premium Life Insurance for which reserves were cash flow tested for asset adequacy. The fixed portion of equity-based variable products should not be included. Guaranteed indexed separate accounts following a Class I investment strategy are reported as low-risk Line 2 and those following a Class II investment strategy are excluded. Company source records entered in Column (3) of Lines (13), (15) and (16) should be adjusted to a pre-tax basis.

Line (17)

Should equal the sum of Lines (6) + (11) + (14) + (15). Line (16) is not included in the Line (17) total. Instead, it is included in the Line (32) total.

Lines (18) through (31)

These lines cover:

- (a) The remaining company business that was not cash flow tested for asset adequacy (see Appendix 1 for details) excluding products included under the “Recommended Approach for Setting Risk-Based Capital Requirements for Variable Annuities and Similar Products” and
- (b) Business in companies that did not cash flow test for asset adequacy.

The calculation for risk-based capital should not include unitized separate accounts without guarantees even though they may be included in Item 32 of the Notes to Financial Statements. Separate accounts with guarantees should be included, except for those separate accounts that guarantee an index and follow a Class II investment strategy and certain other guaranteed separate accounts as defined below. Synthetic GICs net of certain credits should be included in this section. The provisions for these credits to C-3 requirements is provided in the Separate Accounts section of the risk-based capital instructions. Experience-rated pension contracts defined below should be excluded from “annuity reserves with fair value adjustment” and “annuity reserves not withdrawable.” All amounts should be reported net of reinsurance, net of policy loans and adjusted for assumed and ceded modified coinsurance.

Experience-rated group and individual pension business that meets all of the following four conditions is excluded from C-3 factor-based risk:

- (a) General account funded;
- (b) Reserve interest rate is carried at no greater than 4 percent and/or fund long-term interest guarantee (excess of a year) does not exceed 4 percent;
- (c) Experience rating mechanism is immediate participation, retroactive credits, or other technique other than participating dividends; and
- (d) Either is not subject to discretionary withdrawal or is subject to fair value adjustment, but only if the contractually defined lump sum fair value adjustment reflects portfolio experience as well as current interest rates and is expected to pass both credit risk and rate risk to the policyholder at withdrawal. (A lump sum settlement based only on changes in prevailing rates does not meet this test. Book value cash out options meet this test as long as the present value of payments using U.S. Treasury spot rates is less than or equal to the lump sum fair value on the valuation date and the policyholder does not have an option to change the payment period once payments begin.)

For companies not exempt from cash flow testing for C-3 RBC, such testing is to include these experience-rated products exempted from the formula factors, but for which cash flow testing is done as a part of the asset adequacy testing.

Non-indexed separate account business with guarantees that satisfy both condition (b) and (d) above is excluded from C-3 factor-based risk.

Guaranteed indexed separate account business following a Class I investment strategy is reported on Line (18). Note that in the AAA Report “Proposed New Risk-Based Capital Method for Separate Accounts That Guarantee an Index” (adopted by the NAIC Life Risk-Based Capital Working Group in New York, NY, June 2003), there is a stress test applicable to Class I investment strategies for a company that is not subject to scenario testing requirements.

Company source records entered in Column (3) of Lines (30) and (31) should be adjusted to a pre-tax basis.

Line (33)

Enter in Column (3) the pre-tax interest rate risk results of cash flow testing per the Appendix 1a methodology. Line (33) should be completed by all companies who do cash flow testing of Certain Annuities and Single Premium Life Insurance for asset adequacy (see Appendix 1) except those with less than \$100 million in admitted assets at year-end, unless the answer to Line (14) or Line (22) of LR049 Exemption Test: Cash Flow Testing for C-3 RBC is “Yes” or if the company chooses to do C-3 RBC cash flow testing on a continuing basis. Once a company chooses to use the C-3 RBC cash flow testing method to calculate RBC it must continue to do so unless regulatory approval from the domiciliary jurisdiction is received to go back to the factor-based method. The interest rate risk component for Variable Annuities and Similar Products should be entered into Line (35).

Line (34)

If Line (33) is equal to zero, then Line (34) should equal Line (32). Otherwise, Line (34) should equal Line (32) plus Line (33) less Line (16) less Line (17) subject to a minimum of 0.5 times Line (32).

Line (35)

Enter the interest rate risk component for Variable Annuities and Similar Products. The interest rate risk component should be entered on a pre-tax basis.

Line (36)

Total interest rate risk. Equals Line (34) plus Line (35).

Line (37)

*Overview*

The amount reported on Line (37) is calculated using a nine-step process. As in Step 3 of the Single Scenario C-3 Measurement Considerations section of Appendix 1a – CashFlow Testing for C-3 RBC Methodology, existing AVR-related assets should not be included in the initial assets used in the C-3 modeling unless AVR has been excluded from TAC due to its use in the asset adequacy analysis supporting reserves. AVR-related assets may be included with C-3 testing to the extent that the AVR has been used in the cash flow testing and is therefore excluded from TAC, and that portion of the AVR-related assets relates to the business being tested. These assets are available for future credit loss deviations over and above expected credit losses. These deviations are covered by C-1 risk capital. Similarly, future AVR contributions should not be modeled. However, the expected credit losses should be in the C-3 modeling. (Deviations from expected are covered by both the AVR and C-1 risk capital and should not be modeled).

IMR assets should be used for C-3 modeling. If negative cash flows are handled by selling assets, then appropriate modeling of contributions to and amortization of the IMR need to be reflected in the modeling.

(1) The first step is determined by applying the methodology described in the report “Recommended Approach for Setting Risk-Based Capital Requirements for Variable Annuities and Similar Products Presented by the American Academy of Actuaries’ Life Capital Adequacy Subcommittee to the National Association of Insurance Commissioners’ Capital Adequacy Task Force (June 2005)” to calculate the total asset requirement. Although Appendix 2 in the Report notes path dependent models under a different set of initialization parameters might produce scenarios that do not satisfy all the calibration points shown in Table 1, to be in compliance with the requirements in this first step, the actual scenarios used for diversified U.S. equity funds must meet the calibration criteria. The scenarios need not strictly satisfy all calibration points in Table 1 of Appendix 2, but the actuary should be satisfied that any differences do not materially reduce the resulting capital requirements. See the Preamble to the *Accounting Practices and Procedures Manual* for an explanation of materiality. Include the Tax Adjustment as described in the report **using the enacted maximum federal corporate income tax rate. If using the Alternative Method for GMDDB Risks, use 1 minus the enacted maximum federal corporate income tax rate in place of the 65% adjustment contained in paragraph 4 (page 55) and the enacted maximum federal corporate income tax rate in place of 35% Income Tax Rate shown in Table 8-9 (page 78). The discount rate in Table 8-9 should also be adjusted for the appropriate enacted maximum federal corporate income tax rate.**

(2) The second step is to reduce the amount calculated in (1) above by the interest rate portion of the risk (i.e., only the separate account market risk is included in this step).

(3) The third step is to calculate the Standard General Amount.

(4) Take the greater of the amounts from (2) and (3).

(5) Apply the smoothing and transition rules (if applicable) to the amount in step (4).



- (6) Add the general account interest rate portion of the risk to the amount in step (5).
- (7) Subtract the reported statutory reserves for the business subject to the Report from the amount calculated in step (6). Floor this amount to \$0.
- (8) Divide the result from step (7) by **(1-enacted maximum federal corporate income tax rate)** to arrive at a pre-tax amount.

(9) Split the result from step (8) into an interest rate risk portion and a market risk portion. Note that the interest rate portion may not equal the interest rate portion of the risk used in steps (2) and (6) above even after adjusting these to a pre-tax basis. The interest rate portion of the risk should be included in Line (35) and the market risk portion in Line (37).

The lines on the alternative calculations page will not be required for **2018**.

Calculation of the Total Asset Requirement

The method of calculating the Total Asset Requirement is explained in detail in the AAA's June 2005 report, referenced above. In summary, it is as follows:

- A. Aggregate the results of running stochastic scenarios using prudent best estimate assumptions (the more reliable the underlying data is, the smaller the need for margins for conservatism) and calibrated fund performance distribution functions. If utilizing pre-packaged scenarios as outlined in the American Academy of Actuaries' report, *Construction and Use of Pre-Packaged Scenarios to Support the Determination of Regulatory Risk-Based Capital Requirements for Variable Annuities and Similar Products*, Jan. 13, 2006, the Enhanced C-3 Phase 1 Interest Rate Generator should be used in generating an interest rate scenarios or regenerating pre-packaged fund scenarios for funds that include the impact of bond yields. Details concerning the Enhanced C-3 Phase 1 Interest Rate Generator can be found on the American Academy of Actuaries webpage at the following address [http://www.actuary.org/pdf/life/c3supp\\_jan06.pdf](http://www.actuary.org/pdf/life/c3supp_jan06.pdf). The Enhanced C-3 Phase 1 Interest Rate Generator with its ability to use the yield curve as of the run date and to regenerate pre-packaged fund returns using interest rate scenarios based on the current yield curve replaces the usage of the March 2005 pre-packaged scenarios.
- B. Calculate required capital for each scenario by calculating accumulated statutory surplus, including the effect of federal income taxes **at the enacted maximum federal corporate income tax rate**, for each calendar year-end and its present value. The negative of the lowest of these present values is the asset requirement for that scenario. These values are recorded for each scenario and the scenarios are then sorted on this measure. For this purpose, statutory surplus is modeled as if the statutory reserve were equal to the working reserve.
- C. The Total Asset Requirement is set at the 90 Conditional Tail Expectation by taking the average of the worst 10 percent of all the scenarios' asset requirements (capital plus starting reserve). Risk-based capital is calculated as the excess of the Total Asset Requirement above the statutory reserves. For products with no guaranteed living benefit, or just a guaranteed death benefit, an alternative method is allowed as described in the AAA report.
- D. Risk-based capital is calculated as the excess of the Total Asset Requirement above the statutory reserves. Except for the effect of the Standard Scenario and the Smoothing and Transition Rules (see below), this RBC is to be combined with the C-1cs component for covariance purposes.
- E. A provision for the interest rate risk of the guaranteed fixed fund option, if any, is to be calculated and combined with the current C-3 component of the formula.
- F. The way grouping (of funds and of contracts), sampling, number of scenarios, and simplification methods are handled is the responsibility of the actuary. However, all these methods are subject to Actuarial Society of America practice, supporting documentation and justification.

G. Certification of the work done to set the RBC level will be required to be submitted with the RBC filing. Refer to Appendices 10 and 11 of the AAA LCAS C-3 Phase II RBC Report (June 2005) for further details of the certification requirements. The certification should specify that the actuary is not opining on the adequacy of the company's surplus or its future financial condition. The actuary will also note any material change in the model or assumptions from that used previously and the impact of such changes (excluding changes due to a change in these NAIC instructions). Changes will require regulatory disclosure and may be subject to regulatory review and approval. Additionally, if hedging is reflected in the stochastic modeling, additional certifications are required from an actuary and financial officer of the company.

The certification(s) should be submitted by hard copy with any state requiring an RBC hard copy.

H. An actuarial memorandum should be constructed documenting the methodology and assumptions upon which the required capital is determined. The memorandum should also include sensitivity tests that the actuary feels appropriate, given the composition of their block of business (i.e., identifying the key assumptions that, if changed, produce the largest changes in the RBC amount). This memorandum will be confidential and available to regulators upon request.

#### Application of the Tax Adjustment

**Tax Adjustment:** Under the U.S. IRC, the tax reserve is defined. It can never exceed the statutory reserve and is no less than the cash surrender value. If tax reserves assumed in the projection are set equal to Working Reserves and if tax reserves actually exceed Working Reserves at the beginning of the projection, a tax adjustment is required.

A tax adjustment is not required in the following situations:

- Tax reserves are projected directly; that is, it is not assumed that projected tax reserves are equal to Working Reserves, whether these are cash values or other approximations.
- Tax reserves at the beginning of the projection period are equal to Working Reserves.
- Tax reserves at the beginning of the projection period are lower than Working Reserves. This situation is only possible for contracts without cash surrender values and when these contracts are significant enough to dominate other contracts where tax reserves exceed Working Reserves. In this case the modeled tax results are overstated each year for reserves in the projection, as well as the projected tax results revealed at the time of claim.

If a tax adjustment is required, the Total Asset Requirement (TAR) must be increased on an approximate basis to correct for the understatement of modeled tax expense. The additional taxable income at the time of claim will be realized over the projection and will be measured approximately using the duration to worst, i.e., the duration producing the lowest present value for each scenario. The method of developing the approximate tax adjustment is described below.

The increase to TAR may be approximated as the corporate tax rate (i.e., 35 percent) times  $f$  times the difference between tax reserves and Working Reserves at the start of the projections. For this calculation,  $f$  is calculated as follows: For the scenarios reflected in calculating 90 CTE, the lowest of these present values of accumulated statutory surplus is determined for each calendar year-end and its associated projection duration is tabulated. At each such duration, the ratio of the number of contracts in force (or covered lives for group contracts) to the number of contracts in force (or covered lives) at the start of the modeling projection is calculated. The average ratio is then calculated, over all 90 CTE scenarios, and  $f$  is one minus this average ratio. If instead RBC is determined under the standard scenario method then  $f$  is based on the ratio at the worst duration under that scenario. If the Alternative Method is used,  $f$  is approximated as 0.5.

#### Calculation of the Standard Scenario Amount

Standard Scenario for C-3 Phase II Risk-Adjusted Capital (RBC) Determination

I) Overview

A) Application to Determine RBC.

A Standard Scenario Amount shall be determined for all of the contracts under the scope described in the June 2005 report, "Recommended Approach for Setting Risk-Based Capital Requirements for Variable Annuities and Similar Products". If the Standard Scenario Amount is greater than the Total Asset Requirement less any amount included in the TAR but attributable to and allocated to C-3 (Interest Rate Risk) otherwise determined based on the Report, then the Total Asset Requirement before tax adjustment used to determine C-3 Phase 2 (Market Risk) RBC shall be the Standard Scenario Amount.

The Standard Scenario Amount shall be the sum of the following:

1. For contracts for which RBC is based on the Alternative Methodology applied without a model office using 100 percent of the MGDB mortality table, the Standard Scenario Amount shall be the sum of the total asset requirement before tax adjustment from the Alternative Methodology applied to such contracts.
2. For contracts without guaranteed death benefits for which RBC is based on the Alternative Methodology applied without a model office, the Standard Scenario Amount shall be the sum of the total asset requirements before tax adjustment from the Alternative Methodology applied to such contracts.
3. For contracts under the scope of the Report other than contracts for which paragraphs 1 and 2 apply, the Standard Scenario Amount is determined by use of The Standard Scenario Method described in Section III. The Standard Scenario Method requires a single projection of account values based on specified returns on the assets supporting the account values. On the valuation date an initial drop is applied to the account values based on the supporting assets. Subsequently, account values are projected at the rate earned on supporting assets less a margin. Additionally, the projection includes the cash flows for certain contract provisions, including any guaranteed living and death benefits using the assumptions in Section III. Thus the calculation of the Standard Scenario Amount will reflect the greatest present value of the accumulated projected cost of guaranteed benefits less the accumulated projected revenue produced by the margins in accordance with Subsection III (D).

B) The Standard Scenario Amount under the Standard Scenario Method.

The Standard Scenario Amount for all contracts subject to the Standard Scenario Method is determined as of the valuation date under the Standard Scenario Method described in Section III based on a rate, DR. DR is the annual effective equivalent of the 10-year constant maturity treasury rate reported by the Federal Reserve for the month of valuation plus 50 basis points. However, DR shall not be less than 9 percent or more than 9 percent. If the 10-year constant maturity treasury rate is no longer available, then a substitute rate determined by the National Association of Insurance Commissioners shall be used. The accumulation rate, AR, is the product of DR and one minus the tax rate defined in paragraph III(D)(10).

No modification is allowed from the requirements in Section III unless the Domiciliary Commissioner approves such modification as necessary to produce a reasonable result.

C) Illustrative Application of the Standard Scenario Method to a Projection, Model Office and Contract by Contract.

To provide information on the significance of aggregation, a determination of the Standard Scenario Amount based on paragraphs III(B)(1) and III(B)(2) is required for each contract subject to paragraph I(A)(3). The sum of all such Standard Scenario Amounts is described as row B in Table A. In addition, if the Conditional Tail Expectation Amount in the Report is determined based on a projection of an inforce prior to the statement date and/or by the use of a model office, which is a grouping of contracts into representative cells, then additional determinations of the Standard Scenario Amount shall be performed on the prior inforce and/or model office. The calculations are for illustrative purposes to assist in validating the reasonableness of the projection and or the model office and to determine the significance of aggregation.

Table A identifies the Standard Scenario Amounts required by this section. The Standard Scenario Amounts required are based on how the Conditional Tail Expectation projection or Alternative Methodology is applied. For completeness, the table also includes the Standard Scenario Amount required by paragraph I(A)(3). The amounts in Table A should be included as part of the certifying actuary's annual supporting memorandum specified in paragraph (H) of the "Calculation of the Total Asset Requirement" section of the RRC instructions.

- Standard Scenario Amounts in rows A and B in Table A are required of all companies subject to paragraph I(A)(3). No additional Standard Scenario Amounts are required if a company's stochastic or alternative methodology result is calculated on the statement date using individual contracts (i.e., without a model office).
- A company that uses a model office as of the statement date to determine its stochastic or alternative methodology result must provide the Standard Scenario Amount for the model office. This is row C.
- A company that uses an aggregation by duration of contract by contract projection of a prior inforce to determine its stochastic or alternative methodology with result PS and then projects requirements to the statement date with result S must provide the Standard Scenario Amount for the prior inforce, row D.
- A company that uses a model office of a prior inforce to determine its stochastic or alternative methodology requirements with result PM and then projects requirements to the statement date with result S must provide the Standard Scenario Amount for the model office on the prior inforce date, row E.

Not for Distribution

Table A

Standard Scenario Amounts	Guideline Variations	Validation Measures	
		Model Office Projection	Projection of Prior Inforce
A. Aggregate valuation on the statement date on inforce contracts required in I(A)(3)	None	None	None
B. Seriatim valuation on the statement date on inforce contracts	None: Compare to A	None	None
C. Aggregate valuation on the statement date on the model office	If not material to model office validation	Aggregate compare to 1.00	None
D. Aggregate valuation on a prior inforce date on prior inforce contracts	If not material to model office validation	None	A/D - S/PS Compare to 0
E. Aggregate valuation on a prior inforce date of a model office	If not material to model office validation	(A/E - S/PM) compare to 0	

Modification of the requirements in Section III when applied to a prior inforce or a model office is permitted if such modification facilitates validating the projection of inforce or the model office. All such modifications should be documented. No modification is allowed for row B as of the statement date unless the Domiciliary Commissioner approved such modification as necessary to produce a reasonable result under the corresponding amount in row A.

II) Basic Adjusted Reserve

For purposes of determining the Standard Scenario Amount for Risk-Adjusted Capital, the Basic Adjusted Reserve for a contract shall be the Working Reserve, as described in the Report, as of the valuation date.

III) Standard Scenario Amount - Application of the Standard Scenario Method

A) General

Where not inconsistent with the guidance given here, the process and methods used to determine results under the Standard Scenario Method shall be the same as required in the calculation under the modeling methodology required by the Report. Any additional assumptions needed to apply the Standard Scenario Method to the inforce shall be explicitly documented.

B) Results for the Standard Scenario Method.

The Standard Scenario Amount is equal to (1) + (2) – (3) where:

- 1) Is the sum of the Basic Adjusted Reserve as described in Section II for all contracts for which the Standard Scenario Amount is being determined,
  - 2) Is zero or if greater the aggregate greatest present value for all contracts measured as of the end of each projection year and the negative of the Accumulated Net Revenue described below using the assumptions described in Subsection III(D) and a discount rate equal to the Accumulation Rate, AR. The Accumulated Net Revenue at the end of a projection year equals (i) + (ii) - (iii) where:
    - (i) Is the Accumulated Net Revenue at the end of the prior projection year accumulated at the rate AR to the end of the current projection year. The Accumulated Net Revenue at the beginning of the projection (i.e., time 0) is zero.
    - (ii) Are the margins generated during the projection year on account values as defined in paragraph III(D)(1) multiplied by one minus the tax rate and accumulated at rate AR to the end of current projection year, and
    - (iii) Are the contract benefits paid in excess of account value applied plus the Individual Reinsurance premiums (ceded less assumed) less the Individual reinsurance benefits (ceded less assumed) payable or receivable during the projection year multiplied by one minus the tax rate and accumulated at rate AR to the end of current projection year. Individual reinsurance is defined in paragraph III(D)(2).
  - 3) Is the value of approved hedges and Aggregate reinsurance as described in paragraph III(E)(2). Aggregate reinsurance is defined in paragraph III(D)(2).
- C) The actuary shall determine the projected reinsurance premiums and benefits reflecting all treaty limitations and assuming any options in the treaty to the other party are exercised to decrease the value of reinsurance to the reporting company (e.g., options to increase premiums or terminate coverage). The positive value of any reinsurance treaty that is not guaranteed to the insurer or its successor shall be excluded from the value of reinsurance. The commissioner may require the exclusion of any portion of the value of reinsurance if the terms of the reinsurance treaties are too restrictive (e.g. time or amount limits on benefits correlate to the Standard Scenario Method).
- D) Assumptions for Paragraph III(B)(2) Margins and Account Values.
- 1) Margins on Account Values. The bases for return assumptions on assets supporting account values are shown in Table I. The Initial returns shall be applied to the account values assigned to each asset class on the valuation date as the rate drops, resulting in the Account Values at time 0. The "Year 1" and "Year 2+" returns are gross annual effective rates of return and are used (along with other decrements and/or increases) to produce the Account Values as of the end of each projection year. For purposes of this section, money market funds shall be considered part of the Bond class.
- The Fixed Fund rate is the greater of the minimum rate guaranteed in the contract or 3.5 percent but not greater than the current rates being credited to Fixed Funds on the valuation date.
- Account Values shall be accumulated after the initial deduction using the rates from Table I with appropriate reductions applied to the supporting assets. The appropriate reductions for account values supported by assets in the Equity, Bond or Balance Classes are all fund and contract charges according to the provisions of the funds and contracts. The appropriate reduction for Account Values supported by Fixed Funds is zero.

The margins on Account Values are defined as follows:

- a) During the Surrender Charge Period:
  - i. 0.10% of Account Value; plus
  - ii. The maximum of:
    - 0.20% of Account Value; or
    - Explicit and optional contract charges for guaranteed living and death benefits.
- b) After the Surrender Charge Period:
  - i. The amount determined in (a) above; plus
  - ii. The lesser of:
    - 0.65% of Account Values; and
    - 50% of the excess, if any, of all contract charges over (a) above.

However, on fixed funds after the surrender charge period, a margin of up to the amount in (a) above plus 0.4% may be used.

Table J

	Initial	Year 1	Year 2+
Equity Class	0%	0%	3%
Bond Class	0	0	4.85%
Balanced Class	-12%	0%	3.74%
Fixed Separate Accounts and General Account		Fixed Fund Rate	Fixed Fund Rate

- 2) Reinsurance Credit. Individual reinsurance is defined as reinsurance where the total premiums for and benefits of the reinsurance can be determined by applying the terms of the reinsurance to each contract covered without reference to the premiums or benefits of any other contract covered and summing the results over all contracts covered. Reinsurance that is not individual reinsurance is Aggregate reinsurance. Individual reinsurance premiums projected to be payable on ceded risk and receivable on assumed risk shall be included in the subparagraph III(B)(2)(iii). Similarly, Individual reinsurance benefits projected to be receivable on ceded risk and payable on assumed risk shall be included in subparagraph III(B)(2)(iii). No Aggregate reinsurance shall be included in subparagraph III(B)(2)(iii).

3) Lapses, Partial Withdrawals, and Moneyness. Partial withdrawals elected as guaranteed living benefits or required contractually (e.g., a contract operating under an automatic withdrawal provision on the valuation date) are to be included in subparagraph III(B)(2)(iii). No other partial withdrawals, including free partial withdrawals, are to be included. All lapse rates shall be applied as full contract surrenders.

A contract is in the money (ITM) if it includes a guaranteed living benefit and at any time the portion of the future projected account value under the Standard Scenario Method required to obtain the benefit would be less than the value of the guaranteed benefit at the time of exercise or payment. If the projected account value is 90 percent of the value of the guaranteed benefit at the time of exercise or payment, the contract is said to be 10 percent in the money. If the income from applying the projected account value to guaranteed purchase rates exceeds the income from applying the projected benefit base to GMIB purchase rates for the same type of annuity, then there is no GMIB cost and the GMIB is not in the money. A contract not in the money is out of the money (OTM). If a contract has multiple living benefit guarantees then the contract is ITM to the extent that any of the living benefit guarantees are ITM. Lapses shall be based on the annual effective rates given in Table II.

Table II – Lapse Assumptions

	During Surrender Charge Period	After Surrender Charge Period
Death Benefit Only Contracts	5%	10%
All Guaranteed Living Benefits OTM	5%	10%
Any Guaranteed Account Balance Benefits ITM	0%	ITM < 10% 0% 10% ≤ ITM < 20% 0% 20% ≤ ITM 0%
Any Other Guaranteed Living Benefits ITM	3%	7% 5% 2%

4) Account Transfers and Future Deposits. No transfers between funds shall be assumed to determine the greatest present value amount required under paragraph III(B)(2) unless required by the contract (e.g., transfers from a dollar cost averaging fund or contractual rights given to the insurer to implement a contractually specified portfolio insurance management strategy or a contract operating under an automatic re-balancing option). When transfers must be modeled, to the extent not inconsistent with contract language, the allocation of transfers to funds must be in proportion to the contract's current allocation to funds.

Margins generated during a projection year on funds supporting account values are transferred to the Accumulation of Net Revenue at year-end and are subsequently accumulated at the Accumulation Rate. Assets for each class supporting account values are to be reduced in proportion to the amount held in each asset class at the time of transfer of margins or any portion of Account Value applied to the payment of benefits.

No future deposits shall be assumed unless required by the terms of the contract to prevent contract or guaranteed benefit lapse, in which case they must be modeled. When future deposits must be modeled, to the extent not inconsistent with contract language, the allocation of the deposit to funds must be in proportion to the contract's current allocation to funds.

5) Mortality. Mortality at 80 percent of the 1994 MGDB tables through age 95 increasing by 1 percent each year to 100 percent of the 1994 MGDB table at age 115 shall be assumed in the projection used to determine the greatest present value amount required under paragraph III(B)(2).



6) Projection Frequency. The projection used to determine the greatest present value amount required under paragraph III(B)(2) shall be calculated using an annual or more frequent time step, such as quarterly. For time steps more frequent than annual, assets supporting Account Values at the start of each projection year may be retained in such funds until year-end (i.e., pre-tax margin earned during the year will earn the fund rates instead of the Discount Rate until year-end) or removed after each time step. However, the same approach shall be applied for all years. Subsequent to each projection year-end, Accumulated Net Revenues for the year shall earn the Accumulation Rate. Similarly, projected benefits, lapses, elections and other contract activity can be assumed to occur annually or at the end of each time step, but the approach shall be consistent for all years.

7) Surrender Charge Period. If the surrender charge for the contract is determined based on individual contributions or deposits to the contracts, the surrender charge amortization period may be estimated for projection purposes. Such estimated period shall not be less than the remaining duration based on the normal amortization pattern for the remaining total contract charge assuming it resulted from a single deposit, plus one year.

8) Contract Holder Election Rates. Contract holder election rates to determine amounts in subparagraph III(B)(2)(iii) shall be 15 percent per annum for any elective ITM benefit except guaranteed withdrawal benefits, but only to the extent such election does not terminate a more valuable benefit subject to election. Guaranteed Minimum Death Benefits are not benefits subject to election. Exception: Contract holder election rates shall be 100 percent at the last opportunity to elect an ITM benefit, but only to the extent such election does not terminate a more valuable benefit subject to election. A benefit is more valuable if it is more ITM in absolute dollars using the definition of ITM in paragraph III(D)(3).

9) For guaranteed minimum withdrawal benefits, a partial withdrawal equal to the applicable percentage in Table III applied to the contract's maximum allowable partial withdrawal shall be assumed in subparagraph III(B)(2)(iii). However, if the contract's minimum allowable partial withdrawal exceeds the partial withdrawal from applying the rate in Table III to the contract's maximum allowable partial withdrawal, then the contract's minimum allowable partial withdrawal shall be assumed in subparagraph III(B)(2)(iii).

Table III – Guaranteed Withdrawal Assumptions

	Attained Age Less than 50	Attained Age 50 to 59	Attained Age 60 or Greater
Withdrawals do not reduce other elective Guarantees that are in the money	50%	75%	100%
Withdrawals reduce elective Guarantees that are in the money	25%	50%	75%

9) GMIBs. For subparagraph III(B)(2)(iii), GMIB cost at the time of election shall be the excess, if positive, of the reserve required for the projected annuitization stream over the available account value. If the reserve required is less than the account value, the GMIB cost shall be zero. The reserve required shall be determined using the Annuity 2000 Mortality Table and a valuation interest rate equal to the Discount Rate. If more than one annuity option is available, choose the option with a reserve closest to the reserve for a life annuity with 10 years of certain payments.

10) Indices. If an interest index is required to determine projected benefits or reinsurance obligations, the index must assume interest rates have not changed since the last reported rates before the valuation date. If an equity index is required, the index shall be consistent with the last reported index before the valuation date, the initial drop in equity returns and the subsequent equity returns in the standard scenario projection up to the time the index is used. The sources of information and how the information is used to determine indices shall be documented and, to the extent possible, consistent from year to year.

11) Taxes. All taxes shall be based on the enacted maximum federal corporate income tax rate.