# LIFE FRATERNAL 

## 2022

## RBC

## Riff Based Capital

## O Forecasting and

 InstructionsThe NAIC is the authoritative source for insurance industry information. Our expert solutions support the efforts of regulators, insurers and researchers by providing detailed and comprehensive insurance information. The NAIC offers a wide range of publications in the following categories:

## Accounting \& Reporting

Information about statutory accounting principles and the procedures necessary for filing financial annual statements and conducting risk-based capital calculations.

## Consumer Information

Important answers to common questions about auto, home, health and life insurance - as well as buyer's guides on annuities, long-term care insurance and Medicare supplement plans.

## Financial Regulation

Useful handbooks, compliance guides and reports on financial analysis, company licensing, state audit requirements and receiverships.

## Legal

Comprehensive collection of NAIC model laws, regulations and guidelines; state laws on insurance topics; and other regulatory guidance on antifraud and consumer privacy.

## Market Regulation

Regulatory and industry guidance on market-related issues including antifraud, product filing requirements, producer licensing and market analysis.

## Special Studies

Studies, reports, handbooks and regulatory research conducted by NAIC members on a variety of insurance related topics.

## Statistical Reports

Valuable and in-demand insurance industry-wide statistical data for various lines of business, including auto, home, health and life insurance.

## Supplementary Products

Guidance manuals, handbooks, surveys and research on a wide variety of issues.

## Capital Markets \& Investment Analysis

Information regarding portfolio values and procedures for complying with NAIC reporting requirements.

## White Papers

Relevant studies, guidance and NAIC policy positions on a variety of insurance topics.

## NAIC Activities

NAIC member directories, in-depth reporting of state regulatory activities and official historical records of NAIC national meetings and other activities.

## For more information about NAIC publications, visit us at:

## https://content.naic.org/resource-center

© 2019-2022 National Association of Insurance Commissioners. All rights reserved.

ISBN: 978-1-64179-237-0

Printed in the United States of America
No part of this book may be reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic or mechanical, including photocopying, recording, or any storage or retrieval system, without written permission from the NAIC.

NAIC Executive Office<br>444 North Capitol Street, NW<br>Suite 700<br>Washington, DC 20001<br>202.471.3990

NAIC Central Office<br>1100 Walnut Street<br>Suite 1500<br>Kansas City, MO 64106<br>816.842.3600

```
NAIC Capital Markets
\& Investment Analysis Office
One New York Plaza, Suite 4210
New York, NY 10004
212.398.9000
```


## What RBC Pages Should Be Submitted?

For year-end 2022 life and fraternal risk-based capital (RBC), submit hard copies of pages LR001 through LR049 to any state that requests a hard copy in addition to the electronic filing. Starting with year-end 2007 RBC, a hard copy was not required to be submitted to the NAIC. However, a portable document format (PDF) file representing the hard copy 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 hard copy 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. However, they still need to be retained by the company as documentation.

## Instructions for Residual Tranches

The Capital Adequacy (E) Task Force adopted proposal 2022-05-L Instruction for Residuals to address changes made to Schedule BA and the asset valuation reserve (AVR) to isolate the reporting of residual tranches during its June 30 meeting. This made an instructional change for line 49.2 on LR008, Other Long-Term Assets.

## Structure and Instruction Changes to Update the Treatment of C-2 Mortality Risk

The Capital Adequacy (E) Task Force adopted proposal 2022-03-L C-2 Mortality Risk Structure during its April 28 meeting. This proposal made structural changes to LR025, Life Insurance, to expand the categorization of policies along with reference changes to LR030, Calculation of Tax Effect and LR031, Calculation of Authorized Control Level Risk-Based Capital. The Capital Adequacy (E) Task Force adopted proposal 2022-06-L during its June 30 meeting. This proposal provides the instructions for the updated structure including factors for the expanded categories.

## In This Issue:

What RBC Pages Should be Submitted? / 1
Instructions for Residual Tranches / 1
Structure and Instruction Changes to Update the
Treatment of C-2 Mortality Risk / 1
Editorial Changes / 2
RBC Forecasting and Instructions / 2
Contact Information / 2

## Editorial Changes

1. Annual statement references on the blank schedule to investment schedules were updated on LR002, Bonds, for lines (8) and (16) and LR012, Miscellaneous Assets, for lines (2.2), (2.3), (3.2), (8) and (9).
2. Annual statement references on the blank schedule to the AVR were updated on LR008, Other Long-Term Assets, for lines (51.1), (51.2) and (52.1).

## RBC Forecasting and Instructions

The Life and Fraternal RBC forecasting spreadsheet calculates RBC using the same formula presented in the 2022 NAIC Life and Fraternal Risk-Based Capital Forecasting \& Instructions for Companies, and it is available to download from the NAIC Account Manager. The 2022 NAIC Life and Fraternal Risk-Based Capital Forecasting \& Instructions for Companies publication is available for purchase in electronic format through the NAIC Publications Department. This publication is available on or about November 1 each year. The User Guide is no longer included in the Forecasting \& Instructions.

WARNING: The RBC Forecasting Spreadsheet CANNOT be used to meet the year-end RBC electronic filing requirement. RBC 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.
3. Annual statement references in the instructions to Schedule H were updated for LR020, Underwriting Risk-Experience Fluctuation Risk, for line (6) and LR022, Underwriting Risk-Managed Care Credit, for line (9).

© 2022 NATIONAL ASSOCIATION OF INSURANCE COMMISSIONERS

Life and Fraternal Risk-Based Capital Newsletter Volume 28. Published annually or whenever needed by the NAIC for insurance regulators, professionals and consumers.

Direct correspondence to: Dave Fleming, RBC Newsletters, NAIC, 1100 Walnut Street, Suite 1500, Kansas City, MO 641062197. Phone: (816) 783-8121. Email: dfleming@naic.org.

Address corrections requested. Please mail the old address label with the correction to: NAIC Publications Department, 1100 Walnut Street, Suite 1500, Kansas City, MO 64106-2197 Phone: 816-783-8300. Email: prodserv@naic.org.

## 2022 NAIC Life and Fraternal Risk-Based Capital Report

Including

# Forecasting and Instructions for Companies 

as of December 31, 2022

Confidential when Completed

## NAIC

of Insurance Commissioners

Executive Office
Hall of States Bldg
444 North Capitol NW, Suite 700
Washington, DC 20001-1509
202-471-3990

Central Office
1100 Walnut Street, Suite 1500
Kansas City, MO 64106-2197
816-842-3600

Capital Markets and Investment Analysis Office One New York Plaza, Suite 4200
New York, NY 10004
212-398-9000

## Table of Contents (Life/Fraternal)

Risk-Based Capital Preamble ..... i
Overview of the NAIC Life and Fraternal Risk-Based Capital Report ..... iv
Bonds. .....  1
Mortgage Experience Adjustment .....  3
Mortgages .....  4
Unaffiliated Preferred and Common Stock ..... 16
Separate Accounts ..... 18
Real Estate ..... 21
Other Long-Term Assets ..... 25
Schedule BA Mortgages ..... 26
Asset Concentration Factor ..... 38
Common Stock Concentration Factor ..... 40
Miscellaneous Assets. ..... 41
Replication (Synthetic Asset) Transactions and Mandatory Convertible Securities ..... 42
Hedged Asset Bond and Common Stock Schedules ..... 44
Reinsurance ..... 49
Off-Balance Sheet and Other Items ..... 50
Off-Balance Sheet Collateral (Including any Schedule DL, Part 1 Assets not Included in the Asset Valuation Reserve) ..... 53
Health Premiums and Health Claims Reserves ..... 54
Underwriting Risk - Experience Fluctuation Risk ..... 62
Underwriting Risk - Other ..... 67
Underwriting Risk - Managed Care Credit ..... 68
Long-Term Care ..... 73
Life Insurance ..... 74
Longevity Risk ..... 78
Premium Stabilization Reserves ..... 79
Interest Rate Risk and Market Risk ..... 80
Health Credit Risk ..... 88
Business Risk ..... 91
Calculation of Authorized Control Level Risk-Based Capital ..... 92
Calculation of Total Adjusted Capital (Including Total Adjusted Capital Tax Sensitivity Test) ..... 94
Risk-Based Capital Level of Action (Including Tax Sensitivity Test) ..... 97
Trend Test. ..... 98
XXX/AXXX Reinsurance Primary Security Shortfall by Cession ..... 99
XXX/AXXX Captive Reinsurance Consolidated Exhibit. ..... 101
Sensitivity Tests ..... 105
Federal ACA Risk Adjustments and Risk Corridor Sensitivity Test. ..... 106
Affiliated Investments ..... 107
Modco or Funds Withheld Reinsurance Agreements ..... 113
Exemption Test: Cash Flow Testing for C-3 RBC ..... 115
Appendix 1 - Cash Flow Testing for C-3 RBC ..... 116
Appendix 1a - Cash Flow Testing for C-3 RBC Methodology ..... 118
Appendix 1b - Frequently Asked Questions for Cash Flow Testing for C-3 RBC ..... 120
Appendix 2 - Alternative Method for GMDB Risks (2020 Instructions) ..... 121
Appendix 3 - Commonly Used Health Insurance Terms ..... 143
Appendix 4 - Commonly Used Terms for Stand-Alone Medicare Part D Coverage. ..... 145
Company Information Page (Jurat) ..... LR001
Bonds ..... LR002
Mortgage Experience Adjustment ..... LR003
Mortgages ..... LR004
Unaffiliated Preferred and Common Stock ..... LR005
Separate Accounts ..... LR006
Real Estate ..... LR007
Other Long-Term Assets ..... LR008
Schedule BA Mortgages ..... LR009
Asset Concentration Factor ..... LR010
Common Stock Concentration Factor ..... LR011
Miscellaneous Assets ..... LR012
Replication (Synthetic Asset) Transactions and Mandatory Convertible Securities. ..... LR013
Hedged Asset Bond Schedule ..... LR014
Hedged Asset Common Stock Schedule ..... LR015
Reinsurance ..... LR016
Off-Balance Sheet and Other Items ..... LR017
Off-Balance Sheet Collateral (Including any Schedule DL, Part 1 Assets not Included in the Asset Valuation Reserve) ..... LR018
Health Premiums ..... LR019
Underwriting Risk - Experience Fluctuation Risk ..... LR020
Underwriting Risk - Other ..... LR021
Underwriting Risk - Managed Care Credit ..... LR022
Long-Term Care ..... LR023
Health Claims Reserves ..... LR024
Life Insurance ..... LR025
Longevity Risk ..... LR025-A
Premium Stabilization Reserves ..... LR026
Interest Rate Risk and Market Risk ..... LR027
Health Credit Risk ..... LR028
Business Risk ..... LR029
Calculation of Tax Effect for Life and Fraternal Risk-Based Capital ..... LR030
Calculation of Authorized Control Level Risk-Based Capital ..... LR031
Capital Notes before Limitation ..... LR032
Calculation of Total Adjusted Capital (Including Total Adjusted Capital Tax Sensitivity Test) ..... LR033
Risk-Based Capital Level of Action (Including Tax Sensitivity Test) ..... LR034
Trend Test ..... LR035
XXX/AXXX Reinsurance Primary Security Shortfall by Cession ..... LR036
XXX/AXXX Captive Reinsurance Consolidated Exhibit ..... LR037
Additional Information Required ..... LR038
Sensitivity Tests - Authorized Control Level ..... LR039
Sensitivity Tests - Total Adjusted Capital ..... LR040
Federal ACA Risk Adjustment and Risk Corridor Sensitivity Test ..... LR041
Summary for Affiliated Investments ..... LR042
Crosschecking for Affiliated Investments ..... LR043
Details for Affiliated Investments ..... LR044
MODCO or Funds Withheld Reinsurance Agreements - Reinsurance Ceded Bonds C-1o .... ..... LR045
MODCO or Funds Withheld Reinsurance Agreements - Reinsurance Assumed Bonds C-10, ..... LR046
MODCO or Funds Withheld Reinsurance Agreements - Reinsurance Ceded All Other Assets C-0, C-1o and C-1cs ..... LR047
MODCO or Funds Withheld Reinsurance Agreements - Reinsurance Assumed All Other Assets C-0, C-1o and C-1cs ..... LR048
Exemption Test: Cash Flow Testing for C-3 RBC ..... LR049

## Risk-Based Capital Preamble

## History of Risk-Based Capital by the NAIC

## A. Background

1. The NAIC, through its committees and working groups, facilitated many projects of importance to state insurance regulators, the industry and users of statutory financial information in the early 1990s. That was evidenced by the original mission statement and charges given to the Capital Adequacy (E) Task Force (CADTF) of the Financial Condition (E) Committee.
2. From the inception of insurance regulation in the mid-1800s, the limitation of insurance company insolvency risk has been a major goal of the regulatory process. The requirement of adequate capital has been a major tool in limiting insolvency costs throughout the history of insurance regulation. Initially, the states enacted statutes requiring a specified minimum amount of capital and surplus for an insurance company to enter the business or to remain in business.
3. Fixed minimum capital requirements were largely based on the judgment of the drafters of the statutes and varied widely among the states. Those fixed minimum capital and surplus requirements have served to protect the public reasonably well for more than a century. However, they fail to recognize variations in risk between broad categories of key elements of insurance, nor do they recognize differences in the amount of capital appropriate for the size of various insurers.
4. In 1992, the NAIC adopted the life risk-based capital (RBC) formula with an implementation date of year-end 1993. The formula was developed for specific regulatory needs. Four major categories were identified for the life formula: asset risk; insurance risk; interest rate risk; and all other business risk. The property/casualty and health formulas were implemented in 1994 and 1998, respectively. The focus of these two formulas is: asset risk; underwriting risk; credit risk; and business risk (health).
5. The total RBC needed by an insurer to avoid being taken into conservatorship is the Authorized Control Level RBC, which is $50 \%$ of the sum of the RBC for the categories, adjusted for covariance. The covariance adjustment is meant to take into account that problems in all risk categories are not likely to occur at the same time.
6. The mission of the CADTF was to determine the amount of capital an insurer should be required to hold to avoid triggering various specific regulatory actions. The RBC formula largely consists of a series of risk factors that are applied to selected assets, liabilities or other specific company financial data to establish the threshold levels generally needed to bear the risk arising from that item.
7. To carry out its mission, the CADTF was charged with carrying out the following initiatives:

Evaluate emerging "risk" issues for referral to the RBC working groups/subgroups for certain issues involving more than one RBC formula.
Monitor emerging and existing risks relative to their consistent or divergent treatment in the three RBC formulas.
Review and evaluate company submissions for the schedule and corresponding adjustment to total adjusted capital (TAC).
Monitor changes in accounting and reporting requirements resulting from the adoption and continuing maintenance of the Accounting Practices and Procedures Manual and the Valuation Manual to ensure that model laws, publications, formulas, analysis tools, etc., supported by the CADTF continue to meet regulatory objectives.
8. The RBC forecasting and instructions were developed and are now maintained in accordance with the mission of the CADTF as a method of measuring the threshold amount of capital appropriate for an insurance company to avoid capital specific regulatory requirements based on its size and risk profile.

## B. Purpose of Risk-Based Capital

9. The purpose of RBC is to identify potentially weakly capitalized companies. This facilitates regulatory actions that, in most cases, ensure policyholders will receive the benefits promised without relying on a guaranty association or taxpayer funds. Consequently, the RBC formula calculates capital level trigger points that enable regulatory intervention in the operation of such companies.
10. RBC instructions, RBC reports and adjusted report(s) are intended solely for use by the commissioner/state in monitoring the solvency of insurers and the need for possible corrective action with respect to insurers and are considered confidential. All domestic insurers are required to file an RBC report unless exempt by the commissioner. There are no state permitted practices to modify the RBC formula and all insurers are required to abide by the RBC instructions.
11. Comparison of an insurer's TAC to any RBC level is a regulatory tool that may indicate the need for possible corrective action with respect to the insurer and is not intended as a means to rank insurers generally. Therefore-except as otherwise required under the provisions of Risk-Based Capital (RBC) for Insurers Model Act (\#312) or the RiskBased Capital (RBC) for Health Organizations Model Act (\#315)-the making, publishing, disseminating, circulation or placing before the public, or causing, directly or indirectly to be made, published, disseminated, circulated or place before the public, in a newspaper, magazine or other publication, or in a form of a notice, or in any other way, an advertisement, announcement or statement containing an assertion, representation or statement with regard to the RBC levels of any insurer or of any component derived in the calculation by any insurer is prohibited.

## C. Objectives of Risk-Based Capital Reports

2. The primary responsibility of each state insurance department is to regulate insurance companies in accordance with state laws, with an emphasis on solvency for the protection of policyholders. The ultimate objective of solvency regulation is to ensure that policyholder, contract holder and other legal obligations are met when they come due and that companies maintain capital and surplus at all times and in such forms as required by statute.

To support this role, the RBC reports identify potentially weakly capitalized companies in that each insurer must report situations where the actual TAC is below a threshold amount for any of the several RBC levels. This is known as an "RBC event" and reporting is mandatory. The state regulatory response is likely to be unique to each insurer, as each insurer's risk profile will have some differences from the average risk profile used to develop the RBC formula factors and calculations.

There are several RBC levels with different levels of anticipated additional regulatory oversight following the reporting of an RBC event. Company Action Level (CAL) has the least amount of additional regulatory oversight, as it envisions the company providing to its regulator a plan of action to increase capital or reduce risk or otherwise satisfy the regulator of the adequacy of its capital. Regulatory Action Level (RAL) is the next higher level, where the regulator is more directly involved in the development of the plan of action. Authorized Control Level (ACL) anticipates an even higher amount of regulatory action in implementing the plan of action.

## D. Critical Concepts of Risk-Based Capital

13. Over the years, various financial models have been developed to try to measure the "right" amount of capital that an insurance company should hold. "No single formula or ratio can give a complete picture of a company's operations, let alone the operation of an entire industry. However, a properly designed formula will help in the early identification of companies with inadequate capital levels and allow corrective action to begin sooner. This should ultimately lower the number of company failures and reduce the cost of any failures that may occur."

[^0]14. Because the NAIC formula develops threshold levels of capitalization rather than a target level, it is impractical to use the RBC formula to compare the RBC ratio developed by one insurance company to the RBC ratio developed by another. Comparisons of amounts that exceed the threshold standards do not provide a definitive assessment of their relative financial strength. For this reason, Model \#312 and Model \#315 prohibit insurance companies, their agents and others involved in the business of insurance using the company's RBC results to compare competitors.
15. The principal focus of solvency measurement is the determination of financial condition through an analysis of the financial statements and RBC. However, protection of the policyholders can only be maintained through continued monitoring of the financial condition of the insurance enterprise. Operating performance is another indicator of an enterprise's ability to maintain itself as a going concern.
16. The CADTF and its RBC working groups are charged with evaluating refinements to the existing NAIC RBC formula and considering improvements and revisions to the various RBC blanks to: 1) conform the RBC blanks to changes made in other areas of the NAIC to promote uniformity (when it is determined to be necessary); and 2) oversee the development of additional reporting formats within the existing RBC blanks as needs are identified
17. The CADTF and its RBC working groups will monitor and evaluate changes to the annual financial statement blanks and the Purposes and Procedure Manual of the NAIC Investment Analysis Office to determine if assets or, specifically, investments evaluated by the NAIC Securities Valuation Office are relevant to the RBC formula in determining the threshold capital and surplus for all insurance companies or whether reporting available to the regulator is a more appropriate means to addressing the risk. The CADTF will consider different methods of determining whether a particular risk should be added as a new risk to be studied and selected for a change to the applicable RBC formula, but due consideration will be given to the materiality of the risk to the industry, as well as the very specific purpose of the RBC formulas to develop regulatory threshold capital levels.

## Overview of the NAIC Life and Fraternal 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 taken by the insurer is the primary determinant. The five major categories of risks involved are:

| Insurance Affiliates and <br> Misc. Other | $\mathrm{C}-0$ | This is the risk from declining value of insurance subsidiaries as well as fisk from off-balance sheet and other misc. accounts <br> (e.g., DTAs). |
| :--- | :--- | :--- |
| Asset Risk - Other | C-1 | This is the risk of assets' default of principal and interest or fluctuation in fair value. | Insurance Risk $\quad$ C-2 $\quad$| This is the risk of underestimating liabilities from business already written or inadequately pricing business to be written in |
| :--- |
| the coming year. |

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 actual 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 and Fraternal 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 or 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 in 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. Factors, RBC amounts that go to the Calculation of Authorized Control Level Risk-Based Capital page (C-0, C-1cs, C$10, \mathrm{C}-2, \mathrm{C}-3 \mathrm{a}, \mathrm{C}-3 \mathrm{~b}, \mathrm{C}-3 \mathrm{c}, \mathrm{C}-4 \mathrm{a}, \mathrm{C}-4 \mathrm{~b}$ ), 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 and Fraternal RBC Report

The NAIC Life and Fraternal RBC Report has been developed for U.S. Life and Health insurers and Fraternal Benefit Societies who file the NAIC Life and Accident and Health companies/Fraternal Benefit Societies annual statement. 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 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.

## Basis of Factors

The bond factors are based on cash flow modeling using historically adjusted default rates for each bond category. For each of 2,000 trials, annual economic conditions were generated for the 10 -year modeling period. Each bond of a 400-bond portfolio was annually tested for default (based on a "roll of the dice") where the default probability varies by designation category and that year's economic environment. When a default takes place, the actual loss considers the expected principal loss by category, the time until the sale actually occurs and the assumed tax consequences.

Actual surplus needs are reduced by incorporating anticipated annual contributions to the asset valuation reserve (AVR) as offsetting cash flow. Required surplus for a given trial is calculated as the amount of initial surplus funds needed so that the accumulation with interest of this initial amount and subsequent cash flows will not become negative at any point throughout the modeling period. The factors chosen for the proposed formula produce a level of surplus at least as much as needed in 92 percent of the trials by category and a 96 percent level for the entire bond portfolio.

The factor for NAIC 6 bonds recognizes that the book/adjusted carrying value of these bonds reflects a loss of value upon default by being marked to market.
Specific Instructions for Application of the Formula

## Lines (1) through (7)

The book/adjusted carrying value of all bonds and related fixed-income investments should be reported in Column (1). The bonds are split into seven different risk classifications. For long-term bonds, these classifications are found on Lines 1 through 7 of the Asset Valuation Reserve Default Component, Page 30 of the annual statement.

## Line (8)

The total should equal long-term bonds and other fixed-income instruments reported on Page 2, Column 3, Line 1 plus Schedule DL Part 1, Column 6, Line 7099999 minus Schedule D, Part 1A, Section 1, Column 7, Line 7.7 of the annual statement.

Lines (9) through (15)
The book/adjusted carrying value of all bonds and related fixed-income investments should be reported in Column (1). The bonds are split into seven different risk classifications. For short-term bonds, these classifications are found on Lines 18 through 24 of the Asset Valuation Reserve Default Component, Page 30 of the annual statement.

## Line (16)

The total should equal short-term bonds reported on Schedule DA, Part1, 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 loanbacked 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 2.40 will be used.

Line (25)
The size factor reflects the higher risk of a bond portfolio that contains relatively fewer bonds. The overall factor decreases as the portfolio size increases. Portfolios with more than 1,300 issuers will receive a discount. The size factor is based on the weighted number of issuers. (The calculation shown below will not appear on the RBC filing software but will be calculated automatically.)

## Line (25)

First 50
Next 50
Next 100
Next 300
Over 500
Total Number of Issuers from Line (23)
Total Weighted Issuers
Size Factor $=$ Total Weighted Issuers divided by Total Number of Issuers
Company Records
Company Records
Company Records
Company Records
Company Records
(a)

Number of Issuers
$\qquad$
$\qquad$
$\qquad$

## (b) <br> Weighted Issuers

## MORTGAGE EXPERIENCE ADJUSTMENT

## LR003

Under the new RBC and AVR methodology for Commercial and Farm Mortgages 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 levels 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 represents 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 forecl
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 (3), (26) and (27), the RBC subtotal is multiplied by the factor to calculate Column (6).

(Figure 1)


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), (4) 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. NOTE: This worksheet will be available in the risk-based capital filing software.
$\dagger$ 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 <br> Number | Mortgage Factors |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | In Good Standing | Category Factor ${ }^{\dagger}$ | In Good Standing Factor | MEA Factor |
|  |  |  |  |  |
| (1) | Residential Mortgages-Insured or Guaranteed | N/A ${ }^{*}$ | 0.0014 | N/A |
| (2) | Residential Mortgages-All Other | N/A | 0.0068 | N/A |
| (3) | Commercial Mortgages-Insured or Guaranteed | N/A | 0.0014 | N/A |
| (4) | Commercial Mortgages-All Other - Category CM1 | N/A | 0.0090 | N/A ${ }^{\text {+ }}$ |
| (5) | Commercial Mortgages - Category CM2 | N/A | 0.0175 | N/A $\ddagger$ |
| (6) | Commercial Mortgages - Category CM3 | N/A+ | 0.0300 | N/A $\ddagger$ |
| (7) | Commercial Mortgages - Category CM4 | N/A | 0.0500 | N/A |
| (8) | Commercial Mortgages - Category CM5 | N/A $\ddagger$ | 0.0750 | N/A + |
| (10) | Farm Mortgages - Category CM1 | N/A $\ddagger$ | 0.0090 | N/A $\ddagger$ |
| (11) | Farm Mortgages - Category CM2 | N/A $\ddagger$ | 0.0175 | N/A + |
| (12) | Farm Mortgages - Category CM3 | N/A $\ddagger$ | 0.0300 | N/A |
| (13) | Farm Mortgages - Category CM4 | N/A | 0.0500 | N/A + |
| (14) | Farm Mortgages - Category CM5 | N/A $\ddagger$ | 0.0750 | N/A $\ddagger$ |
|  | 90 Days Overdue, Not in Process of Foreclosure |  |  |  |
| (16) | Farm Mortgages - Category CM6 | 0.1800 | $\pm$ | N/A $\ddagger$ |
| (17) | Residential Mortgages-Insured or Guaranteed | 0.0027 | 0.0014 | 1.0 N/A |
| (18) | Residential Mortgages-All Other | 0.0140 | 0.0068 | 1.0 N/A |
| (19) | Commercial Mortgages-Insured or Guaranteed | 0.0027 | 0.0014 | 1.0 N/A |
| (20) | Commercial Mortgages-All Other - Category CM6 <br> In Process of Foreclosure | 0.1800 | $\pm$ | N/A $\ddagger$ |
| (21) | Farm Mortgages - Category CM7 | 0.2300 | $\pm$ | N/A |
| (22) | Residential Mortgages-Insured or Guaranteed | 0.0054 | 0.0014 | 1.0 N/A |
| (23) | Residential Mortgages-All Other | 0.0270 | 0.0068 | 1.0 N/A |
| (24) | Commercial Mortgages-Insured or Guaranteed | 0.0054 | 0.0014 | 1.0 N/A |
| (25) | Commercial Mortgages-All Other - Category CM7 | 0.2300 | $\pm$ | N/A $\dagger$ |

$\dagger$ The category factor is a factor used for a particular category of mortgage loans that are not in good standing.
$\ddagger$ The RBC Requirement for mortgage loans in good standing or restructured are not calculated on Figure (1). These requirements are calculated on Mortgage Worksheet (company developed) (Figure 3) and transferred to LR004 Mortgage Loans Lines (4) through (8) and (10) through (14). In addition, for Commercial and Farm mortgage loans 90 days past due or In Process of Foreclosure, the CM category is determined in Mortgage Worksheet (company developed) and transferred to Worksheet A.

Mortgage Worksheet (company developed)
In Good Standing - Commercial Mortgages and Farm Mortgages


The Company should develop this worksheet on a loan-by-loan basis for each commercial mortgage - other or farm loan held in Annual Statement Schedule B. This worksheet columns (7) and (9) subtotals for each category are to be carried over and entered in Columns (1) and (2) of Mortgages (LR004) 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 riskbased capital filing software and needs to be developed by the company.


| (17) | Interest Rate | Input | Enter the annual interest rate at which the loan is accruing. <br> -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 <br> -If the rate is fixed by the contract, not level over the year, but level for the next 12 months, use current rate. <br> 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. (Note 9) |
| (20) | Property Value | Input | Property Value is 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. (Note 9) |
| (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 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 <br> $2=$ amortizing with balloon <br> $3=$ full I/O <br> $4=$ partial I/O, then amortizing |
| (36) | Rolling Average NOI | Computation | For $2013-100 \%$ of NOI <br> For $2014-65 \%$ NOI $+35 \%$ NOI Prior <br> For $2015-50 \%$ NOI $+30 \%$ NOI Prior $+20 \%$ NOI $2^{\text {nd }}$ Prior <br> For loans originated or valued within the current year, use $100 \%$ NOI. <br> 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 <br> $(13)$ 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 <br> places. See Note 3 below for special circumstances. |
| $(39)$ | NCREIF Price Index at <br> 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 <br> $(22)$. |
| $(40)$ | Contemporaneous <br> 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 <br> 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 <br> 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 $12 / 31 / 2012$, 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). 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 $20 \% 2^{\text {nd }}$ 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 ( $49 \%$ of 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 $(\mathrm{DSC}=1.0)$ or the NOI from the normalized underwriting.
iii. If there is no evidence from inspection that the property is occupied and noevidence 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:

b. Not in Balance, no construction issues:

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 seryice 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 $=\$ 0$
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 specifie 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 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, then the internal valuation may be used.
(Figure 4)
For Office, Industrial, Retail and Multi-family:

| RISK CATEGORY | DSC LIMITS |  |  | LTV LIM |
| :---: | :---: | :---: | :---: | :---: |
| CM1 | $1.50 \leq$ DSC | and |  | LTV < 85\% |
| CM2 | $0.95 \leq$ DSC $<1.50$ | and |  | LTV < 75\% |
| CM2 | $1.15 \leq$ DSC $<1.50$ | and | 75\% | $\leq$ LTV $<100 \%$ |
| CM2 | $1.50 \leq$ DSC | and | 85\% | $\leq$ LTV $<100 \%$ |
| CM2 | $1.75 \leq$ DSC | and | 100\% | $\leq$ LTV |
| CM3 | DSC $<0.95$ | and |  | LTV < 85\% |
| CM3 | $0.95 \leq$ DSC $<1.15$ | and | 75\% | $\leq$ LTV $<100 \%$ |
| CM3 | $1.15 \leq \mathrm{DSC}<1.75$ | and | 100\% | $\leq$ LTV |
| CM4 | DSC $<0.95$ | and | 85\% | $\leq$ LTV < 105\% |
| CM4 | $0.95 \leq$ DSC $<1.15$ | and | 100\% | $\leq$ LTV |
| CM5 | DSC $<0.95$ | and | 105\% | $\leq$ 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 | $1.85 \leq$ DSC | and | LTV $<60 \%$ |
| CM2 | $1.45 \leq$ DSC $<1.85$ | and | LTV $<70 \%$ |
| CM2 | $1.85 \leq$ DSC | and | $60 \% \leq$ LTV $<115 \%$ |
| CM3 | $0.90 \leq$ DSC $<1.45$ | and | $\leq$ LTV $<80 \%$ |
| CM3 | $1.45 \leq$ DSC $<1.85$ | and | $70 \% \leq$ LTV |
| CM3 | $1.85 \leq$ DSC | and | $115 \% \quad \leq$ LTV |
| CM4 | DSC $<0.90$ | and | LTV $<90 \%$ |
| CM4 | $0.90 \leq$ DSC $<1.10$ | and | $80 \% \leq$ LTV $<90 \%$ |
| CM4 | $1.10 \leq$ DSC $<1.45$ | and | $80 \% \leq$ LTV |
| CM5 | $1.10 \leq$ DSC | and | $90 \% \leq$ LTV |

(Figure 6)
Farm Mortgages (Agricultural Loans):

|  | Timber | Farm \& Ranch | Agribusiness Single Purpose | $\frac{\text { Agribusiness }}{\text { All Other }}$ |
| :---: | :---: | :---: | :---: | :---: |
| 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, Page 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 (13)
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 (11) of this page).

## Line (14)

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 (16)
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.

## Lines (19) and (20)

To the extent that a modco or funds withheld transaction is backed by common stock included in Line (17) 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 (17) calculation of the ceding insurer.


## SEPARATE ACCOUNTS

## LR006

## 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 much 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.
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 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 10506 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 $\mathrm{C}-3$ requirement. The remainder is used to reduce the $\mathrm{C}-1$ 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 C1 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 contributions, 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 1 indexed separate accounts. It 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 that is described below. The factor times the net separate account assets is the RBC Requirement.

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

Where m is the mean of the series $\{\mathrm{X}(\mathrm{t})\}$ 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. Covariance 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 $\{\mathrm{Y}(\mathrm{t})\}$ in ascending order. Set any pesitive values to zero. Average the first six values. Change the sign and the result is the 90 CTE capital for $\mathrm{C}-1$ and $\mathrm{C}-3$.
4. Where there is less than 30 months of tracking error history, the capital charge for $\mathrm{C}-1$ and $\mathrm{C}-3$ 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 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 or 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

The base factor for equity real estate of $11 \%$ was developed by adding a margin for conservatism to the results of an analysis of real estate performance over the period of 1978 2020. The analysis was conducted by a group of life insurance company real estate investment professionals coordinated by the ACLI. The data used was a national database of real property owned by investment fiduciaries and supplemented by data on real estate backing mortgage securities. The analysis is documented in a report to the NAIC dated March 29 , 2021. In addition to modifying the factor for company owned and investment real estate, this updated factor will also be used for real estate acquired in satisfaction of debt (Foreclosed real estate). Foreclosed real estate is recognized in the statutory statements as having acquisition cost equal to market value at time of foreclosure. For assets with the characteristics of real held estate (partnership or other structure) reported on Schedule BA, a higher factor of $13 \%$ is used to account for the lower transparency involved with these structures. Schedule BA real estate was originally given a higher factor under a presumption that it was more highly levered. Analysis has shown these assets to have experience very similar to directly held and will therefore use a modestly higher factor.

While the experience analysis was done based on analysis of fair value impacts, Real Estate is reported at depreciated cost in the Statutory statements. The difference in values impacts the risk to statutory surplus. Therefore, an adjustment is made to the factor based on the difference between fair value and statutory carrying value on a property by property basis. The adjustment is defined as

Adj Factor $=$ RE Factor $*(1-[$ factor $] *(M V-B V g) / B V g)\}$
factor is 0 This zero factor for the fair value adjustment is for yearend 2021 RBC filings
The resulting adjusted RBC factor is subject to a minimum of zero. In the RBC calculation, see Figure 7, fair value is taken from Schedule A Column 10 plus encumbrances, or from Schedule BA column 11 plus encumbrances, respectively, while BVg is the net Book Adjusted Carrying Value plus the encumbrance.

Encumbrances have been included in the real estate base since the value of the property is held net of the encumbrance, but the entire value is subject to loss. Encumbrances receive the base real estate factor of $11 \%$ reduced by the average factor for commercial mortgages of 1.75 percent pre-tax In the past this was computed as a base factor applied to the net real estate value plus a separate factor applied to the amount of the encumbrance. Beginning in 2021, the equivalent result will be obtained by applying a base factor to the gross statutory value of the property, and a credit provided for the amount of the encumbrance
The final RBC amount is subject to a minimum of the Baa bond factor $1.30 \%$ applied to the BACV, and a maximum of $45 \%$ of the BACV.
Specific Instructions for Application of the Formula

## Column (1)

Calculations are done on an individual property or joint venture basis in the worksheets and then the summary amounts are entered in this column for each class of real 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 2199999 plus Line 2299999, in part.
| Line (15) should equal Schedule BA, Part 1, Column 12, Line 2199999 plus Line 2299999, 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 SSAP No. 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 errors 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).
(Figure 7)

## Real Estate Worksheet




## 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 pre-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 subs 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 (49.2)

New lines were added for yearend 2022 reporting to Schedule BA and the AVR Equity Component to capture amounts related to residual tranches or interest. For yearend 2022 life RBC reporting, AVR Equity Component, Column 1, Line 93 will be included in Lime (49.2).

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 12999999, 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 11999999, 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, Lines 11999999,12999999, 23999999 and 24999999.

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 worksheet (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).
(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 <br> Carrying <br> Value | Involuntary Reserve Adjustment§ | RBC <br> Subtotal £ | Cumulative Writedowns * | Category <br> Factor | In Good Standing Factor | In Good Standing Category | $\begin{aligned} & \hline \mathrm{Col}(6) \mathrm{X} \\ & {[\mathrm{Col}} \\ & (4)+(5)] \\ & -\operatorname{Col}(5) \\ & \hline \end{aligned}$ | $\begin{aligned} & \operatorname{Col}(4) \mathrm{X} \\ & \operatorname{Col}(7) \end{aligned}$ | $\begin{aligned} & \text { RBC } \\ & \text { Requirement } \\ & \ddagger \end{aligned}$ |
|  | 90 Days Overdue - Insured or Guaranteed |  |  |  |  |  |  | $\dagger$ |  |  |  |
| (1) | All Mortgages Without Cumulative Writedowns |  |  |  | XXX | $0.0027$ | 0.0014 | N/A |  |  |  |
| (2) | With Cumulative Writedowns: |  |  |  |  | 0.0027 | 0.0014 | N/A |  |  |  |
| (3) |  |  |  |  |  | 0.0027 | 0.0014 | N/A |  |  |  |
|  | Total |  |  |  |  |  |  |  |  |  |  |
|  | 90 Days Overdue - Unaffiliated |  |  |  |  |  |  |  |  |  |  |
| (1) | All Mortgages Without Cumulative Writedowns |  |  |  | XXX | 0.1800 | $\dagger$ | $\dagger$ |  |  |  |
| (2) | With Cumulative Writedowns: |  |  |  |  | 0.1800 | $\dagger$ | $\dagger$ |  |  |  |
| (3) |  |  |  |  |  | 0.1800 | $\dagger$ | $\dagger$ |  |  |  |
|  | Total |  |  |  |  |  |  |  |  |  |  |
|  | 90 Days Overdue - Affiliated |  |  |  |  |  |  |  |  |  |  |
| (1) | All Mortgages Without Cumulative Writedowns |  |  |  | XXX | 0.1800 | $\dagger$ | $\dagger$ |  |  |  |
| (2) | With Cumulative Writedowns: |  |  |  |  | 0.1800 | $\dagger$ | $\dagger$ |  |  |  |



This worksheet is prepared on a loan-by-loan basis for each of the mortgage categories listed in (Figure 9) that are applicable. The Column (2), (3), (5) and (10) subtotals for each category are carried over and entered in Columns (1), (2), (4) and (6) of the Schedule BA Mortgages (LR009) Lines (12) through (14) and Lines (16) through (18) in the risk-based capital formula. NOTE: This worksheet will be available in the risk-based capital filing software.
$\dagger$ See (Figure 9) 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 10) and reported in Column 7a.
$\ddagger$ The RBC Requirement column (10) 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 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 CM1. The following factors are used for each category of mortgages:

|  | Schedule BA Mortgage Factors |  |  |
| :---: | :---: | :---: | :---: |
| LR009 |  | Category | In Good |
| Line |  | Factor $\dagger$ | Standing |
| Number |  |  | Factor |
| (3) | Unaffiliated - defeased with government securities | N/A | 0.0090 |
| (4) | Unaffiliated investments comprised primarily of Senior Debt | $\mathrm{N} / \mathrm{A}$ | 0.0175 |
| (5) | Unaffiliated - all other unaffiliated mortgages | N/A+ | 0.0300 |
| (6) | Affiliated Mortgages - Category CM1 | 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 $\ddagger$ | 0.0500 |
| (10) | Affiliated Mortgages - Category CM5 | N/A $\dagger$ | 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 | $\ddagger$ |
| (16) | In Process of Foreclosure - Insured or Guaranteed | 0.0054 | . 0014 |
| (17) | In Process of Foreclosure - Unaffiliated | 0.2300 | $\pm$ |
| (18) | In Process of Foreclosure - Affiliated | 0.2300 | $\pm$ |

$\dagger$ The category factor is a factor used for a particular category of mortgage loans that are not in good standing.
$\ddagger$ 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).

Mortgage Worksheet (company developed)
In Good Standing - Commercial

| Price Index current (year-end calculations to be based off of $3^{\text {rd }}$ Quarter index of the given year) $\}$ | \{input Price Index as of September 30\} |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |
| $\begin{aligned} & \text { Name / ID } \\ & \text { (1) } \end{aligned}$ | Date of Origination <br> (2) | Maturity Date (3) | Property Type <br> (4) | Farm Loan Sub- <br> property Type <br> (5) Post <br> (6) | code Book/A <br> Carryin <br> $(7)$ | Book/Adjusted Carrying Value (7) | Statutory Write-downs (8) | Statutory Involuntary Reserve (9) |
|  |  |  |  |  |  |  |  |  |
| Original Loan Balance <br> (10) | Principal Loan <br> Balance to <br> Company (11) | Balloon Payment at Maturity <br> (12) | Principal Balance <br> Total <br> (13) | NOI Second Prior Year (14) | NOI Prior Year (15) | $\begin{aligned} & \mathrm{NOI} \\ & (16) \end{aligned}$ |  | Interest Rate (17) |
|  |  |  |  |  |  |  |  |  |
| Trailing 12 Month Debt Service (18) | Original Property Value (19) | Property Value (20) |  | Year of Valuation (21) | Calendar Quarter of Valuation <br> (22) | Credit <br> Enhancement? <br> (23) | Senior Debt (24) |  | Construction Loan (25) |
|  |  |  |  |  |  |  |  |  |  |
| Construction Loan out of Balance (26) | Construction Loan Issues (27) | Land Loan <br> $(28)$ <br> 90 Days Past Due <br> $(29)$ |  | In Process of Foreclosure? (30) | Current payment lower than based on Loan Interest? (31) | Is loan interest floating? <br> (32) |  | Is fixed rate reset during term? (33) |
| - - |  |  |  |  |  |  |  |  |
| Is negative amortization allowed? (34) | Amortization Type (35) | Schedule BA mortgage? (36) | Affiliated Mortgage (37) | Covenant - Max <br> LTV <br> $(39)$ | Covenant - Min DCR <br> (40) | Loan C complia (41) | ovenants in nce? | Defeased with government securities? (42) |


| Primarily Senior <br> positions? <br> $(43)$ | Rolling Average <br> NOI <br> $(44)$ | RBC DCR <br> $(45)$ | Price Index at <br> Valuation <br> $(46)$ | Contemporaneous <br> Property Value <br> $(47)$ | RBC - Loan to <br> Value Ratio <br> $(48)$ | RBC Risk Category <br> $(49)$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  |  |  |  |  |  |  |

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 lines (2) - (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 |  |  | Description / Explanation of Item |
| :---: | :---: | :---: | :---: |
| \# | Heading |  |  |
|  |  |  | 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 | Input | Identify each mortgage included as in good standing. |
| (2) | Date of Origination | Input | Enter the year and month that the loan was originated. If the loan has been restructured, extended, or otherwise rewritten, enter that new date. |
| (3) | Maturity Date | Input | Enter earlier of maturity of the loan, or the date the lender can call the loan. |
| (4) | Property Type | Input | Enter 1 for mortgages with an Office, Industrial, Retail or multifamily property as collateral. <br> 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. <br> Enter 3 for Farm Loans. |
| (5) | Farm Sub-type | Input | 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 | Input | Enter zip code of 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 | Input | Enter the value that the loan is carried at on the company ledger. |
| (8) | Statutory Writedowns | Input | Enter the value of any writedowns taken on this loan due to permanent impairment. |
| (9) | Involuntary Reserve | Input | 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? | Input | Enter the loan balance at the time of origination of the loan. |
| (11) | Principal Balance to Co. | Input | Enter the value of the loan balance owed by the borrower. |
| (12) | Balloon Payment at Maturity | Input | Enter the amount of any balloon or principal payment due at maturity. |
| (13) | Principal Balance Total | Input | Enter the total amount of mortgage outstanding that is senior to or pari passu with the company's mortgage |
| (14) | NOI Second Prior | Input | 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, 2, 3, 4, 5 and 6 below. |
| :---: | :---: | :---: | :---: |
| (17) | Interest Rate | Input | Enter the annual interest rate at which the loan is accruing. <br> -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 <br> -If the rate is fixed by the contract, not level over the year, but level for the next 12 months, use current rate. <br> 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 | $\begin{aligned} & 1=\text { fully amortizing } \\ & 2=\text { amortizing with balloon } \\ & 3=\text { full I/O } \\ & 4=\text { partial I/O, then amortizing } \end{aligned}$ |
| (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? \{If yes, assign to CM2 \} |
| (43) | Rolling Average NOI | Computation | For 2012 - 100\% of NOI <br> For 2014 - $65 \%$ NOI + 35\% NOI Prior <br> For $2015-50 \%$ NOI $+30 \%$ NOI Prior $+20 \%$ NOI $2^{\text {nd }}$ Prior <br> For loans originated or valued within the current year, use $100 \%$ NOI. <br> For loans originated 2012 or later and within 2 years, use $65 \%$ 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. <br> 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).

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 $20 \% 2^{\text {nd }}$ 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 ( $49 \%$ of 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 ( $\mathrm{DSC}=1.0$ ) 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: $\mathrm{NOI}=\$ 0$
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 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 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.

For Office, Industrial, Retail and Multi-family

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

For Hotels and Specialty Commercial

| Risk category | DSC limits |  | LTV limits |
| :--- | :--- | :--- | :---: |
| CM1 | $1.85 \leq$ DSC | and | LTV $<60 \%$ |
| CM2 | $1.45 \leq$ DSC $<1.85$ | and | LTV $<70 \%$ |
| CM2 | $1.85 \leq$ DSC | and | $60 \% \leq$ LTV $<115 \%$ |
| CM3 | $0.90 \leq$ DSC $<1.45$ | and | $\leq$ LTV $<80 \%$ |
| CM3 | $1.45 \leq$ DSC $<1.85$ | and | $70 \% \leq$ LTV |
| CM3 | $1.85 \leq$ DSC | and | $115 \% \quad \leq$ LTV |
| CM4 | DSC $<0.90$ | and | LTV $<90 \%$ |
| CM4 | $0.90 \leq$ DSC $<1.10$ | and | $80 \% \leq$ LTV $<90 \%$ |
| CM4 | $1.10 \leq$ DSC $<1.45$ | and | $80 \% \leq$ LTV |
| CM5 | $1.10 \leq$ DSC | and | $90 \% \leq$ LTV |

(Figure 13)
For Farm Loans:

|  | Timber | $\underline{\text { Farm \& Ranch }}$ | $\frac{\text { Agribusiness }}{\text { Single Purpose }}$ | Agribusiness <br> 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 |

## 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 lowrisk categories or categories that already have a maximum factor. Since the risk-based capital of the assets included in the concentration factor has already been counted once in the basic formula, the asset concentration factor only serves to add in the additional risk-based capital required. The calculation is completed on a consolidated basis; however, the concentration factor is reduced by amounts already included in the concentration factors of subsidiaries to avoid double-counting.

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

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

In determining the assets subject to the concentration factor for both $\mathrm{C}-10$ and $\mathrm{C}-1 \mathrm{cs}$, the ceding company should exclude any asset whose performance inures primarily ( $>50$ percent) to one reinsurer under modified coinsurance or funds withheld arrangements. The reinsurer should include 100 percent of such asset. Any asset where no one reinsurer receives more than 50 percent of its performance should remain with the ceding company.

Assets should be aggregated by issuer before determining the 10 largest exposures. Aggregations should be done separately for bonds and preferred stock (the first six digits of the CUSIP number can be used as a starting point) (please note that the same issuer may have more than one unique series of the first six digits of the CUSIP), mortgages and real estate. Securities held within Schedule BA partnerships should be aggregated by issuer as if the securities are held directly. Likewise, where joint venture real estate is mortgaged by the insurer, both the mortgage and the joint venture real estate should be considered as part of a single exposure. Tenant exposure is not included. For bonds and unaffiliated preferred stock, aggregations should be done first for classes 2 through 6 . After the 10 largest issuer exposures are chosen, any NAIC 1 bonds, NAIC 1 unaffiliated preferred stock or NAIC 1 hybrids from any of these issuers should be included before doubling the risk-based capital. For some companies, following the above steps may generate less than 10 "issuer" exposures. These companies should list all available exposures.
Replicated assets other than synthetically created indices should be included in the asset concentration calculation in the same manner as other assets.
The book/adjusted carrying value of each asset is listed in Column (2).
The RBC factor will correspond to the risk-based capital category of the asset reported previously in the formula before application of the size factor for bonds. The RBC filing software automatically allows for an overall 45 percent RBC cap.

## Lines (17) through (22)

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

Line (18), Column (4) is calculated as Line (17), Column (2) multiplied by 0.1100 plus Line (18), Column (2) multiplied by 0.0925 , but not greater than Line (17), Column (2).
Line (20), Column (4) is calculated as Line (19), Column (2) multiplied by 0.1100 plus Line (20), Column (2) multiplied by 0.0925 , but not greater than Line (19), Column (2).
Line (22), Column (4) is calculated as Line (21), Column (2) multiplied by 0.1300 plus Line (22), Column (2) multiplied by 0.1125 , but not greater than Line (21), Column (2).
Lines (23) through (54)
The Asset Concentration RBC Requirement for a particular mortgage plus the LR004 Mortgages RBC Requirement or LR009 Schedule BA Mortgages RBC Requirement for a particular mortgage cannot exceed 45 percent of the book/adjusted carrying value of the mortgage. Any mortgages exceeding 45 percent of the book/adjusted carrying value must be adjusted down in Column (6) of the Asset Concentration.

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

Line (34), Column (4) is calculated as the greater of 0.0140 multiplied by [(Line (33) plus Line (34)] less Line (34) or Line (33) multiplied by 0.0068 .
Line (36), Column (4) is calculated as the greater of 0.1800 multiplied by [(Line (35) plus Line (36)] less Line (36) or Line (35) multiplied by the appropriate factor for the CM class to which the loan is assigned.

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

Line (40), Column (4) is calculated as the greater of 0.0270 multiplied by [(Line (39) plus Line (40)] less Line (40) or Line (39) multiplied by 0.0068 .
Line (42), Column (4) is calculated as the greater of 0.2200 multiplied by [(Line (41) plus Line (42)] less Line (42) or Line (41) multiplied by the appropriate factor for the CM class to which the loan is assigned.

Line (43), Column (4) is calculated as Line (43) multiplied by the appropriate factor for the CM class to which the loan is assigned.
Line (52), Column (4) is calculated as the greater of 0.1800 multiplied by [(Line (51) plus Line (52)] less Line (52) or Line (51) multiplied by the appropriate factor for the CM class to which the loan is assigned.

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

# 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 of 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 riskbased 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, repurchase 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 Over 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) asset(s) 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 enhanced by limits established by the insurer's domiciliary state.

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

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

## RBC and Measuring the Risk Reduced by Hedging

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

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

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

This accounts for mismatched maturities and provides a regulatory margin of safety within a range of $94 \%-10 \%$ of the C-1 asset charge.
There may also be circumstances where default risk is reduced by hedging specific portfolios using a basket or index-based derivative (e.g. CDX family of derivatives) with the same or very similar components as the portfolio. For these hedges the risk reduction shall be measured based on the number of issuers common to both the insurer's portfolio and the index/basket CDS. A minimum of $50 \%$ overlap of the derivative instrument notional amount and the book/adjusted carrying value of the hedged bonds shall be required to qualify for any RBC credit. Additionally, if the insurer hedges an index, each bond must be listed (e.g. if the insurer acquires a CDX that hedges 125 names equally, then the insurer must list all 125 names on the schedule), regardless if the insurer owns all the bonds in the index.

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

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

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

Definitions and Instructions for the Spreadsheet Computation of Risk Reduction
(Numeric references represent spreadsheet columns)

## Bonds

(1) Description - Reported on Schedule DB.
(2) Notional Amount - Amount reported on Schedule DB.
(3) Relationship Type of the Hedging Instrument and Hedged Asset. There are two categories; Basic and Intermediate relationships. Basic relationship = Single issuer credit default swap on a single issuer name to hedge the credit risk of a specific hedged asset. Intermediate relationship = A portfolio of insurer assets paired with a basket or index based hedging instrument with the same or very similar components as the portfolio. For intermediate relationships, a minimum of 50\% overlap of the derivative instrument notional amount and the book adjusted carrying value of the hedged bonds shall be required to qualify for any RBC credit.
(4) Maturity Date - Date reported on Schedule DB.
(5) Description - Bond description found in Schedule D. For intermediate relationships, each bond must be listed (e. g. if the insurer acquires a credit default index that hedges 125 names equally, then the insurer must list all 125 names on the schedule.)
(6) CUSIP Identification - Bond unique identifier found in Schedule D.
(7) Book Adjusted Carrying Value - Value found on Schedule D.
(8) Overlap with Insurer's Bond Portfolio - The portion of Column (2) Notional Amount of the Hedging Instrument that hedges Column (7) Book Adjusted Carrying Value. This amount cannot exceed Column (7) Book Adjusted Carrying Value.
(9) Maturity Date - The date is found in Schedule D.
(10) NAIC Designation - Designation found in Schedule D. Necessary to determine correct RBC Factor for the Bonds
(11) RBC Factor - Factor based on Column (10) NAIC Designation and NAIC C-1 RBC factors table.
(12) Gross RBC Charge - This is the C-1 RBC charge based on holdings at the end of the year. Calculation: Columns (7) Book Adjusted Carrying Value multiplied by (11) RBC Factor.
(13) RBC Credit for Hedging Instruments - If Column (8) Overlap with Insurer's Bond Portfolio is zero; the RBC Credit would also be zero. The Hedging Instrument must have more than 1 year remaining to maturity in order to receive any RBC credit provided that the remaining time to maturity of the Hedged Asset - Bonds is greater than 1 year. If both the Hedging Instrument and the Hedged Asset - Bonds maturity dates are less than 1 year, the maximum RBC credit determined using the formula below shall be allowed provided that the maturity of the hedging instrument is equal to or later than the maturity of the bond. Calculation is Column (8) Overlap with Insurer's Bond Portfolio multiplied by RBC Credit as \% of C-1 Asset Charge formula (formula listed below) multiplied by Column (11) RBC Factor.

RBC Credit as $\%$ of C1 Asset Charge $=\operatorname{Min}\left(1, \frac{\text { Time to Maturity of Hedging Instrument }}{\text { Time to Maturity of Bond }}\right) \times(94 \%-10 \%)+10 \%$
Time to Maturity of Hedging Instrument divided by Time to Maturity of Bond cannot exceed 1.
(14) Net RBC Charge - Column (12) Gross RBC Charge minus (13) RBC Credit for Hedging Instruments.

## Common Stocks

(1) Description - Reported on Schedule DB.
(2) Notional Amount - Amount reported on Schedule DB
(3) Relationship Type of the Hedging Instrument and Hedged Asset. There are two categories; Basic relationships or Intermediate relationships. Basic relationship = Single name equity Hedging Instrument paired with a specific common stock. Intermediate relationship $=$ A portfolio of common stocks paired with a basket or index based Hedging Instrument with the same or very similar components as the portfolio. For intermediate relationships, a minimum of 50\% overlap of the derivative instrument notional amount and the book adjusted carrying value of the hedged common stocks shall be required to qualify for any RBC credit.
(4) Description - Common Stock description found in Schedule D Part 2 Section 2. For intermediate relationships, each common stock must be listed (e. g. if the insurer acquires a short futures contract that hedges the $S \& P 500$, then the insurer must list all 500 stocks on the schedule).
(5) CUSIP Identification - Common Stock unique identifier found in Schedule D Part 2 Section 2.
(6) Book Adjusted Carrying Value - Value found on Schedule D Part 2 Section 2.
(7) Overlap with Insurer's Stock Portfolio - The portion of Column (2) Notional Amount of the Hedging Instrument that hedges Column (6) Book/Adjusted Carrying Value. This amount cannot exceed the Column (6) Book Adjusted Carrying Value.
(8) RBC Factor - Factor based on NAIC C-1 RBC factors table.
(9) Gross RBC Charge - The C-1 RBC charge based on holdings at the end of the year. Calculation: Columns (6) Book Adjusted Carrying Value multiplied by (8) RBC Factor.
(10) RBC Credit for Hedging Instruments - RBC credit for equity market risk reduction is limited to $94 \%$ of the C-1 Asset charge. Calculation: Column (7) Overlap with Insurer's Stock Portfolio multiplied by (8) RBC Factor multiplied by $94 \%$.
(11) Net RBC Charge - Column (9) Gross RBC Charge minus (10) RBC Credit for Hedging Instruments.

## Factors Table

As determined by the NAIC


## 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 trusteed collateral that meets the requirements stipulated in Appendix A-785 (Credit for Reinsurance), where there have been regular bona fide withdrawals from such trusteed 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 trusteed 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 recoverables 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 primarily 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, Line 24.07 - Funds Held under Coinsurance and Line 25 - Aggregate Write-ins for Liabilities). Line (15) is also to include amounts in support of Lines (1) through (7) and subject to the provisions of Credit for Reinsurance Model Regulation (\#786). 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 funded 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 24.04 of the annual statement should be included on Line (1).

## Line (2)

Collateral from all other securities lending programs should be reported General Interrogatories, Part 1, Line 24.05 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, both 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 C3P1 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 activities exceed $5 \%$ of total net admitted assets. If the higher factor is applicable, the Factor for column 4 is calculated as a blended factor 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 ${ }^{\dagger}$ contingent exposure of the company's assets to liability.

## Line (26)

The exposure amount for long-term leases is the annual rental amount of all leases that could have a material $\dagger$ 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 entity which files the US Federal income tax return which includes the reporting entity is not a regulated insurance company (e.g. a noninsurance 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)
These lines are not applicable to Fraternal Benefit Societies.
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 11 b (lesser of paragraph $11 \mathrm{~b}(\mathrm{i})$ and 11 b (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).
$\dagger$ 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 OffBalance 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 deseribed 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 add 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 disability 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 page LR021 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 pretax 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 and Fraternal 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.

Lines 10-13, 17-20, 23-27, 31, 34 and 35 are not applicable to Fraternal Benefit Societies.

## 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 amounts and risk corridor payment adjustments. See Appendix 3 for definition of these terms. This does not include Medicare-Advantage prescription drug coverage (MA-PD) premiums 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 $\mathrm{AD} \& \mathrm{D}$ 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). No RBC requirement is calculated in Column (2). The premium is carried forward to page LR020 Underwriting Risk - Experience Fluctuation Risk Column (4) Line (1.2).

## 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 where 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, a 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.

Disability Income Premium

Line (21) Noncancellable Disability Income - Individual Morbidity
a) First $\$ 50$ Million Earned Premium of Line (21)
b) Over $\$ 50$ Million Earned Premium of Line (21)
c) Total Noncancellable Disability Income Individual Morbidity

Line (22) Other Disability Income - Individual Morbidity
a) Earned Premium in Line (22) [up to $\$ 50$ million less premium in a) of Line (21)]
b) Earned Premium in Line (22) not included in a) of Line (22)
c) Total Other Disability Income - Individua Morbidity

Line (23) Disability Income - Credit Monthly Balance
a) First $\$ 50$ Million Earned Premium of Line (23)
b) Over $\$ 50$ Million Earned Premium of Line (23)
c) Total Disability Income - Credit Monthly Balance


Earned Premium included in Schedule H, Part 1, Line 2, in


$$
\text { X } 0.4435=
$$

$X 0.1901=$
$\qquad$

## Factor

a) of Line (21) + b) of Line (21), Column (2)

Earned Premium included in Schedule H, Part 1, Line 2, in Company Records

Company Records
a) of Line (22) + b) of Line (22), Column (2)

Earned Premium included in Schedule H, Part 1, Line 2, in part
Company Records
Company Records
a) of Line (23) + b) of Line (23), Column (2)

## Company Records

Line (24) Disability Income - Group Long-Term
a) Earned Premium in Line (24) [up to $\$ 50$ million less premium in a) of Line (23)]
b) Earned Premium in Line (24) not included in a) of Line (24)
c) Total Disability Income - Group Long-Term

Line (25) Disability Income - Credit Single Premium with Additional Reserves
a) Additional Reserves for Credit Disability Plans
b) Additional Reserves for Credit Disability Plans, Prior Year
c) Subtotal Disability Income - Credit Single Premium with Additional Reserves
d) Earned Premium in c) [up to $\$ 50$ million less premium in a) of Line (23) + a) of Line (24)]
e) Earned Premium in c) of Line (25) not included in d) of Line (25)
f) Total Disability Income - Credit Single Premium with Additional Reserves

Line (26) Disability Income - Credit Single Premium without Additional Reserves
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)]
b) Earned Premium in Line (26) not included in a) of Line (26)
c) Total Disability Income - Credit Single Premium without Additional Reserves

Line (27) Disability Income - Group Short-Term
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)]
b) Earned Premium in Line (27) not included in a) of Line (27)
c) Total Disability Income - Group Short-Term

Earned Premium included in Schedule H, Part 1, Line 2, in part
Company Records
Company Records
a) of Line (24) + b) of Line (24), Column (2)

Earned Premium included in Schedule H, Part 1, Line 2, in part. This amount to be reported on LR019 Health Premiums Line (25)
LR019 Health Premiums Column (1) Line (34)
LR019 Health Premiums Column (1) Line (35)

Line (25) - a) of Line (25) + b) of Line (25)
Company Records
Company Records
d) of Line (25) + e) of Line (25), Column (2)

Earned Premium included in Schedule H, Part 1, Line 2, in part Company Records
a) of Line $(26)+$ b) of Line (26), Column (2)

Earned Premium included in Schedule H, Part 1, Line 2, in part
Company Records

Company Records
a) of Line (27) + b) of Line (27), Column (2)
$\mathrm{X} 0.1901=$
X $0.0378=$
$\qquad$
$\qquad$
$\qquad$
$\qquad$ X 0.1901= $\qquad$
$\qquad$ X $0.0378=$ $\qquad$

X $0.1267=$ $\qquad$
$\qquad$ X $0.0378=$ $\qquad$
$\qquad$
$\qquad$
$\qquad$ X $0.0634=$ $\qquad$
X $0.0378=$ $\qquad$

## 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 coyerage 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 Benefits 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 ${ }^{\text {st, }} 2018$

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 aggregating 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 ${ }^{\text {st }}, 2018$.

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 currentreporting 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 $2 \mathbf{a}$ - Calendar Year Specific Stop Loss Contracts By Group Size and Table 2b - Calendar Year Aggregate 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.

## Table 2a should reflect the specific stop loss data and Table 2 b should reflect the aggregate stop loss data.

Report the number of groups, average specific attachment point and average aggregate attachment as of December $31^{\text {st }}$ 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, total number of lives insured, including 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 (Table 2a) - 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.

Example: Average Specific Attachment Point (\$) (Table 2a, 50-99 Covered Lives in Group) = (Sum of Specific Attachment Points X Reported Lives) / (Sum of Reported Lives)

| Insured Group |  |  | fic oint (\$) | Aggregate <br> Att (\%) | Number of Lives |  | Include Exclude | Reason to Exclude |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 1 | \$ | 200,000 | 115\% |  | 90 | Include |  |
|  | 2 | \$ | 100,000 | 120\% |  | 60 | Include |  |
|  | 3 | \$ | 50,000 | 140\% |  | 40 | Exclude | Not in G |
|  | 4 | \$ | 120,000 | N/A |  | 50 | Include |  |
| Calculation: |  | $(200,000 \times 90+100,000 \times 60+120,000 \times 50) /(90+60+50)=\$ 150,000$ |  |  |  |  |  |  |

Average Aggregate Attachment Percentage (Table 2b) - Is based on expected claims. Subgroups that have separate stop loss contracts should be aggregated in terms of determining the group size. The average should be weighted by expected claims in the respective group size bracket, excluding the count of covered lives within the denominator where aggregate coverage was not provided.

Example: Average Aggregate Attachment Percentage (\%) (Table 2b, 50-99 Covered Lives in Group) $=$
(Sum of Expected Claims x Attachment Percentage \%) / (Sum of Expected Claims)


Calculation: $\quad(500,000 \times 115 \%+300,000 \times 120 \%) /(500,000+300,000)=116.7 \%$
Footnote - The number of covered lives for stop loss coverage is reported in the Accident and Health Policy Experience Exhibit for Year (April $1^{\text {st }}$ filing) in Column 6 , Section C. Other Business, Line 2.

If stop loss policies are sold on a Per Employee Per Month basis and the actual number of covered lives is unknown, it would be reasonable to estimate the number of covered lives if the exact information is not administratively available to the reporting entity. This method of estimation may be similar to estimations provided for the Accident and Health Policy Experience Exhibit for Year. If estimated, an explanation of the method used to estimate the number of covered lives should be provided in the footnote.

## 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 this 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 and fraternal 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 premiums 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 formula. Neither 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 seryices 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, Columns 1 and 2 Line 13 less the amounts reported as incurred claims for administrative services contracts (ASC) in Line (54) of LR029 Business Risk and Federal Employee Health Benefit Program (FEHBP) in Line (3) of LR021 Underwriting Risk - Other. 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 5, 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. The factors for Column 1-3 have incorporated investment income.
Comprehensive Medical
Medicare Supplement
Dental
Stand-Alone Medicare Part D Coverage

| $\$ 0-\$ 3$ <br> Million | $\$ 3-\$ 25$ <br> Million | Over $\$ 25$ <br> Million |
| :--- | :--- | :--- |
| 0.1493 | 0.1493 | 0.0893 |
| 0.1043 | $0 . .0663$ | $0 . .0663$ |
| 0.1195 | 0.0755 | 0.0755 |
| 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, a 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 (4), 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-proportional 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
Maximum Reinsured Coverage
Maximum Retained Risk $=$
\$100,000
$90 \%$ of $\$ 500,000$ in excess of $\$ 100,000$
$\$ 600,000(\$ 100,000+\$ 500,000)$

| $\$ 100,000$ | 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
Maximum Reinsured Coverage
Maximum Retained Risk $=$

## 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 minimum 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 guarantees. 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)

These lines are not applicable to Fraternal Benefit Societies.
Separate risk factors have been established for Workers' Compensation Carve-Out business. The 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 $\mathrm{P} \& \mathrm{C}$ RBC formula for workers compensation reinsurance assumed.

A factor of 0.060 is applied against reinsurance recoverable balances on reinsurance ceded to 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 and Fraternal 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 the 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 and/or incentives / 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 claims 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 2 b and Category 3 c 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/Incentives 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/incentives/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 and/or incentives paid to providers during the prior year to total withholds and bonuses and incentives 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 2 a managed care credit factor. Bonus and/or incentives 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/incentive payments
1997 withholds / bonuses/incentives available
A . MCC Factor Multiplier
1997 withholds / bonuses/incentives available
1997 claims subject to withhold -gross $\dagger$
B. Average Withhold Rate 20\%

Category 2 Managed Care Credit Factor (A x B)

750,000
1,000,000
$75 \%$ - Eligible for credit
1,000,000
5,000,000

15\%
The resulting factor is multiplied by claims payments subject to withhold - net; in the current year.
$\dagger$ These are amounts due before deducting withhold or paying bonuses and/or incentives.
$\ddagger$ These are actual payments made after deducting withhold or paying bonuses and/or incentives.
Enter the paid claims for the current year where payments to providers were subject to withholds and bonuses/incentives, but otherwise had no managed care arrangements.
Line (4)
Category 2b - Payments Made Subject to Withholds or Bonuses/Incentives That Are Otherwise Managed Care Category 1. Category 2 b may include business that would have otherwise fit into Category 1. That is, there may be a bonus/incentive/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 2 b managed care credit is 25 percent. The minimum of Category 2 b managed care credit is 15 percent (Category 1 credit factor). The credit calculation is the same as found in the previous example for Category 2 a .

Enter the paid claims for the current year where payments to providers were subject to withholds and bonuses/incentives 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 premium payments directly to licensed providers.

Enter the amount of claims payments paid DIRECTLY to licensed providers on a capitated basis.
Line (6)
Category $3 b$ - 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 intermediary. 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 uninsured 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 non-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 reportedin Schedule H, Part 5, Columns 1, 2 and 5, 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/incentives. 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/incentive payments.
Line (19)
Enter the prior year's withholds and bonuses/incentives that were available for payment in the prior year.
$\underline{\text { Line (20) }}$
Divides Line (18) by Line (19) to determine the portion of withholds and bonuses/incentives 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 withholds and bonuses/incentives 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/incentive program in the prior year.


## 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 (3) of LR023 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 ( 5.1 ) 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 developed represent surplus needed to provide for life insurance mortality risk, which is defined as adverse variance in life insurance deaths (i.e., insureds dying sooner than expected) over the remaining lifetime of a block of business while appropriately reflecting the pricing flexibility to adjust current mortality rates for emerging experience. The mortality risks included in the development of the factors were volatility, level, trend, and catastrophe. The factors were developed by stochastically simulating the run-off of in force life insurance blocks typical of U.S. life insurers.

The capital need, expressed as a dollar amount, is determined as the greatest present value of accumulated deficiencies at the $95{ }^{\text {th }}$ percentile of the stochastic distribution of scenarios over the remaining lifetime of a block of business while appropriately reflecting the pricing flexibility to adjust current mortality rates. Statutory losses are defined as the after-tax quantification of gross death benefits minus reserves released minus mortality margin present in reserves. The after-tax statutory losses are discounted to the present by using 20-year averages for U.S. swap rates. By selecting the largest present value accumulated loss across all projection years, the solved for capital ensures non-negative capital at all projection periods. Earlier period losses are not allowed to be offset by later period gains to reduce capital. The $95^{\text {th }}$ percentile is the commonly accepted statistical safety level used for Life RBC C-2 mortality risk to identify weakly capitalized companies. The after-tax capital needs are translated to a factor expressed as a percentage of the net amount at risk (NAR). The pre-tax factor is determined by taking the after-tax factor divided by ( 1 minus the tax rate).

The factors are differentiated between individual $\mathcal{\&}$ industrial life and group $\&$ credit life, and by in force block size. Within individual $\mathcal{\&}$ industrial life, the factors are differentiated into categories by contract type depending on the degree of pricing flexibility. Within group \& credit life, the factors are differentiated into categories by the remaining length of the premium rate term by group contract. There are distinct factors for contracts that have remaining premium rate terms 36 months and under and for contracts that have remaining premium rate terms over 36 months. The Federal Employees' Group Life Insurance (FEGLI) and Servicemembers' Group Life Insurance (SGLI) receive a separate factor applied to the amounts in force.

## Specific Instructions for Application of the Formula

Lines 2, 5 and 21-41 are not applicable to Fraternal Benefit Societies.
The NAR is derived for each of the factor categories using annual statement sources and company records. In Force and Reserves amounts are net of reinsurance throughout. The In Force amounts throughout derived from company records need to be consistent with the Exhibit of Life Insurance. The Reserves amounts throughout derived from company records need to be consistent with Exhibit 5, Separate Accounts Exhibit, and Schedule S.

The NAR size bands apply to the total amounts for individual \& industrial life and group term \& credit life. The size bands are allocated proportionately to the NAR for each of the factor categories. Size band 1 is for NAR amounts up to $\$ 500$ million. Size band 2 is for NAR amounts greater than $\$ 500$ million and up to $\$ 25$ billion. Size band 3 is for NAR amounts greater than $\$ 25$ billion.

Pricing Flexibility for Individual Life Insurance is defined as the ability to materially adjust rates on in force contracts through changing premiums and/or non-guaranteed elements as of the valuation date and within the next 5 policy years and reflecting typical business practices. For the purposes of assessing whether business is categorized as having "Pricing Flexibility", grouping of gross amounts may be done at either the contract level or at a cohort level consistent with grouping for pricing purposes. The categorization for ceded amounts for direct insurers should be based on the terms of each reinsurance treaty. Non-affiliated reinsurers are to assess the flexibility to adjust rates on in force contracts based on the terms of each reinsurance treaty and constraints based on typical business practices. For example, if a non-affiliated reinsurer has historical precedent for changing in force rates, then that may provide support for assigning policies to the category with pricing flexibility. Affiliated reinsurers are to assign the factor category based on the direct policies. In force contracts may move between categories throughout their remaining lifetime if the degree of pricing flexibility
changes as of each valuation date. A material rate adjustment is defined as the ability to recover, on a present value basis, the difference in mortality provided for in the factors below for contracts with and without pricing flexibility. These differences in factors are shown in the Line (13) table below in the Permanent Life Flexibility Factor and Term Life Flexibility Factor columns. The flexibility factor for each category multiplied by the NAR results in the minimum dollar margin needed for a material rate adjustment, which can then be compared against margins available to adjust rates. In force contracts that have margin available that is greater than or equal to the minimum dollar margin needed may be assigned to the category for policies with pricing flexibility. Insurers may choose to assign contracts to the categories without pricing flexibility if the evaluation of margins is not completed or if the degree of pricing flexibility is uncertain.

Lines (11) and (12) Life Policies with Pricing Flexibility In Force and Reserves are derived from company records. Examples of products intended for this category include, but aren't limited to, participating whole life insurance, universal life insurance without secondary guarantees, and yearly renewable term insurance where scheduled premiums may be changed on an annual basis from the date of issue. The table below illustrates the RBC requirement calculation embedded in Line (13) for Life Policies with Pricing Flexibility.

## Line (13) Life Policies with Pricing Flexibility

Allocation of First $\mathbf{\$ 5 0 0}$ Million
Allocation of Next \$24,500 Million
Allocation of Over $\$ \mathbf{2 5 , 0 0 0}$ Million
Statement Value


Total Life Policies with Pricing Flexibility Net Amount at Risk

Lines (14) and (15) Term Life Policies without Pricing Flexibility In Force andReserves are derived from company records. Examples of products intended for this category include, but aren't limited to, level term insurance with guaranteed level premiums and yearly renewable term insurance where scheduled premiums may not be changed. The table below illustrates the RBC requirement calculation embedded in Line (16) for Term Life Policies without Pricing Flexibility.

Line (16) Term Life Policies without Pricing Flexibility Allocation of First \$500 Million
Allocation of Next \$24,500 Million
Allocation of Over $\mathbf{\$ 2 5 , 0 0 0}$ Million

$$
\begin{aligned}
& \text { Factor } \\
& \text { X } \frac{\text { Fan }}{0.00280=} \\
& \text { X } 0.00120= \\
& \text { X } 0.00085=
\end{aligned}
$$

RBC Requirement

Total Term Life Policies without Pricing Flexibility Net $\qquad$ Amount at Risk

Lines (17) and (18) Permanent Life Policies without Pricing Flexibility In Force and Reserves are derived from the aggregate amounts derived in lines (1) to (10) minus the amounts recorded in the other individual life categories. Examples of products intended for this category include, but aren't limited to, universal life with secondary guarantees and non-participating whole life insurance. Policies that aren't recorded in the other individual life categories default to this category which has the highest factors. The table below illustrates the RBC requirement calculation embedded in Line (19) for Permanent Life Policies without Pricing Flexibility.

| Line (19) |  | (1) |  | (2) |
| :---: | :---: | :---: | :---: | :---: |
|  | Allocation of First $\$ 500$ Million | Statement Value | $\mathrm{X} \frac{\text { Factor }}{0.00400}=$ | $\underline{\text { RBC Requirement }}$ |
|  | Allocation of Next \$24,500 Million |  | X $0.00175=$ |  |
|  | Allocation of Over \$ $\mathbf{2 5 , 0 0 0}$ Million |  | X $0.00120=$ |  |
|  | Total Permanent Life Policies without Pricing Flexibility Net Amount at Risk |  |  |  |

Lines (35) and (36) Group \& Credit Life In Force and Reserves with Remaining Rate Terms 36 Months and Under are derived from company records. This category includes group contracts where the premium terms have 36 months or fewer until expiration or renewal. Insurers may choose to assign contracts to the category for remaining rate terms over 36 months if the evaluation of remaining rate terms is not completed. The in force amount classified in this category needs to be consistent with the Exhibit of Life Insurance. The reserves amount classified in this category needs to be consistent with Exhibit 5 used for Lines (28) and (29), Separate Accounts Exhibit used for Line (30), and Schedule S used for Lines (31) and (32). Federal Employees' Group Life Insurance (FEGLI) and Servicemembers' Group Life Insurance (SGLI) contracts are excluded. The table below illustrates the RBC requirement calculation embedded in Line (37) for Group \& Credit Life Net Amount at Risk with Remaining Rate Terms 36 Months and Under.

Line (37) Group \& Credit Life with Remaining Rate Terms 36 Months and Under
Allocation of First $\$ 500$ Million

(2)

RBC Requirement
$\qquad$

Lines (38) and (39) Group \& Credit Life In Force and Reserves with Remaining Rate Terms Over $\mathbf{3 6}$ Months are derived from the aggregate amounts derived in lines (21) to (34) minus the Group \& Credit Life In Force and Reserves with Remaining Rate Terms 36 Months and Under in lines (35) and (36). FEGLI and SGLI contracts are excluded. The table below illustrates the RBC requirement calculation embedded in Line (40) for Group \& Credit Life Net Amount at Risk with Remaining Rate Terms Over 36 Months.
$\underline{\text { Line (40) Group \& Credit Life with Remaining Rate Terms Over }}$
Allocation of First \$500 Million
Allocation of Next \$24,500 Million
Allocation of Over $\mathbf{\$ 2 5 , 0 0 0}$ Million
Total Group \& Credit Life Net Amount at Risk with Remaining Rate Terms Over 36 Months
(1)

Statement Value
$\qquad$

## Factor

X $0.00190=$
X $0.00080=$ X $0.00055=$

RBC Requirement

Allocation of Next $\$ \mathbf{2 4 , 5 0 0}$ Million
Allocation of Over $\mathbf{\$ 2 5 , 0 0 0}$ Million
Total Group \& Credit Life Net Amount at Risk with Remaining Rate Terms $\mathbf{3 6}$ Months and Under
$\qquad$
$\qquad$

Line (41) FEGLI/SGLI In Force amounts are retrieved from the Exhibit of Life Insurance. The capital factor assigned is the same as the largest size band for group \& credit life contracts with remaining rate terms 36 months and under.


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.


## LONGEVITY RISK

## LR025-A

## Basis of Factors

The factors chosen represent surplus needed to provide for claims in excess of reserves resulting from increased policyholder longevity calibrated to a $95^{\text {th }}$ percentile level. For the purpose of this calibration aggregate reserves were assumed to provide for an $85^{\text {th }}$ percentile outcome.

Longevity risk was considered over the entire lifetime of the policies since these annuity policies are generally not subject to repricing. Calibration of longevity risk considered both trend risk based on uncertainty in future population mortality improvements, as well as level or volatility risk which derives from misestimation of current population mortality rates or random fluctuations. Trend risk applies equally to all populations whereas level and volatility risk factors decrease with larger portfolios consistent with the law of large numbers.

Statutory reserve was chosen as the exposure base as a consistent measure of the economic exposure to increased longevity. Factors were also scaled by reserve level since number of insured policyholders is a less accessible measure of company specific volatility risk. Factors provided are pre-tax and were developed assuming a $21 \%$ tax adjustment would be subsequently applied.

## Specific Instructions for Application of the Formula

Annual statement reference is for the total reserve for the products in scope. The scope includes annuity products with life contingent payments where benefits are to be distributed in the form of an annuity. The entire reserve amount for contracts in scope that include any life contingent payments are in scope. For example, under a certain-and-life style annuity, the entire reserve for both the certain payments and life contingent payments are in scope. Variable immediate annuity reserves under VM- 21 are also in scope where there are life contingent payments. Scope does not include annuity products that are not life contingent, or deferred annuity products where the policyholder has a right but not an obligation to annuitize. A certain-and-life style annuity, where only certain payments remain (such as following the death of the annuitant), is out of scope. Variable deferred annuity contract reserves under VM-21 are out of scope, including reserves valued under VM-21 for any contracts where policyholder account value has reached zero, but a lifetime benefit may still be payable by the insurer. Line (3) for General Account Life Contingent Miscellaneous reserves is included in the event there are any reserves for products in scope reported on Exhibit 5 line 0799999; it is not meant to include cash flow testing reserves reported on this line. Included in scope are:

- Single Premium Immediate Annuities (SPIA) and other payout annuities in pay status
- Deferred Income Annuities which will enter annuity pay status in the future
- Structured Settlements for annuitants with any life contingent benefits
- Group Annuities, such as those associated with pension liabilities with both immediate and deferred benefits

The total reserve exposure is then further broken down by size as in a tax table. This breakdown will not appear on the RBC filing software or on the printed copy, as the application of factors to reserves is completed automatically. The calculation is as follows:

Line (5) Life Contingent Annuity Reserve First 250 Million
Next 250 Million
Next 500 Million
Over 1,000 Million

| (1) |  |
| :---: | :---: |
| Statement Value | Factor |
|  | X 0.0171 |
|  | X 0.0108 |
|  | X 0.0095 |
|  | X 0.0089 |

## (2)

RBC Requirement
$\qquad$
$\qquad$

Total Life Contingent Annuity Reserves $\qquad$
$\qquad$
The amount ultimately included in the authorized control level will be subject to a guardrail factor of 0 and a correlation factor of -.25 .

## 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
Lines 1-6 are not applicable to Fraternal Benefit Societies.
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 provision, Section 8, of Actuarial Guideline XLVIII (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 for 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.

Cash Flow Modeling for C-3 RBC
A company may be required or choose to perform cash flow modeling to determine its C-3 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 modeling. Some companies may choose to or be required to calculate part of the C-3 RBC requirement on Certain Annuities and Single Premium Life Insurance under a method using cash flow modeling techniques. Refer to LR049 Exemption Test: Cash Flow Testing for C-3 RBC for determination of exemption from this cash flow testing requirement. Companies are required to calculate the C-3 RBC requirement on Variable Annuities and Similar Products as described in the instructions for line (37).

Factor-Based RBC for Reserves on contracts that are Cash Flow Modeled for Interest Rate Risk
Lines (2) though (16) include the reserves for contracts that were modeled for interest rate risk following the guidance of Appendix 1 of the instructions. $1 / 2$ of this factor-based amount is used in the floor determined in line (34).

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 0.0063 . For a well-matched portfolio, the risk-based capital pre-tax factor reflecting the 50 percent loading discussed above is 0.0095 .
(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.

Factor-Based RBC for All Other Reserves not included in Reserves that are Cash Flow Modeled for Interest Rate Risk

## 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 0.0063 . For a less well-matched portfolio, the risk-based capital pre-tax factor is 0.0095 .
(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 Modeled. 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.

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 modeled for RBC. Guaranteed Indexed separate accounts following a Class 1 investment strategy are reported as low-risk Line (2).

The fixed portion of equity-based variable products and Guaranteed indexed separate accounts following a Class II investment strategy are excluded. See Proposed new Risk-Based Capital Method for Separate Accounts that Guarantee an Index, June 2003. 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:

 for Variable Annuities and Similar Products" and
(b) Business in companies that did not cash flow model for C-3 RBC.

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 $\mathrm{C}-3$ 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 (in 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 those 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 conditions (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 modeling of Certain Annuities and Single Premium Life Insurance for C-3RBC (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.

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 from the Cash Flow Modeling for C-3 RBC Requirements Variable Annuities and Similar Products (see Line (37)). The interest rate risk component should be entered on a pre-tax basis using the enacted maximum corporate income tax rate.

Line (36)
Total interest rate risk. Equals Line (34) plus Line (35)

## Line (37)

## Cash Flow Modeling for C-3 RBC Requirements for Variable Annuities and Similar Products:

## Overview

The amount reported on Line (35) and Line (37) is calculated using the 7 -step process defined below. This calculation applies to all policies and contracts that have been valued following the requirements of AG-43 or VM-21. For contracts whose reserve was determined using the Alternative Methodology (VM-21 Section 7) see step 3 while all other contracts follow steps 1 and 2, then all contracts follow steps 4-7.

Step 1 CTE98: The first step is to determine CTE98 by applying the one of the two methodologies described in paragraph A below.
Step 2 C-3 RBC: using the formulas in paragraph B, determine the C-3 RBC amount based on the amount calculated in step (1). Floor this amount at $\$ 0$.
Step 3: Determine the C-3 RBC using the Alternative Methodology for any business subject to that requirements as described in paragraph C.
Step 4: As described in paragraph D below, the C-3 RBC amount is the sum of the amounts determined in steps 2 and 3 above, but not less than zero. The Total Asset Requirement is the Reserve based on the requirements of VM-21 prior to the application of any phase-in, plus the C-3 RBC amount.

Step 5: For a company that has elected a Phase-in for reserves following VM-21 Section 2.B., the C-3 RBC amount is to be phased-in over the same time period following the requirements in paragraph E below.

Step 6: Apply the smoothing rules (if applicable) to the C-3 RBC amount in step (4) or (5) as applicable.
Step 7: Divide the amount from Step 4, 5, or 6 (as appropriate) by (1-enacted maximum federal corporate income tax rate). Split this amount into an interest rate risk portion and a market risk portion, as described in paragraph G.
The interest rate portion of the risk should be included in Line (35) and the market risk portion in Line (37).
The C-3 RBC is calculated as follows:
A. CTE (98) is calculated as follows: Except for policies and contracts subject to the Alternative Methodology (See C. below), apply the CTE methodology described in NAIC Valuation Manual VM-21 and calculate the CTE (98) as the numerical average of the 2 percent largest values of the Scenario Reserves, as defined by Section 4 of VM- 21 . In performing this calculation, the process and methods used to calculate the Scenario Reserves use the requirements of VM- 21 and should be the same as used for the reserve calculations. The effect of Federal Income Tax should be handled following one of the following two methods:

1. If using the Macro Tax Adjustment (MTA): The modeled cash flows will ignore the effect of Federal Income Tax. As a result, for each individual scenario, the numerical value of the scenario reserve used in this calculation should be identical to that for the same scenario in the Aggregate Reserve calculation under VM-21. Federal Income Tax is reflected later in the formula in paragraph B.1.
2. If using Specific Tax Recognition (STR): At the option of the company, CTE After-Tax (98) (CTEAT (98)) may be calculated using an approach in which the effect of Federal Income Tax is reflected in the projection of Accumulated Deficiencies, as defined in Section 4.A. of VM-21, when calculating the Scenario Reserve for each scenario. To reflect the effect of Federal Income Tax, the company should find a reasonable and consistent basis for approximating the evolution of tax reserves in the projection, taking into account restrictions around the size of the tax reserves (e.g., that tax reserve must equal or exceed the cash surrender value for a given contract). The Accumulated Deficiency at the end of each projection year should also be discounted at a rate that reflects the projected after-tax discount rates in that year. In addition, the company should add the Tax Adjustment as described below to the calculated CTEAT (98) value.
3. A company that has elected to calculate CTEAT (98) using STR may not switch back to using MTA in the projection of Accumulated Deficiencies without prominently disclosing that change in the certification and supporting memorandum. The company should also disclose the methodology adopted, and the rationale for its adoption, in the documentation required by paragraph J below.
4. Application of the Tax Adjustment: Under the U.S. IRC, the tax reserve is defined. It can never exceed the statutory reserve nor be less than the cash surrender value. If a company is using STR and if the company's actual tax reserves exceed the projected tax reserves at the beginning of the projection, a tax adjustment is required.

The CTEAT (98) 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 approximated 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 CTEAT (98) may be approximated as the corporate tax rate times fimes the difference between the company's actual tax reserves and projected tax reserves at the start of the projections. For this calculation, f is calculated as follows: For the scenarios reflected in calculating CTE (98), the Scenario Greatest Present Value scenario reserve is determined 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 CTE (98) scenarios and $f$ is one minus this average ratio. If the Alternative Method is used, $f$ is approximated as 0.5 .
B. Determination of RBC amount using stochastic modeling:

1. If using the MTA: Calculate the RBC Requirement by the following formula in which the statutory reserve is the actual reserve reported in the Annual Statement. in the second term - i.e., the difference between statutory reserves and tax reserves multiplied by the Federal Income Tax Rate - may not exceed the portion of the company's nonadmitted deferred tax assets attributable to the same portfolio of contracts to which VM-21 is applied in calculating statutory reserves:
$25 \%$ x ((CTE (98) + Additional Standard Projection Amount - Statutory Reserve) x (1 - Federal Income Tax Rate) - (Statutory Reserve - Tax Reserve) x Federal Income Tax Rate
2. If the company elects to use the STR: The C-3 RBC is determined by the following formula:

25\% x (CTEAT (98) + Additional Standard Projection Amount - Statutory Reserve)
The Additional Standard Projection Amount is calculated using the methodology outlined in Section 6 of VM-21.
C. Determination of C-3 RBC using Alternative Methodology: This calculation applies to all policies and contracts that have been valued following the requirements of AG-43 or VM-21, for which the reserve was determined using the Alternative Methodology (VM-21 Section 7). The C-3 RBC amount is determined by applying the methodology as defined in Appendix 2 to these instructions.
D. The C-3 RBC amount is the sum of the amounts determined in paragraphs B and C above, but not less than zero. The TAR is defined as the Reserve determined according to VM-21 plus the C-3 RBC amount. All values are prior to any consideration of Phase-in allowances for either reserve or C-3 RBC, or any C-3 RBC smoothing allowance. The RBC values are post-tax.
E. Phase in: A company that has elected to phase-in the effect of the new reserve requirements following VM- 21 Section 2 .B. shall phase in the effect on C-3 RBC over the same time period, using the following steps:

- 1. Begin with the C-3 RBC amount from step 7 for Dec. 31, 2019 LR027 Line (37) instructions for all business within the scope of the Variable Annuities modeling requirements as of $12 / 31 / 19$. Add to this any voluntary reserves which were subtracted from TAR when the C-3 RBC amount reported for 2019 was determined. Also add to this the amount of C-3 RBC computed in the same manner as the 2019 value for any reinsurance ceded that is expected to be recaptured in 2020 and in the scope of the Variable Annuities modeling requirements. This amount is 2019 RBC
- 2. Determine the C-3 RBC amount as of $12 / 31 / 19$ using paragraphs $\mathrm{A}, \mathrm{B}, \mathrm{C}$, and D for the same inforce business as in 1 . Exclude any voluntary reserves in these calculations. Labeled as 2019 RBC New
- Determine the phase-in amount (PIA) as the excess of 2019RBC New over 2019RBC
- For $12 / 31 / 2020$, compute the C-3 RBC following paragraphs A - 108D above, then subtract PIA times (2/3)
- For $12 / 31 / 2021$, compute the C-3 RBC following paragraphs A - D above, then subtract PIA times ( $1 / 3$ )

Guidance Note: For a company that has adopted a Phase-in for reserves longer than 3 years, adjust the above formula to reflect the actual period with uniform amortization amounts during that period.
Guidance Note: An adjustment is made for voluntary reserves. Voluntary reserve means any reserve that is not required by AG-43, VM-21 and/or a state in which the company is doing business and was subtracted from TAR in 2019 to determine the RBC.

## F. Smoothing of C-3 RBC amount

A company should decide whether or not to smooth the C-3 RBC calculated in paragraph D or E above to determine the amount in Line (37). For any business reinsured under a coinsurance agreement that complies with all applicable reinsurance reserve credit "transfer of risk" requirements, the ceding company shall reduce the reserve in proportion to the business ceded while the assuming company shall use a reserve consistent with the business assumed.

A company may choose to smooth the C-3 RBC calculated in paragraph D or E above. A company is required to get approval from its domestic regulator prior to changing its decision about smoothing from the prior year. In addition, a company that has elected to smooth the risk-based capital is required to get approval from its domestic regulator prior to smoothing if it has experienced a material change in its Clearly Defined Hedging Strategy from the prior. For this purpose, a company's Clearly Defined Hedging Strategy is considered to have experienced a material change if any of the items outlined in VM-21 Section 1.D. 2 in the current year differs from that in the prior year.

To implement smoothing, use the following steps. If a company does not qualify to smooth or a decision has been made not to smooth, go to paragraph G .
. Determine the C-3 RBC amount calculated in paragraph D or E above
. Determine the aggregate reserve for the contracts covered by the Variable Annuity Stochastic modeling requirements.
3. Determine the ratio of the C-3 RBC / reserve for current year.
4. Determine the C-3 RBC as actually reported for the prior year Lines (35) plus (37) and adjust that amount to a post-tax amount by multiplying by (1- enacted maximum federal corporate income tax rate). Restate the amount to remove the effect of any voluntary reserves held in prior years that materially differ in amount from the voluntary reserves held in the current year.
5. Determine the aggregate reserve for the contracts in scope of these requirements for the prior year-end. Restate the aggregate reserve to remove any voluntary reserves held for the prior year-end that materially differ in amount from the voluntary reserves held as of the current year-end.
6. Determine the ratio of the $\mathrm{C}-3 \mathrm{RBC}$ / reserve for prior year.
7. Determine a ratio as $0.4^{*}(6)$ plus $0.6^{*}(3)\{40 \%$ prior year ratio and $60 \%$ current year ratio $\}$.
8. Determine the risk-based capital for current year as the product of (7) and (2) \{adjust (2) to be actual $12 / 31$ reserve\}.
G. The amount determined in paragraphs D., E., or F. above for the contracts shall be divided by (1-enacted maximum federal corporate income tax rate) to arrive at a pre-tax amount. This pre-tax amount shall be split into a component for interest rate risk and a component for market risk. Neither component may be less than zero. The provision for the interest rate risk, if any, is to be reported in Line (35). The market risk component is reported in Line (37).

The amount reported in Line (37) is to be combined with the C-1cs component for covariance purposes.
H. The way grouping (of funds and of contracts), sampling, number of scenarios, and simplification methods are handled is the responsibility of the company. However, all these methods are subject to Actuarial Standards of Practice, supporting documentation and justification, and should be identical to those used in calculating the company's statutory reserves following VM-21.
I. Certification of the work done to set the C-3 RBC amount for Variable Annuities and Similar products are the same as are required for reserves as part of VM-31. The certification should specify that the actuary is not opining on the adequacy of the company's surplus or its future financial condition.

The certification(s) should be submitted by hard copy with any state requiring an RBC hard copy.
J. An actuarial memorandum should be constructed documenting the methodology and assumptions upon which the required capital for the variable annuities and similar products is determined. Since the starting point for the C-3 RBC calculation is the cash flow modeling used for the reserves, the documentation requirements for reserves (VM-31) should be followed for the C-3 RBC. The reserve report may be incorporated by reference, with this C-3 RBC memorandum focused on identifying differences and items unique to the C-3 RBC process, or at the company's option, the documentation of C-3 RBC may be merged into the VA Report with the differences for C-3 RBC discussed in a separate section of the Memorandum as outlined in VM-31.

These differences that would need to be identified either in the RBC Actuarial Memorandum or the VA Report will typically include:

* the basis for considering federal income tax,
* whether or not smoothing was applied, and the effect of that smoothing,
* whether or not a phase in was used, and the impact on the reported values,
* If the company elects to calculate CTEAT (98) using STR whereby the effect of Federal Income Tax is reflected in the projection of Accumulated Deficiencies, the company should still disclose in the memorandum the Total Asset Requirement and C-3 RBC that would be obtained if the company had elected to use the MTA method.
* Documentation of the alternative methodology calculations, if applicable, and
* Documentation of how the C-3 RBC values were allocated to the interest and market risk components.

This actuarial memorandum will be confidential and available to regulators upon request.
The lines on the alternative calculations page will not be required for 2019 or later.

The total of all annual statement reserves representing exposure to $\mathrm{C}-3$ risk on Line (36) should equal the following:
Exhibit 5, Column 2, Line 0199999

- Page 2, Column 3, Line 6
+ Exhibit 5, Column 2, Line 0299999
+ Exhibit 5, Column 2, Line 0399999
+ Exhibit 7, Column 1, Line 14
+ Separate Accounts Page 3, Column 3, Line 1 plus Line 2 after deducting (a) funds in unitized separate accounts with no underlying guaranteed minimum return and no unreinsured guaranteed living benefits; (b) non-indexed separate accounts that are not cash flow tested with guarantees less than 4 percent; (c) non-cash-flow-tested experience rated pension reserves/liabilities; and (d) guaranteed indexed separate accounts using a Class II investment strategy.
- Non policyholder reserves reported on Exhibit 7
+ Exhibit 5, Column 2, Line 0799997
+ Schedule S, Part 1, Section 1, Column 12
- Schedule S, Part 3, Section 1, Column 14


## HEALTH CREDIT RISK

## LR028

## Basis of Factors

The Health Credit Risk is an offset to some portions of the managed care discount factor. Since the managed care discount factor assumes that health risks are transferred to health care providers through fixed prepaid amounts, the Health Credit Risk compares these capitation payments to security the company holds. To the extent that the security does not completely cover the credit risk of capitated payments, a risk charge is applied to the exposed portion. There is no credit risk for any portion of the managed care discount factor for Stand-Alone Medicare Part D Coverage.

Capitations - Line (1) through Line (6)
Credit risk arises from capitations paid directly to providers or intermediaries. The risk is that the company will pay the capitation but will not receive the agreed-upon services and will encounter unexpected expenses in arranging for alternative coverage. The credit risk RBC requirement for capitations paid directly to providers is 2 percent of the amount of capitations reported as paid claims in LR022 Underwriting Risk - Managed Care Credit. This amount is roughly equal to two weeks of paid capitations.

However, an insurer can also make arrangements with its providers that mitigate the credit risk, such as obtaining acceptable letters of credit or withholding funds. Where the insurer obtains these protections for a specific provider, the amount of capitations paid to that provider are exempted from the credit risk charge. A separate worksheet is provided to calculate this exemption, but an insurer is not obligated to complete the worksheet.

The credit risk RBC requirement for capitations to intermediaries is 4 percent of the capitated payments reported as paid claims in LR022 Underwriting Risk - Managed Care Credit. However, as with capitations paid directly to providers, the regulated insurer can eliminate some or all of the credit risk that arises from capitations to intermediaries by obtaining acceptable letters of credit or withheld funds.

## Specific Instructions for Application of the Formula

Line (1) - Total Capitations Paid Directly to Providers
This is the amount reported in LR022 Underwriting Risk - Managed Care Credit Column (1), Line (5)

## Line (2) - Less Secured Capitations to Providers

This includes all capitations to providers that are secured by funds withheld or by acceptable letters of credit equal to 8 percent of annual claims paid to the provider. If lesser protection is provided (e.g., an acceptable letter of credit equal to 2 percent of annual claims paid to that provider), then the amount of capitation is prorated. The exemption is calculated separately for each provider and intermediary. The worksheet to calculate the exemption is shown in Figure (14) (and is to be filed electronically if any data is included).

Line (3) - Net Capitations to Providers Subject to Credit Risk Charge
Line (1) minus Line (2).
Line (4) - Total Capitations to Intermediaries
From Line (6) and Line (7) of LR022 Underwriting Risk - Managed Care Credit, this includes all capitation payments to intermediaries.
Line (5) - Less Secured Capitations to Intermediaries
This includes all capitations to providers that are secured by funds withheld or by acceptable letters of credit equal to 16 percent of annual claims paid to the provider. If lesser protection is provided (e.g., an acceptable letter of credit equal to 5 percent of annual claims paid to that provider), then the amount of capitation is prorated. The exemption is calculated separately for each provider and intermediary. The worksheets to calculate the exemption are shown in Figure (15) and Figure (16) (and are to be filed electronically if any data is included.
(Figure 14)
Capitations Paid Directly to Providers

| Number | Name of |
| :---: | :--- |
| 1 | Denise Sampson |
| 2 | James Jones |
| 3 | Dr. Dunleavy |
| 4 | Dr. Clements |
| 5 | All others |
| 1999999 | Total to Providers |


| (A) | (B) |  |
| :---: | ---: | :---: |
| Paid Capitations | Letter of Credit <br> During Year <br> Amount |  |
| 125,000 |  |  |
| 50,000 | 5,000 |  |
| 750,000 | 5,000 |  |
| 25,000 | 5,000 |  |
| $2,500,000$ | 0 |  |
| $3,450,000$ | xxx |  |

Capitations Paid to Unregulated Intermediaries
(A)
Paid Capitations
During Year

|  |  |
| :---: | :--- |
| Number | Name of Provider |
|  |  |
| 1 | Mercy Hospital |
| 2 | General |
| 3 | Physicians Clinic |
| 4 | Joes HMO |
| 5 | All others |
| 2999999 | Total to Unregulated Intermediaries |

(C)
$=\mathrm{A} * \operatorname{Min}(1, \mathrm{D} / 8 \%)$
Exempt
Capitations
$(\mathrm{D})$
$=(\mathrm{B}+\mathrm{C}) / \mathrm{A}$
Protection
Percentage

Funds Withheld Percentage
(E)

## Capitations Paid to Regulated Intermediaries

| Number | Name of Provider | Paid Capitations During Year | Domiciliary State |  | Exempt Capitations |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | Freds HMO | 2,500,000 | NY |  | 2,500,000 |
| 2 | Blue Cross of Guam | 50,000 | GU |  | 50,000 |
| 3999999 | Total to Regulated Intermediaries | 2,550,000 | xxx | xxx | 2,550,000 |
| 9999999 | Total of Figures (14), (15) and (16) | 20,000,000 | xxx | xxx | 9,600,000 |

Divide the "Protection Percentage" by 8 percent (providers) or by 16 percent (unregulated intermediaries) to obtain the percentage of the capitation payments that are exempt. If the protection percentage is greater than 100 percent, the entire capitation payment amount is exempt. All capitations to regulated intermediaries qualify for the exemption (Figure 16).

The "Exempt Capitation" amount from Line 1999999 of $\$ 800,000$ would be reported on Line (2) "Less Secured Capitations to Providers" in LR028 Health Credit Risk. The total of the "Exempt Capitation" amount from Line 2999999 plus Line 3999999 ( $\$ 6,250,000+\$ 2,550,000=\$ 8,800,000$ ) would be reported on Line (5) "Less Secured Capitations to Intermediaries" in LR028 Health Credit Risk.

## BUSINESS RISK

LR029

## Basis of Factors

General business risk is based on premium income, annuity considerations and separate account liabilities. The formula factors were based on considering a company's exposure to guaranty fund assessments without attempting to exactly mirror the assessment formulas. Also considered were other general business risk exposures; e.g., litigation, etc.

For life and annuity business, the RBC pre-tax contribution is 2.53 percent of Schedule T life premiums and annuity considerations before taxes. A smaller pre-tax factor of 0.63 percent is applied against Schedule T accident and health premiums. The smaller factor for accident and health business recognizes that general business risk exposure is, in part, a function of reserves. Since life and annuity business typically carries higher reserves than accident and health business, a lower factor is used to achieve the same relative risk coverage as for life and annuity business.

To maintain general consistency with the health RBC formula, an amount is determined as risk related to the potential that actual expenses of administering certain types of health insurance will exceed the portion of the premium allocated to cover these expenses. Not all administrative expenses are included (commissions, premium taxes and other expenses defined and paid as a percentage of premium are not included and the expenses for administrative services contracts (ASC) and administrative service only (ASO) business have separate lower factors) and the factor is graded based on a two-tier formula related to health insurance premium to which this risk is applied. ASC is considered to have a separate business risk related to the use of the company's funds with an expectation of later recovery of all amounts from the contractholder but this does not include Stand-Alone Medicare Part D coverage. Lines (54) and (55) apply a small factor to amounts reported as incurred claims for ASC contracts and separately for other medical costs. This separation allows for the cross-checking of incurred claims between Schedule H and the RBC filing.

Deposit-type funds shown on Schedule T are not included in the risk-based capital calculation.
For separate account business, a pre-tax factor of $\mathbf{0 . 0 6}$ percent is applied to separate account liabilities. Separate account business is generally not subject to guaranty fund assessments. As a result, most of the exposure in the separate account is reserve based. A lower factor is used here and applied to a higher number; i.e., reserves versus the use of premiums above, to achieve an appropriate level of risk coverage for a company's exposure to the general business risk in the separate account.

Since the RBC calculation is applied to separate account liabilities, Variable and Other Premiums and Considerations are excluded from the pre-tax 3.08 percent or 0.77 percent factors above. Variable and Other Premiums and Considerations are those on all variable business life, annuity and health (both fixed and variable components), as well as on other business ultimately reserved for in the separate account. This information can be found on the annual statement.

Specific Instructions for Application of the Formula
Amounts reported for Business Risk should equal the annual statement references indicated. No adjustments are to be made.

## CALCULATION OF AUTHORIZED CONTROL LEVEL RISK-BASED CAPITAL

LR031

## Basis of Factors

The purpose of the formula is to estimate the risk-based capital levels required to manage losses that can be caused by a series of catastrophic financial events. However, it is remote that all such losses will occur simultaneously. The covariance adjustment states that the combined effect of the $\mathrm{C}-10, \mathrm{C}-1 \mathrm{cs}, \mathrm{C}-2$ and $\mathrm{C}-3$ and a portion of the $\mathrm{C}-4$ risks are not equal to their sum but are equal to the square root calculation described below. It is statistically assumed that the $\mathrm{C}-10$ risk and a portion of the $\mathrm{C}-3$ risk are correlated, while the $\mathrm{C}-1 \mathrm{cs}$ risk, the C-2 risk, the balance of the C-3 risk and a portion of the C-4 risk are independent of both. The split of the C-3 and C-4 risks allows for general consistency with the health RBC formula. This assumption provides a reasonable approximation of the capital requirements needed at any particular level of losse

The covariance formula is applied on Line (67) on LR031 before adding operational risk and Primary Security Shortfall Calculated in Accordance With Actuarial Guideline XLVIII:
RBC after Covariance Before Operational Risk $=\mathrm{C} 0+\mathrm{C} 4 \mathrm{a}+$ Square Root of $\left.\left[(\mathrm{C} 1 \mathrm{o}+\mathrm{C} 3 \mathrm{a})^{2}+(\mathrm{C}-1 \mathrm{cs}+\mathrm{C}-3 \mathrm{c})^{2}+(\mathrm{C} 2)^{2}+(\mathrm{C} 3 \mathrm{~b})^{2}+\mathrm{C} 4 \mathrm{~b}\right)^{2}\right]$
Operational Risk:
Operational risk is defined as the risk of financial loss resulting from operational events, such as the inadequacy or failure of internal systems, personnel, procedures or controls, as well as external events. Operational risk includes legal risk but excludes reputational risk and risk arising from strategic decisions. Operational risk has been identified as a risk that should be explicitly addressed in the RBC formulas. The Operational Risk charge is intended to account for operational risks that are not already reflected in existing risk categories.

A Gross Operational Risk charge will be reported on Line 68 using a percentage of RBC or "add-on" approach that will apply a risk factor of $\mathbf{3} .00 \%$ to the amount reported in Line (67) - Total RBC after Covariance Before Operational Risk reported on page LR031. The result will represent an initial value of operational risk. Because the current C-4a risk charge is assumed to include some operational risk, a company's C-4a - Post Tax reported on Line (63) is offset against operational risk. A further reduction to the operational risk charge equal to the sum of the C-4a offset amounts reported by direct life RBC filing insurance subsidiaries (Page LR031, Lines ( $63+69$ )), adjusted for the percentage of ownership in the direct life insurance subsidiary, will be reported on Page LR031 in Line (69).

Net Operational risk after C-4a offset is reported on Line (70), but not less than zero.
Total RBC After Covariance including Operational Risk will be reported in Line (72) as the sum of lines (67), (70) and (71) - Primary Security Shortfall Calculated in Accordance With Actuarial Guideline XLVIII as described below.

Authorized Control Level Risk-Based Capital is 50 percent of the sum of items A plus B plus C where:
"A" equals C-0 plus the C-4a risk-based capital and the square root of the sum of the $\mathrm{C}-1 \mathrm{o}$ and $\mathrm{C}-3 \mathrm{a}$ risk-based capital squared, the $\mathrm{C}-1 \mathrm{cs}$ and $\mathrm{C}-3 \mathrm{c}$ risk-based capital squared, the $\mathrm{C}-2$ risk-based capital squared, the $\mathrm{C}-3 \mathrm{~b}$ risk-based capital squared and the $\mathrm{C}-4 \mathrm{~b}$ risk-based capital squared as reported on Line (67) and,
" $B$ " equals the amount of operational risk after C-4a offset as reported on Line (70) and
"C" equals the greater of zero and the amount of Primary Security shortfalls for all cessions covered by Actuarial Guideline XLVIII (AG 48) multiplied by two on Line (71).
The intent of this addend is to produce a dollar for dollar increase in the Authorized Control Level for the total of the AG 48 Primary Security shortfall. This Authorized Control Level increase for the amount of Primary Security shortfall applies to all insurers and all cessions of Covered Policies as defined in AG 48, that do not fall within an exemption set forth in

AG 48, regardless of whether a state may have chosen to waive all or part of AG 48. For example, if a cession is of Covered Policies and no exemption is available under the terms of AG 48 for a particular insurer or transaction, but a state nevertheless determines that the insurer or Appointed Actuary will not be required to comply in full with the Guideline, then for RBC a computation of shortfall, if any, will still be required and an increase to Authorized Control Level for any such shortfall will still apply.

The information reported should be consistent with the information that will be included in Part 2B, Column 19, of the annual statement Supplemental Term and Universal Life Insurance Reinsurance Exhibit.

Mandatory Control Level Risk-Based Capital is 70 percent of Authorized Control Level Risk-Based Capital.
Specific Instructions for Application of the Formula
All amounts reflected for the calculation of Authorized Control Level Risk-Based Capital will be calculated automatically by the software.
In recognition of the exclusion of the carrying value of Alien Insurance Subsidiaries - Other from Total Adjusted Capital, the carrying value of these entities is also to be excluded from the calculation of C-O risk-based capital.


# CALCULATION OF TOTAL ADJUSTED CAPITAL 

## (Including Total Adjusted Capital Tax Sensitivity Test)

LR033
The following instructions for the Calculation of Total Adjusted Capital will remain effective independent of the status of the sunset provision, 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 for reinsurance, is adopted by the NAIC.

Basis of Factors
In determining the $\mathrm{C}-1$ risk factors, availability of the AVR and voluntary investment reserves to absorb specific losses was not assumed. Therefore, the AVR is counted as capital for the purposes of the formula although it represents a liability and is not usable against general contingencies. The portion of the AVR that can be counted as capital is limited to the amount not utilized in asset adequacy testing in support of the Actuarial Opinion for reserves. Voluntary investment reserves were eliminated from Total Adjusted Capital for the 1997 risk-based capital formula.

The annual statement provision for future dividends can provide a general cushion against potentially adverse future experience. As a reflection of this possible cushion, 50 percent of the annual statement dividend liability is included. However, when a block is reinsured, such credit to Total Adjusted Capital will not be allowed to either company unless the company has total control over the dividend decision and the full benefit of a change in the dividend scale flows to the company. A factor of 25 percent of the dividend liability is used in sensitivity testing.

Subsidiary amounts other than the carrying value of Alien Insurance Subsidiaries - Other, are included as appropriate recognizing that this surplus is included within the surplus of the parent. The carrying value of Alien Insurance Subsidiaries - Other should be excluded from the surplus of the parent for purposes of computing Total Adjusted Capital. Property and casualty subsidiaries should subtract all non-tabular discounts from surplus to arrive at the adjusted surplus figure. This adjustment to surplus was phased in over a five-year period by subtracting 20 percent of the non-tabular discount the first year and an additional 20 percent each year thereafter. Beginning with the 1998 risk-based capital formula, the adjustment to surplus is 100 percent. The same adjustment is made to the surplus of a life company having ownership of a property and casualty subsidiary.

The laws of certain states allow insurers to issue a form of capital instrument called a "capital note." A credit is allowed to Total Adjusted Capital for a capital note that satisfies all of the following conditions:

1. In a liquidation, the capital note ranks with surplus notes and is subordinate to the claims of policyholders, claimants and general creditors.

The form and content of the capital note was approved by the commissioner of the insurer's state of domicile.
3. At the time of issuance of the capital note, the aggregate principal amount did not exceed 25 percent of the Total Adjusted Capital (including the aggregate principal amount of outstanding capital and surplus notes) as of the end of the immediately preceding calendar year less the aggregate principal amount of outstanding capital and surplus notes.
4. The term of the capital note is not less than five years.
5. At the time of issuance of the capital note:
a) The total principal amount of capital notes maturing in any one year did not exceed 5 percent of Total Adjusted Capital (measured at the time of issuance); and
b) The total principal amount of capital notes maturing in any three-year period did not exceed 12 percent of Total Adjusted Capital (measured at the time of issuance).
6. Payment of interest, dividend or principal of the capital note is deferred if it would have caused:
a) The insurer's Total Adjusted Capital to drop below its Company Action Level Risk-Based Capital; or
b) The insurer's Total Adjusted Capital to drop below 125 percent of its Company Action Level Risk-Based Capital, and there is a negative trend on the Trend Test. However, upon request by the insurer, the commissioner of the insurer's state of domicile may approve such payment if, in the commissioner's judgment, the financial condition of the insurer warrants it.
7. The commissioner of the insurer's state of domicile may halt all payments on the capital note if the insurer's Total Adjusted Capital drops below three times the principal amount of the capital and surplus notes the insurer has outstanding.
8. The capital note is treated as a liability in the computation of statutory surplus.
9. The insurer issuing the capital note is obligated to supply to the commissioner of the insurer's state of domicile an informational filing in a manner approved by the commissioner at the same time the insurer files its annual statement, and at such other times as the commissioner determines necessary. The filing shall include and be based on the following guidelines:
a) The filing shall display the financial results of the criteria used to determine whether payments on the insurer's capital notes need be approved by the commissioner or may be halted by the commissioner. Further, it shall specifically identify those results that either necessitate commissioner approval of the payment or give the commissioner the option to halt payment.
b) The insurer shall notify the Commissioner for informational purposes of each forthcoming payment under a capital note not less than ten business days prior to the date of payment, nor more than 30 business days prior to the date of payment.
c) Whenever an insurer declares its intention to exercise the option to call or redeem a capital note prior to the scheduled maturity, the Commissioner shall be notified within five business days following the declaration, and not less than 10 business days prior to the declared redemption date. The 10 -day period should be measured from the date of the commissioner's receipt of the notice.
The credit for a capital note is reduced as the note approaches maturity (as calculated on LR032 Capital Notes before Limitation). The aggregate credit for capital notes is limited so that the total amount of capital and surplus notes included in Total Adjusted Capital is not more than one-third of Total Adjusted Capital.

Total Adjusted Capital is to be reduced by the amount of all XXX/AXXX reinsurance RBC shortfalls.
Specific Instructions for Application of the Formula
Lines 10.1-10.4, 13, 14 and 18 are not applicable to Fraternal Benefit Societies.
Lines (3) and (4)
When reinsurance is involved (coinsurance, modified coinsurance, coinsurance with funds withheld, or any similar arrangement) the dividend liability credit included in Total Adjusted Capital by the ceding company should not be allowed in the event the ceding company cannot realize the financial benefits associated with a reduction in the dividend liability. At the same time, the reinsurer should not be allowed a credit to Total Adjusted Capital for any of the dividend liability, even if the direct writer cannot take the Total Adjusted Capital credit, unless the reinsurer can demonstrate control over the dividend decision of the direct writer.

A "no" answer to either of the following two questions eliminates the company's ability to take the dividend liability credit related to such reinsurance:

1. Does the company have "total control" over the dividend decision?
2. Does the full benefit of any future ability to change the dividend scale flow to the company? (In considering the answer to this question, the company should consider the retained and reinsured portions separately.)

## Line (5)

Fair Value TAC Adjustment - In order to mitigate the effects of derivative accounting mismatches an adjustment to total adjusted capital is required when all of the following conditions exist:

- the bond is not carried at fair value,
- the bond is hedged with a credit derivative and RBC is being reduced for the hedge,
- the credit derivative is carried at fair value, and
- the bond has never been written-down pursuant to the recording of an other-than-temporary impairment.

When these conditions exist, the adjustment shall never be less than zero and shall be based on any unrealized gain of the credit derivative, determined as the lesser of 1 or 2 below:

1. Book/Adjusted Carrying Value of the credit derivative from Schedule DB minus the sum of the Prior Year and Current Year Initial Cost of the credit derivative from Schedule DB
2. The reduction in RBC arising from the hedge.

This Fair Value TAC Adjustment shall be applied to basic and intermediate hedging relationships as described in the instructions to the Spreadsheet Computation of Risk Reduction. In the case of an intermediate hedging relationship any unrealized gain attributable to the index-based credit derivative shall be determined as required in " 1 ." above then allocated to the individual bonds named in the index-based credit derivative on the basis of their par values compared to the total par value represented by the index. Each allocated unrealized gain will then be used as " 1. ." above for purposes of determining the Fair Value TAC Adjustment for that bond and hedge within the intermediate hedging relationship.

Lines (6) through (8)
The source for subsidiary amounts should be reported from the subsidiaries' annual statements. These amounts should be adjusted by percentage of ownership before entering. All U.S. life, property and casualty and investment subsidiaries should be included. An adjustment to reduce the Total Adjusted Capital for the carrying value of Alien Insurance Subsidiaries - Other should be made for the parent company on Line (8).

Lines (10.1) through (10.4)
These lines calculate the credit to Total Adjusted Capital for the insurer's qualifying capital notes. The calculation on Line (10.2) limits the credit for capital notes so the total amount of capital and surplus notes included in Total Adjusted Capital is not more than one-half of Total Adjusted Capital from other sources. This is equivalent to a limit of one-third of Total Adjusted Capital from all sources, including the capital and surplus notes themselves.

Line (11)
Line (11) should include all XXX/AXXX reinsurance RBC shortfalls as reported in LR037 XXX/AXXX Captive Reinsurance Consolidated Exhibit Column (10) Line (10).

## Lines 12 through 16

The tax sensitivity test provides a "what if" scenario eliminating deferred tax assets and deferred tax liabilities from the calculation of Total Adjusted Capital. The sensitivity test has no effect on the risk-based capital amounts reported in the annual statement.

## Line (12)

Include only the admitted portion of the deferred tax asset.

## Line (14)

Line 14 should include only the admitted portion of deferred tax assets for insurance subsidiaries that are subject to RBC.


## RISK-BASED CAPITAL LEVEL OF ACTION

## (Including Tax Sensitivity Test)

 LR034
## Basis of Factors

This section of the risk-based capital report compares amounts previously developed and thus determines the level of regulatory attention, if any, applicable to the company.

## Specific Instructions for Application of the Formula

This section will be calculated automatically by the software, indicating the Level of Action:

```
Company Action Level RBC
Regulatory Action Level RBC
Authorized Control Level RBC
Mandatory Control Level RBC
None
```

The indicators are different event levels as defined in the Risk-Based Capital (RBC) for Insurers Model Act. Refer to the model act for further elaboration.
An indicator of None requires no action.
Company Action Level requires the company to prepare and submit an RBC Plan to the commissioner of the state of domicile. After review, the commissioner will notify the company if the plan is satisfactory.

Regulatory Action Level requires the insurer to submit to the commissioner of the state of domicile an RBC Plan, or if applicable, a Revised RBC Plan. After examination or analysis, the commissioner will issue an order specifying corrective actions (Corrective Order) to be taken.

Authorized Control Level authorizes the commissioner of the state of domicile to take whatever regulatory actions considered necessary to protect the best interest of the policyholders and creditors of the insurer.

Mandatory Control Level authorizes the commissioner of the state of domicile to take actions necessary to place the company under regulatory control (i.e., rehabilitation or liquidation).

## Tax Sensitivity Test

The tax sensitivity test provides a "what if" scenario that calculates the different RBC levels using pre-tax factors and eliminates deferred tax assets and liabilities from the calculation of Total Adjusted Capital. The sensitivity test has no effeet on the risk-based capital amounts reported in the annual statement.

## TREND TEST

## LR035

Basis of Factors
Companies whose Total Adjusted Capital is between 2.0 and 3.0 times the Authorized Control Level Risk-Based Capital are subject to a trend test. The trend test calculates the greater of the decrease in the margin between the current year and the prior year and the average of the past three years. It assumes that the decrease could occur again in the coming year. Any company that trends below 1.9 times the Authorized Control Level Risk-Based Capital would trigger Company Action Level RBC regulatory action.

## Specific Instructions for Application of the Formula

The trend test will utilize two of the previous three years of information.


## XXX/AXXX REINSURANCE PRIMARY SECURITY SHORTFALL BY CESSION

## LR036

This calculation is not required for cessions covered by the state equivalent of the NAIC Term and Universal Life Insurance Reserve Financing Model Regulation (Model \#787) so long as the state equivalent regulation has the following similarities to Model \#787: the same definition of Primary Security, the same definition of Required Level of Primary Security, the same definition of Covered Policies, the same Exemptions (Section 4), the same Actuarial Method (Section 6), and the same requirement that cessions without sufficient Primary Security and Other Security (Sections 7A3 and 7A4) must directly establish a liability for the difference between the credit for reinsurance taken and the actual Primary Security held. Such cessions should not be listed. In the event that such a cession also includes policies that are regulated by AG 48, only list the portion of the cession regulated by AG 48.

The information reported for this RBC schedule should be consistent with the information that will be included in Part 2 B , Columns $13,14,15$, and 19 of the annual statement Supplemental Term and Universal Life Insurance Reinsurance Exhibit.

Cessions shall be reported on a treaty by treaty basis.
The terms below shall have the following definitions for the purposes of this RBC schedule:
A. Actuarial Method: The methodology used to determine the Required Level of Primary Security, as described in Section 5 of AG 48
B. Covered Policies: Subject to the exemptions described in Section 3 of AG 48 , Covered Policies are those policies of the following policy types: (1) life insurance policies with guaranteed nonlevel gross premiums and/or guaranteed nonleyel benefits, except for flexible premium universal life insurance policies or (2) flexible premium universal life insurance policies with provisions resulting in the ability of a policyholder to keep a policy in force over a secondary guarantee period; provided, however, that Covered Policies shall not include policies that were both (1) issued prior to $1 / 1 / 2015$ and (2) ceded so that they were part of a reinsurance arrangement, as of $12 / 31 / 2014$, that would not qualify for exemption as described in Section 3 of AG 48.
C. Required Level of Primary Security: The dollar amount determined by applying the Actuarial Method to the risks ceded with respect to Covered Policies, but not more than the total reserve ceded.
D. Primary Security: The following forms of security:

1. Cash meeting the requirements of Section 3.A. of the NAIC Credit for Reinsurance Model Law (Model 785);
2. SVO-listed securities meeting the requirements of Section 3.B. of Model 785, but excluding any synthetic letter of credit, contingent note, credit-linked note or other similar security that operates in a manner similar to a letter of credit and excluding any securities issued by the ceding insurer or any of its affiliates; and
3. For security held in connection with funds-withheld and modified coinsurance reinsurance arrangements:
a. Commercial loans in good standing of CM3 quality and higher;
b. Policy Loans; and
c. Derivatives acquired in the normal course and used to support and hedge liabilities pertaining to the actual risks in the policies ceded pursuant to the reinsurance treaty.

Column $1 \quad-\quad$ Cession ID

Enter a unique Cession ID for each line (01-99).
Column $2-\quad$ NAIC Company Code
Provide the NAIC code of the assuming insurer.
Column $3-\quad$ ID Number
Enter one of the following as appropriate for the assuming insurer being reported on the schedule.

Federal Employer Identification Number Alien Insurer Identification Number Certified Reinsurer Identification Number

## Column $4 \quad-\quad$ Name of Company

Provide the name of the assuming insurer.
Column 5 - Required Level of Primary Security
State the Required Level of Primary Security applicable to the statutory policy reserves as of the current annual statement date.
Column $6-\quad$ Primary Security and Remediation Adjustments
Reflect the values as of the current annual statement date of the Primary Security as defined in D. above held by or on behalf of the reporting entity. Also reflect any amounts qualifying as Remediation Adjustments as provided for in AG 48, Section 6.B.1:

1. Additional Primary Security added on or before March 1 of the year in which the actuarial opinion is being filed held by or on behalf of the ceding insurer, as security under the cession, on a funds withheld, Trust, or modified coinsurance basis; or
2. Any liability established equal to some or all of the difference between the Primary Security held pursuant to AG 48, Section 6.A. 1 and the Required Level of Primary Security.

Column $7 \quad-\quad$ Primary Security Shortfall
For a given cession the Column 7 Primary Security Shortfall equals the greater of (a) zero and (b) Column 5 Required Level of Primary Security less Column 6 Primary Security and Remediation Adjustments. The total for line (9999999) will be doubled and added to line (68) of LR031 Calculation of Authorized Control Level Risk-Based Capital. The adjustment will result in a dollar for dollar increase in Authorized Control Level for the total of all primary security shortfalls.

## XXX/AXXX CAPTIVE REINSURANCE CONSOLIDATED EXHIBIT

## LR037

The following instructions for the XXX/AXXX Captive Reinsurance Consolidated Exhibit will remain effective independent of the status of the sunset provision, 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 for reinsurance, is adopted by the NAIC.

Columns 2 through 9 only need to be calculated for entities reinsuring covered policies (as defined in AG 48, excluding entities assuming only risks exempted per Section 3 of AG 48). For the purposes of the descriptions below, the term "Captive" is to mean the assuming insurer of non-exempt transactions as defined in AG 48 . In the event that a Captive reinsures non-covered policies or covered policies reinsured from a different ceding company, a proration of all Captive liabilities and assets shall be used, with the pro rata portion based upon the reserves ceded for the covered policies compared to total reserves assumed by the Captive.

## For Captives that file RBC Reports:

The following situations may exist:

1. For instances where the ceding company is already calculating and holding a C-0 charge that reflects the RBC calculation for the Captive:
a. Use the RBC calculations underlying the determination of the ceding company C- 0 charge to fill in Columns 2 through 9 (as applicable).
b. For subsidiaries that are less than $100 \%$ owned, increase adjusted TAC by the C-0 charge (times 1-the enacted maximum federal corporate income tax rate to tax effect and then times the .5 ACL factor) to the ceding company attributable to that Captive (drafting note: intent had been to decrease Benchmark RBC, but ACL \& Benchmark RBC formulas had already been locked down in RBC calculations: thus the decision to increase TAC in lieu of decreasing Benchmark RBC)
c.

For $100 \%$ owned subsidiaries, set TAC equal to the greater of the calculated TAC and the Benchmark RBC. The purpose of this is to zero out the shortfall since the Captive's TAC and RBC are reflected in the ceding company's C-0 and TAC.
d. Assets in excess of the total Primary Security and Other Security may not be considered assets unless they would be normally admitted on the balance sheet of the reporting entity without taking into account any prescribed or permitted practices. Therefore, TAC must be adjusted for (b) and (c) above to remove any impact of such assets as follows:
i. Calculate the excess of statutory reserves of the Captive over the Required Level of Primary Security of the Captive. This is the maximum amount allowed of assets that would not normally be admitted on the balance sheet of the reporting entity without taking into account any prescribed or permitted practices.
ii. Next, calculate the actual value of the assets of the Captive that would not normally be admitted on the balance sheet of the reporting entity without prescribed or permitted practices.
iii. Next, calculate the excess of (d.ii) over (d.i), not less than zero.
iv. Multiply the percentage ownership of the Captive by the amount in (d.iii).
v. Reduce the amounts calculated for TAC in (b) or (c) above by the amount calculated in (d.iv).
a. Use the RBC reports to fill in Columns 2 through 9 (as applicable).
b. Assets in excess of the total Primary Security and Other Security may not be considered assets unless they would be normally admitted on the balance sheet of the reporting entity without taking into account any prescribed or permitted practices. Therefore, TAC must be adjusted for 2(a) above to remove any impact of such assets as follows:
i. Calculate the excess of statutory reserves of the Captive over the Required Level of Primary Security of the Captive. This is the maximum amount allowed of assets that would not normally be admitted on the balance sheet of the reporting entity without taking into account any prescribed or permitted practices.
ii. Next, calculate the actual value of the assets of the Captive that would not normally be admitted on the balance sheet of the reporting entity without prescribed or permitted practices.
iii. Next, calculate the excess of (b.ii) over (b.i), not less than zero.
iv. Reduce the amounts calculated for TAC in (2.a.) above by the amount calculated in (b.iii)

## For Captives that do not file RBC Reports

1. Regardless of whether or not the ceding company is already calculating and holding a C-0 charge for the Captive:
a. If the Captive reports its financial condition to its regulator using U.S. Statutory Accounting: Calculate RBC using NAIC RBC instructions to determine Authorized Control Level and Total Adjusted Capital for the Captive, even though no RBC report is filed. In both the RBC and Total Adjusted Capital calculations, liabilities are to be based on the Required Level of Primary Security (adjusted VM-20 reserve) rather than statutory reserves. Assets backing a Primary Security must meet the requirements of Primary Security as defined in AG 48, and Assets not backing a Primary Security may not be considered assets unless they would be normally admitted on the balance sheet of the reporting entity without taking into account any prescribed or permitted practices. If the Captive does not file an NAIC Annual Statement Blank, the company will have to rely on company records rather than line items from the Statement Blank.
b. If the Captive does not report its financial condition to its regulator using U.S. Statutory Accounting: Ceding company is to use pro forma statutory statement for the Captive, and use the NAIC RBC Instructions and paragraph 1.a. of this section to develop
company records to develop a pro forma RBC values. In the calculation of Total Adjusted Capital (TAC) of the Captive, use the following:
1) TAC = Adjusted Assets - Adjusted Liabilities + Other Adjustments; where,
2) Adjusted Liabilities are calculated using the Required Level of the Primary Security (adjusted VM-20 reserve);
3) Adjusted Assets are calculated using the value of the Assets backing the Primary Security (as used in AG-48 to determine the Required Level of Primary Security) and any additional assets held by the Captive that would normally be admitted on the balance sheet of the reporting entity without taking into account any prescribed or permitted practices. Asset values are to be determined according to statutory accounting procedures under the NAIC Accounting Practices and Procedures Manual as if such assets were held in the reporting entity's general account. If there is a normal NAIC statutory valuation reasonably available for an asset, then that value is to be used for the RBC shortfall calculation. Any asset should have a cost basis available for tax purposes - this value should be used for any Captive asset that 1) would be a normally admitted asset if on the ceding company's books, 2) was acquired by the Captive prior to $9 / 30 / 15$, and 3 ) does not have a reasonably available NAIC statutory valuation. Any asset acquired by a Captive after $9 / 30 / 15$ should be valued as if it were on the ceding company's books, with a normal statutory valuation if it would be a
normally admitted asset if it were on the ceding company's books and with a value of zero if it would not be a normally admitted asset. It is expected that for the vast majority of Captives' assets, normal NAIC statutory valuations will be used for the RBC shortfall calculation. If monitoring reveals this to not be the case, then these rules will be subject to revision.
4) Other Adjustments are those adjustments in the RBC Instructions (from Page LR033) made to Capital and Surplus to get Total Adjusted Capital.
c.

Increase adjusted TAC by any C-0 charge (times 1-the enacted maximum federal corporate income tax rate to tax effect and then times the .5 ACL factor) to the ceding company attributable to that Captive.

Treatment of the Concentration Factor
The ceding company shall identify its 10 largest asset exposures \& 5 largest common stock exposures consistent with LR010 \& and LR011 except without consolidating with subsidiaries.

For each Captive, the $\mathrm{C}-1 \mathrm{o} \& \mathrm{C}-1 \mathrm{cs}$ concentration factor amounts shall be those associated with any holdings (pro-rated, if/as appropriate, per the second paragraph of the instructions for this exhibit) in issuers that are among the ceding company's top 10 asset or top 5 common stock exposures. There are no additional concentration factor amounts for other issuers in a Captive's holdings.

The C-1o and C-1cs amounts to be included on Lines (2) and (3) include concentration factors based on the instructions for LR010 and LR011. These concentration factor amounts are to be shown on Lines (2.1) and (3.1). The Captive "consolidated" concentration factor amounts calculated based on the preceding paragraph are to be entered on Lines (2.2) \& (3.2). Lines (2.3) and (3.3) will calculate new C-1o and C-1cs amounts which include only the concentration factor amounts related to the ceding company's top 10 asset or top 5 common stock exposures and will equal Line (2) - Line (2.1) $+\operatorname{Line}(2.2)$ or $\operatorname{Line}(3)-\operatorname{Line}(3.1)+\operatorname{Line}(3.2)$, respectively.

Specific Instructions for Application of the Formula
For the purposes of this page, the term "Captives" refers to the assuming insurer of covered policies in non-exempt transactions as defined in AG 48.
Column 1: Ceding Company
Lines (1), (2), (3), (4), (5.1), (5.2), (5.3), (6.1) and (6.2): Take the values from the RBC forms for C-0, C-10, C-1cs, C-2, C-3a, C-3b, C-3c, C-4a, and C-4b.
Lines (2.1), (2.2), (3.1) and (3.2) are to be zero for the ceding company.
Line (2.3) equals Line (2). Line (3.3) equals Line (3).
Line (7): Take the value from the RBC form for Total Adjusted Capital.
Line (8): Take the value from the RBC form for Authorized Control Level.
Line (9) and Line (10) are not applicable to the ceding company (N/A).
Line (11) is the Final Total Adjusted Capital of the Ceding Company, and reflects the RBC Cushion. It is Line (7) of Column (1) minus Line (10) of Column (10).
Columns 2 through 9: Pro Rata Portion of Captive Reinsurer
The amounts included in these columns are to be calculated generally in accordance with the Life RBC Forecasting and Instructions publication, with exceptions noted in line-specific comments below.

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

RBC Cushion only needs to be calculated for entities reinsuring Covered Policies (as defined in AG 48, excluding entities assuming only risks exempted per Section 3 of AG 48 ). Entities not meeting this definition should not be reported on this page.

The line instructions below also apply to the individual Captive calculations aggregated in column (9). Ceding companies shall not reduce the aggregate RBC shortfall by selectively aggregating cessions in column (9).

Lines (1), (2), (3), (4), (5.1), (5.2), (5.3), (6.1), and (6.2): Take the values from the RBC forms for C-0, C-1, C-2, C-3a, C-3b, C-3c, C-4a, and C-4b.
Lines (2.1) and (3.1) are the C-1 concentration factors for the captive, calculated per the standard RBC formula.
Lines (2.2) and (3.2) are calculated per Treatment of Concentration Factor section above.
Line (2.3) is equal to Line (2) minus Line (2.1) plus Line (2.2). Line (3.3) is equal to Line (3) minus Line (3.1) plus Line (3.2). This replaces potential double-counting of concentration factor amounts with a more refined reflection of diversification across ceding company and Captive assets
Line (7) is the value from the RBC forms for Total Adjusted Capital. For subsidiary Captives that are less than $100 \%$ owned, Line (7) is to be increased by any C-0 amount (times 1the enacted maximum federal corporate income tax rate to tax effect and then times. 5 to adjust to ACL value) charged to the ceding company due to that Captive. For $100 \%$ owned subsidiary Captives where the ceding company has taken a C-0 charge based on the subsidiary Captive's RBC calculation, Line (7) is equal to the greater of the calculated Total Adjusted Capital and the Benchmark RBC. For other subsidiary Captives (eg where the ceding company has taken a C-0 charge based on the subsidiary Captive's carrying value), Line (7) should be increased by any C-0 amount (times 1-the enacted maximum federal corporate income tax rate to tax effect and then times the .5 to adjust to ACL value) charged to the ceding company due to that Captive. In all cases, assets in excess of the total Primary Security and Other Security may not be considered assets unless they would be normally admitted on the balance sheet of the reporting entity without taking into account any prescribed or permitted practices, and Line (7) should be reduced to reflect any such occurrence.

Line (8) is the ACL for the Captive based on the above values (including adjustments noted).
Line (9) is the Benchmark RBC level for setting RBC Shortfall. It is set equal to $300 \%$ of Authorized Control Level for each Captive.
Line (10) is the RBC Shortfall of the Captive. It is the difference between the Total Adjusted Capital and the Benchmark RBC level. It is Line (9) minus Line (7), floored at zero, for each Captive.
Line (11) is the Final Total Adjusted Capital of the Ceding Company. It is not applicable to the Captive.
Fill a separate column for each Captive. In the event that the Captive assumes business from more than one ceding company, or in the event that only a portion of the business at the Captive is subject to the scope of AG 48, use a pro rata portion of the total C-0, C-1, C-2, C-3a, C-3b, C-3c, C-4a, and C-4b risks, as well as Total Adjusted Capital for Lines (1), (2), (4), (5.1), (5.2), (5.3), (6.1) and (6.2), and (7). Re-calculate the Authorized Control Level (Line 8) for the pro rata portion. Use reserves ceded by the ceding company and total reserves of the Captive to determine pro rata amounts.

Column (10): Consolidated amounts
Line (10) column (10) is the sum of columns (2) through (9).

## SENSITIVITY TESTS

LR038, LR039 and LR040
The sensitivity tests provide a "what if" scenario recalculating Authorized Control Level RBC or Total Adjusted Capital using a specified alternative for a particular factor in the formula.

The amounts reported in the sensitivity tests will be an actual recalculation of the Authorized Control Level RBC and Total Adjusted Surplus. If a company does not have any of these specified items, the amounts reported will be the same as the Authorized Control Level RBC and Total Adjusted Surplus as originally calculated.

Other affiliates, noncontrolled assets, guarantees for affiliates, contingent liabilities, long-term leases and interest swaps reported elsewhere will automatically trigger recalculations of the RBC Authorized Control Level. Companies who own lower-tier subsidiaries should enter the referenced amounts from the subsidiaries' LRBC report or annual statement times the percent of ownership.

Affiliated investments owned by the company, other than preferred and common stock, should be reported on Line (7.1). Companies owning lower-tier subsidiaries should report the referenced amounts from the subsidiaries' annual statement multiplied by the percent of ownership on Line (7.2).
Surplus notes reported on Page 3 should be reported where indicated. Companies who own lower-tier subsidiaries should report the referenced amounts from the subsidiaries' annual statement times percent of ownership (as defined in the affiliated stock section)

Current year capital contributions are reported on Page 4, Line 50.1 and Line 51.1. This amount should be reported where indicated. Companies who own lower-tier subsidiaries should report the referenced amounts from the subsidiaries' annual statement multiplied by the percent of ownership.

The amounts reported on this page for subsidiaries should include only those subsidiaries that are subject to a "look through" risk-based capital calculation (i.e., insurance and investment subsidiaries). Other subsidiaries have a fixed RBC factor and therefore, have no impact on the sensitivity tests

## FEDERAL ACA RISK ADJUSTMENT SENSITIVITY TEST

LR041

The federal ACA Risk Adjustment Sensitivity Test is used to adjust TAC for the risk adjustment receivable or payable. The sensitivity test identifies the potential impact to an insurer's RBC ratio due to the risk of misestimating the ACA risk adjustment by the insurer. The sensitivity test looks at both the risk of overestimation and underestimation by the insurer for both receivables and payables. Lines (1) through (8) look at the risk of overestimation while Lines (9) through (16) look at the risk of underestimation by decreasing and increasing the amount reported in the Notes to Financial Statement by 25 percent. The sensitivity test provides a "what if" scenario that has no effect on the risk-based capital amounts reported in the annual statement. The Health Risk-Based Capital (E) Working Group determined that a 25 percent change in the annual statement amount and a 50 percent factor should be used to calculate the effect of the misestimation of the risk adjustment receivable and payable on the RBC ratio. The company can provide an explanation in the Footnote if the company believes the factors are not appropriate, with an explanation as to why the factors are inappropriate.

Line (1) and Line (9) - Premium Adjustments Receivable Due to ACA Risk Adjustment. This is the amount reported in the annual statement Notes to Financial Statement 24E2a1. Column (2) would equal Column (1) multiplied by the sensitivity amount.

Line (2) and Line (10) - Premium Adjustments Payable Due to ACA Risk Adjustment. This is the amountreported in the annual statement Notes to Financial Statement 24E2a3. Column (2) would equal Column (1) multiplied by the sensitivity amount.

Line (3) and Line (11) - Total ACA Risk Adjustments Receivable and Payable. Line (3) would be equal to Line (2) minus Line (1) and Line (11) would be equal to Line (10) minus Line (9).

Line (4) and Line (12) - Total Risk Adjustment. The absolute value of Line (4), Column (3) is equal to Line (3). The absolute value of Line (12), Column (3) is equal to Line (11).
Line (5) and Line (13) - LR033 Calculation of Total Adjusted Capital, Line (12)
Line (6) and Line (14) - Total Adjusted Capital Stressed for Risk Adjustments. Line (6) is equal to Line (5) minus Line (4) and Line (14) is equal to Line (13) minus Line (12).
Line (7) and Line (15) - LR034 Risk-Based Capital Level of Action, Line (4)
Line (8) and Line (16) - ACA Risk Adjusted ACL RBC Ratio. Line (8) is equal to Line (6) divided by Line (7) and Line (16) is equal to Line (14) divided by Line (15).

## AFFILIATED INVESTMENTS

## LR042, LR043 and LR044

## Basis of Factors

## Affiliated Preferred and Common Stock

The risk-based capital for U.S. life insurance companies, property and casualty insurance companies, health entities and investment subsidiaries is calculated on a "see through" basis (multiplied by the percent of ownership). This requires "looking through" all holding and subsidiary companies to the lowest level of ownership for each affiliated stock investment. The advantage of this approach is that where there is a choice of whether to have ownership of an asset in either the parent or the subsidiary, RBC results are unlikely to affect that decision.

The pre-tax factor for common stock of other affiliates is set at 30 percent since many of these investments have risk characteristics similar to those of unaffiliated common stock. Conversely, due to management's knowledge and control, the capital remaining in the affiliate may be the minimum needed to properly conduct its normal course of business. For that reason, a separate sensitivity analysis is completed using a pre-tax factor of 100 percent. If an insurance subsidiary is owned by another affiliate, the RBC of the insurance subsidiary is calculated first, and the pre-tax 30 percent is applied to the difference between the carrying value of the other affiliate and the carrying value of the insurance subsidiary.

The pre-tax factor for publicly traded insurance subsidiaries held at fair value is 34.6 percent, and is applied to the excess of the statutorily haircut fair value over the book value of the subsidiary.

There are 14 categories of subsidiary and affiliated investments that are subject to an RBC requirement for common and preferred stock. Those 14 categories are:
1 Directly Owned U.S. Property and Casualty Insurance Subsidiaries Subject to a Look-Through Risk-Based Capital Calculation
2. Directly Owned U.S. Life Insurance Subsidiaries Subject to a Look-Through Risk-Based Capital Calculation
3. Directly and Indirectly Owned U.S. Health Entity Subsidiaries Subject to a Look-Through Risk-Based Capital Calculation
4. Indirectly Owned U.S. Property and Casualty Insurance Subsidiaries Subject to a Look-Through Risk-Based Capital Calculation
5. Indirectly Owned U.S. Life Insurance Subsidiaries Subject to a Look-Through Risk-Based Capital Calculation
6. Investment Subsidiaries
7. Holding Company Value in Excess of Indirectly Owned Insurance Subsidiaries
8. Alien Insurance Subsidiaries - Canadian Life
9. Alien Insurance Subsidiaries - Others
10. Investments in Upstream Affiliate (Parent)
11. Other Affiliated Investments - Property and Casualty Insurers not Subject to Risk-Based Capital
12. Other Affiliated Investments - Life Insurers not Subject to Risk-Based Capital
13. Other Affiliated Investments - Non-insurers
14. Publicly Traded Insurance Subsidiaries Held at Fair Value

Codes 1 through 13 appear in Column (2) of LR044 Detaits for Affiliated Investments. The program will automatically calculate the risk-based capital charge based on the category of affiliate the company is reported under. Reporting an affiliate in the wrong category may cause a cross-check failure, requiring correction of the oversight and refiling a corrected version with the NAIC and/or any state requiring a risk-based capital filing with their department.

The total of all reported affiliated stock should equal the amounts reported on Schedule D, Part 2, Section 1, Line 8699999 pluss Line 8799999 plus Schedule D, Part 2, Section 2, Line 9299999 plus Line 9399999 and should also equal Schedule D, Part 6, Section 1, Line 0999999 plus Line 1899999.

Affiliated investments fall into two broad categories: (a) Insurance and investment subsidiaries that are subject to a look-through risk-based capital calculation; and (b) subsidiaries that are not subject to risk-based capital. The risk-based capital for these two broad groups differs. A third category of affiliates, Publicly Traded Insurance Subsidiaries Held at Fair Value, has characteristics of both of the two broader categories. As a result, it has a two-part RBC calculation. The general treatment for each is explained below.

## Insurance and Investment Subsidiaries that are Subject to a Look-Through Risk-Based Capital Calculation

The risk-based capital requirement for the reporting company for those insurance subsidiaries that are subject to a risk-based capital requirement is based on the Total Risk-Based Capital After Covariance of the subsidiary, prorated for the percent of ownership of that subsidiary. (Note: For life and investment subsidiaries, the Total Risk-Based Capital After Covariance and the Company Action Level Risk-Based Capital are identical.) For purposes of Affiliate Risk all references to Total Risk-Based Capital After Covariance of the subsidiary or affiliate means:

- For a Health subsidiary RBC filing, Total Risk-Based Capital After Covariance before Basic Operational Risk (XR025, Line (37));
- For a P/C subsidiary RBC filing, Total Risk-Based Capital After Covariance before Basic Operational Risk (PR032, Line (68)); and
- For a Life subsidiary RBC filing, the sum of
(a) Total Risk-Based Capital After Covariance before Basic Operational Risk (LR031, Line (67); and
(b) Primary Security shortfalls for all cessions covered by Actuarial Guideline XLVIII (AG 48) multiplied by two (LR031, Line (71)).

The risk-based capital for those subsidiaries must be calculated prior to completing this risk-based capital worksheet. The subsidiaries affected by this rule are:

1. Directly Owned U.S. Property and Casualty Insurance Subsidiaries Subject to a Look-Through Risk-Based Capital Calculation
2. Directly Owned U.S. Life Insurance Subsidiaries Subject to a Look-Through Risk-Based Capital Calculation
3. Directly and Indirectly Owned U.S. Health Entity Subsidiaries Subject to a Look-Through Risk-Based Capital Calculation
4. Indirectly Owned U.S. Property and Casualty Insurance Subsidiaries Subject to a Look-Through Risk-Based Capital Calculation
5. Indirectly Owned U.S. Life Insurance Subsidiaries Subject to a Look-Through Risk-Based Capital Calculation
6. Investment Subsidiaries

Directly Owned U.S. Property and Casualty Insurance Subsidiaries
Report information regarding any top-layer directly owned U.S. property and casualty insurance subsidiaries in the schedule. For each subsidiary, report its name, NAIC company code, affiliate's Total Risk-Based Capital After Covariance, value of the common stock from Schedule D, Part 6, Section 1, Line 1199999 (less any amounts reported on the worksheet as affiliate code " 11 ") in Columns (1) through (6). If no value is reported in the Total Value of Affiliate's Common Stock column (Column (6)), the program will assume 100 percent ownership. If the reporting entity does not own any of the affiliate's common stock but does own preferred stock, the Total Value of Affiliate's Common Stock in Column (6) must be reported so the program can calculate the percent of ownership. Subsidiaries reported in this section will be assigned an affiliate code of " 1 " for directly owned property and casualty insurers.

The carrying value of any preferred stock is reported in Column (7) and should equal the amount reported in Schedule D, Part 6, Section 1, Line 0299999 (less any amounts reported on the worksheet as affiliate code " 11 "). The total outstanding value of the affiliate's preferred stock is reported in Column (8). The percentage of ownership will be automatically calculated in Column (9). For entities owning preferred and common stock in the same subsidiary, the percent of ownership is calculated by summing the book/adjusted carrying values of the owned preferred and common stock and dividing that amount by the sum of all outstanding preferred and common stock.

The risk-based capital to be reported for each subsidiary property and casualty insurer should be obtained by using a separate copy of the property and casualty risk-based capital program for each subsidiary. Title insurers, monoline financial guaranty insurers and monoline mortgage guaranty insurers are not subject to risk-based capital. Additionally, some insurers are granted exemptions from filing risk-based capital. These affiliates and other similar affiliates should be reported as Other Affiliated Investments - Property and Casualty insurers not subject to risk-based capital.

## Directly Owned U.S. Life Insurance Subsidiaries

Report information regarding any top-layer directly owned U.S. life insurance affiliates in the schedule. For each affiliate, report the same information as required for directly owned property and casualty insurance affiliates that are subject to risk-based capital. The value of common stock should be the same as reported in Schedule D, Part 6 , Section 1 , Line 1299999 (less any amounts reported on the worksheet as affiliate code "12"). The amount of preferred stock reported should match Schedule D, Part 6, Section 1, Line 0399999 (less any amounts reported on the worksheet as affiliate code " 12 "). If the life insurance affiliate is not subject to risk-based capital, then it should be considered an Other Affiliated Investment. Subsidiaries reported in this section will be assigned an affiliate code of " 2 " for directly owned life insurers.

The risk-based capital of each life affiliate should be obtained by using a separate copy of the life risk-based capital program for each affiliate.

## Directly/Indirectly Owned U.S. Health Entity Subsidiaries/Affiliates

The filing life insurance companies are responsible for providing the health RBC amount for its health entity subsidiaries/affiliates for use in the life RBC formula, even if the health entity is not required to file this calculation by its state of domicile. The health RBC times the life insurer's percentage ownership of the health entity subsidiary will be used as the risk charge in this part of the life RBC formula. Subsidiaries reported in this section will be assigned an affiliate code of " 3 " for directly/indirectly owned health entities.

Indirectly Owned U.S. Property and Casualty Insurance Affiliates
The reporting company's book/adjusted carrying value of the holding company should be allocated between any top-layer, indirectly owned insurance affiliates and the Holding Company Value in Excess of Indirectly Owned Insurance Affiliates. The carrying value of the holding company should be first allocated based on the values shown on the holding company's balance sheet. The following example shows a hypothetical holding company, Holder, Inc., that is 100 percent owned by Big Insurance Company and illustrates the allocation of Holder's carrying value among these categories:

ABC Life
XYZ Casualty
GX Todd Real Estate
Cash

Cash
Other Assets
Total Assets

\$ 14,000,000
5,000,000
5,000,000

Total Liabilities and Equity $\$ 24,000,000$

Since ABC Life Insurance Company makes up one-sixth ( $\$ 4,000,000$ divided by $\$ 24,000,000$ ) of the total assets for Holder, Inc., then this indirectly owned affiliate represents onesixth of the carrying value of Holder, Inc. on the statement of Big Insurance Company. Similarly, XYZ Casualty represents one-twelfth of the carrying value ( $\$ 2,000,000$ divided by $\$ 24,000,000$ ) of Holder on Big's annual statement. Three-fourths of the carrying value of Holder, Inc. $(\$ 18,000,000$ divided by $\$ 24,000,000)$ represents the Holding Company Value in Excess of Indirectly Owned Insurance Affiliates. If Big Insurance Company carries Holder, Inc. on its annual statement at $\$ 30,000,000$ (assume that this is the current fair value of shares in Holder, which was a publicly traded corporation of which Big has just acquired 100 percent ownership), then Big will allocate one-sixth of the $\$ 30,000,000$ to ABC Life, one-twelfth of the $\$ 30,000,000$ to XYZ Casualty, and three-fourths to Holder under the category Holding Company Value in Excess of Indirectly Owned Insurance Affiliates. The RBC charge for the indirect ownership of common stock in ABC Life will be ABC's Total RBC After Covariance, adjusted for percent of ownership. (If Holder owns 50 percent of ABC Life the amount would be calculated as 100 percent times 50 percent times RBC after Covariance.) The RBC charge for the indirect ownership of XYZ Casualty would be computed in the same manner.

If Big only acquired 50 percent of the shares of Holder, then these values must be adjusted to reflect Big's partial ownership. The carrying value on Big's annual statement is $\$ 15,000,000$ which is allocated as $\$ 2,500,000$ to ABC Life (one-sixth of $\$ 15,000,000$ ), $\$ 1,250,000$ to XYZ Casualty (one-twelfth of $\$ 15,000,000$ ), and $\$ 11,250,000$ to Holder as the Holding Company Value in Excess of Indirectly Owned Affiliates. The RBC for the indirectly owned affiliates is also adjusted to reflect the fact that Big only owns 50 percent of the affiliates. There, Big will report $\$ 2,500,000$ as the carrying value for ABC Life and in Column (5) and $\$ 5,000,000(\$ 2,500,000$ divided by 0.50 ) as the total outstanding common stock in Column (6). (The RBC requirement for ABC Life then becomes 50 percent times 50 percent times ABC's Total RBC After Covariance.)

The information for all top-layer, indirectly owned U.S. property and casualty insurance affiliates and indirectly owned U.S. life insurance affiliates is reported in the appropriate columns within the worksheet. For each affiliate, report its name, NAIC company code and the pro-rated share of risk-based capital along with all other information required in Columns (1) through (6). Subsidiaries reported in this section will be assigned an affiliate code of " 4 " for indirectly owned property and casualty insurers.

Indirectly Owned U.S. Life Insurance Affiliates
Indirectly owned U.S. life insurance affiliates are treated in a manner similar to indirectly owned property and casualty insurance affiliates. Note that the insurance affiliate must be subject to risk-based capital and file a risk-based capital report to be included in this section. Otherwise, the affiliate's value will be included in the Holding Company Value in Excess of Insurance Affiliates section. Subsidiaries reported in this section will be assigned an affiliate code of " 5 " for indirectly owned life insurers.

Investment Affiliates
An investment affiliate is an affiliate that exists only to invest the funds of the parent company. The term "investment affiliate" is strictly defined in the NAIC's Annual Statement Instructions as any affiliate, other than a holding company, engaged or organized primarily to engage in the ownership and management of investments for the insurer. An investment affiliate shall not include any broker-dealer or a money management fund managing funds other than those of the parent company. The risk-based capital charge for the ownership of an investment affiliate is based on the risk-based capital of the underlying assets, pro-rated for the degree of ownership. The basis for this calculation is the assumption that the charge should be the same as it would be if the life insurer held the assets directly.

Report information regarding any investment affiliates. Subsidiaries reported in this section will be assigned an affiliate code of " 6 " for investment subsidiaries. The amount of reported common stock should be the same as Schedule D, Part 6, Section 1, Line 1699999. Preferred stock information should be the same as Schedule D, Part 6, Section 1, Line 0799999.

## Affiliates that are not Subject to Risk-Based Capital

This category includes the following affiliated investments:
7. Holding Company Value in Excess of Indirectly Owned Insurance Subsidiaries
8. Alien Insurance Subsidiaries - Canadian Life
9. Alien Insurance Subsidiaries - Other
10. Investments in Upstream Affiliates (Parents)
11. Other Affiliated Investments - Property and Casualty Insurers that are not Subject to Risk-Based Capital
12. Other Affiliated Investments - Life Insurers that are not Subject to Risk-Based Capital
13. Other Affiliated Investments - Non-insurers

Insurance affiliates that are not subject to risk-based capital, such as title insurers, monoline financial guaranty insurers, and monoline mortgage guaranty insurers are classified as Other Affiliated Investments under the appropriate classification.

The risk-based capital charge for these investments is calculated by multiplying a factor times the book/adjusted carrying value of the common and preferred stock of those affiliates. The risk-based capital factor for Alien Insurance Affiliates is 100 percent (except for Canadian Life insurers); the factor for Holding Company Value in Excess of Indirectly Owned

Insurance Affiliates, Investments in Upstream Affiliate (Parent) and Other Affiliated Investments is 0.300 times the book/adjusted carrying value of the common and preferred stock of those affiliates.

Holding Company Value in Excess of Indirectly Owned Insurance Affiliates
The pre-tax risk-based capital charge for the parent insurer preparing the calculation is a 30 percent charge against the holding company value in excess of the indirectly owned insurance affiliates as calculated in the prior example.

Report information in the appropriate columns of the worksheet, omitting those columns that do not apply (Column (3) - NAIC Company Code and Column (4) affiliate's risk-based capital). Subsidiaries reported in this section will be assigned an affiliate code of " 7 " for Holding Company Value in Excess of Indirectly Owned Insurance Affiliates.

The total of Indirectly Owned Insurers (life and property and casualty) plus the amount of Holding Company Value in Excess of Indirectly Owned Insurance Affiliates should equal Schedule D, Part 6, Section 1, Line 0699999 for the reporting of preferred stock and Schedule D, Part 6, Section 1, Line 1599999 for common stock.

Alien Insurance Affiliates - Canadian Life
Canadian regulatory authorities have in place a Minimum Continuing Capital and Surplus Requirement (MCCSR) for Canadian life insurance companies. In addition to the MCCSR formula, Canadian regulators have the authority to adjust the capital requirements upward for companies where deemed appropriate. For purposes of the U.S. formula, MCCSR times percent of ownership is used to establish the risk-based capital requirement for Canadian life subsidiaries. If the MCCSR has been adjusted by regulatory authorities, this adjusted MCCSR is to be used. Canadian property and casualty companies will continue to be reported in the Alien Insurance Affiliates - Other section.

Report the Canadian life insurer name, alien insurer identification number, the book/adjusted carrying value of common and preferred stock and the total outstanding value of common and preferred stock. Companies reported in this section will be assigned an affiliate code of " 8 " for Canadian life insurers.

Alien Insurance Affiliates - Other
For purposes of this formula, the risk-based capital of each alien insurance affiliate is zero. Report information for any non-U.S. insurance affiliate, both life (except for Canadian life insurers) and property and casualty.

For each affiliate, report the name and alien insurer identification number. For purposes of this formula, the statement value of common and preferred stock and the total outstanding value of common and preferred stock for alien insurance affiliates should be entered as zero. Companies reported in this section will be assigned an affiliate code of " 9 " for alien insurers.

## Investment in Upstream Affiliate (Parent)

The pre-tax risk-based capital for an investment in an upstream parent is 0.300 times the carrying value of the common and preferred stock regardless of whether that upstream parent is subject to risk-based capital. Report the appropriate information from Schedule D, Part 6, Section 1, Lines 0199999 and 1099999 in Columns (1) through (6). The affiliate code for an upstream parent is " 10 ."

Other Affiliated Investments
The pre-tax risk-based capital for an investment in an Other Affiliated Investment is 0.300 times the carrying value of the common and preferred stock. All insurance affiliates that do not otherwise qualify for another section of this report, such as title insurance companies (code " 11 ") or a life insurance affiliate that has been exempted from the risk-based capital system (code "12"), are to be included in these categories. The affiliate code for Other Affiliates is " 13 ." Reported amounts use Schedule D, Part 6, Section 1, Line 0899999 and Line 1799999 as the basis of reporting and additionally include any life and property and casualty insurers not subject to risk-based capital (as discussed earlier).

Publicly Traded Insurance Affiliates Held at Fair Value
The risk-based capital for a publicly traded insurance affiliate held at fair value is calculated in two parts. First, calculate and report the risk-based capital of the affiliate according to the relevant instructions above for Insurance Affiliates that are Subject to a Look-Through RBC Calculation. Second, calculate the additional risk-based capital charge as 34.6 percent pre-tax of the difference between the market (statement) value and the book value of the affiliate.

Report information regarding any publicly traded insurance affiliate held at fair value. The reported fair value of common stock should be the same as shown Schedule D, Part 2 , Section 2, Column 8, Line 9299999 plus Line 9399999 . The fair value of preferred stock should be the same as shown in Schedule D, Part 2, Section 1, Column 10 , line 869999 plus 8799999. The reported book value of common stock should be the same as shown in Schedule D, Part 2, Section 2, Column 6, Line 9299999 plus Line 9399999 . The reported book value of preferred stock should be the same as Schedule D, Part 2, Section 1, Column 8, Line 8699999 plus Line 8799999.

# MODCO OR FUNDS WITHHELD REINSURANCE AGREEMENTS 

LR045, LR046, LR047 and LR048

References to MODCO and funds withheld reinsurance agreements apply to all treaties in effect.

## Basis of Factors

When the default risk in modified coinsurance (MODCO) and other reinsurance transactions with funds withheld is transferred, this transfer should be recognized by reducing the RBC for the ceding company and increasing it for the assuming company. In the event that the entire asset credit or variability in statement value risk associated with the assets supporting the business reinsured is not transferred to the assuming company for the entire duration of the reinsurance treaty, the RBC for the ceding company should not be reduced.

## Assets

The total RBC related to assets (i.e., bonds, mortgages, unaffiliated preferred and common stock, separate accounts, real estate and other long-term assets) in MODCO or Funds Withheld reinsurance agreements, should be reduced (increased) by the amounts of RBC ceded (assumed). There is a separate line in each asset section to achieve this reduction (i.e., "Reduction in RBC for MODCO or Funds Withheld reinsurance ceded agreements"). The amount ceded is determined using the assets supporting the ceded liabilities as of Dec. 31. (In some instances, there may be assets in a trust that exceed the amount needed to support the liabilities; only the portion of assets used to support the ceded liabilities is used to determine the ceded RBC ). The ceding company will need to supply the assuming company with sufficient information in order for the assuming company to determine the amount of RBC assumed. With the exception of the impact of the size factor, the amount of RBC ceded should be equal to the amount of RBC assumed. Put another way, there should be "mirror imaging" of RBC, except for the impact of the size factor. For MODCO or Funds Withheld reinsurance agreements, there will be no specific, line-by-line inventory of ceded assets and corresponding ceded RBC; however, ceding and assuming companies must keep detailed records and be prepared to produce those records upon request. The ceding company is required to supply the assuming company with sufficient information in order for the assuming company to determine the amount of RBC assumed.

A reinsurer that has not received such information shall calculate MODCO adjustments for reinsurance assumed as follows:

- If the reinsurer has received data for periods prior to the effective date of the RBC filing, a "MODCO liability ratio" will be developed by comparing the MODCO liabilities at the filing date to the MODCO liabilities as of the last date for which data were received. The required capital for MODCO assumed is the required capital as calculated based on these data multiplied by the "MODCO liability ratio."
- If the reinsurer has never received data from the ceding company, a "MODCO liability ratio" will be developed by comparing the MODCO liabilities at the filing date to the reinsurer's total invested assets (Page 2, Line 12 of the blue blank, or its equivalent). The required capital for MODCO assumed is the reinsurer's required capital as calculated prior to MODCO ceded and assumed adjustments multiplied by the "MODCO liability ratio."

Adjustments for MODCO or Funds Withheld reinsurance agreements should be based on pre-tax factors.

## Size Factor

Companies with MODCO or Funds Withheld reinsurance agreements should adjust the company's year-end size factors according to the way the bonds are handled in the treaties. The assuming company includes the bonds that support its share of the liabilities; the ceding company includes the bonds that support its share of the liabilities. No adjustment is made for bonds purchased subsequent to June 30 of the valuation year and that solely support ceded liabilities.

## Mortgages

The amount of RBC for mortgages is based upon the ceding company's calculation for the mortgages, or portion of these mortgages, which support the ceded liabilities. Thus, the amount of RBC ceded is equal to the amount of RBC assumed.

Specific Instructions for Application of the Formula

## MODCO OR FUNDS WITHHELD REINSURANCE AGREEMENTS

## Reinsurance Ceded - Bonds C-1o

## LR045

Column 4
Enter by reinsurer, the amount of C-1o RBC the insurance company has ceded that is attributable to bonds. The "total" should equal the total amount of the reduction in C-1o RBC shown on Line (19) of page LR002 Bonds.

## MODCO OR FUNDS WITHHELD REINSURANCE AGREEMENTS

Reinsurance Assumed - Bonds C-10
LR046

## Column 4

Enter by ceding company, the amount of C-1o RBC the insurance company has assumed that is attributable to bonds. The "total" should equal the total amount of the increase in C-1o RBC shown on Line (20) of page LR002 Bonds.

## MODCO OR FUNDS WITHHELD REINSURANCE AGREEMENTS

Reinsurance Ceded - All Other Assets C-0, C-1o And C-1cs
LR047

## Column 4

Enter by reinsurer, the amount of C-0, C-1o And C-1cs RBC the company has ceded that is attributable to all assets except bonds. The "total" should equal the total amount of the reduction of $\mathrm{C}-0, \mathrm{C}-10$ And $\mathrm{C}-1$ cs RBC attributable to all assets except bonds for MODCO and funds withheld agreements.

## MODCO OR FUNDS WITHHELD REINSURANCE AGREEMENTS

Reinsurance Assumed - All Other Assets C-0, C-1o And C-1cs
LR048
Column 4
Enter by ceding company, the amount of C-0, C-1o And C-1 cs RBC the insurance company has assumed that is attributable to all assets except bonds. The "total" should equal the total amount of the increase in $\mathrm{C}-0, \mathrm{C}-1 \mathrm{o}$ And $\mathrm{C}-1 \mathrm{cs}$ RBC attributable to all assets except bonds for MODCO and funds withheld agreements.

## EXEMPTION TEST: CASH FLOW TESTING FOR C-3 RBC

## LR049

## Specific Instructions for Application of the Formula

Line (5)
Column (1) Line (5) will need to be manual entry if the company has any equity-indexed product amounts included in the totals from LR027 Interest Rate Risk and Market Risk. Line (5) is calculated as LR027 Interest Rate Risk and Market Risk Column (3) Line (17) times (1-enacted maximum federal corporate income tax rate) plus LR027 Interest Rate Risk and Market Risk Column (3) Line (16) times (1-enacted maximum federal corporate income tax rate) minus any equity indexed product amounts included in these totals times (1-enacted maximum federal corporate income tax rate).

## Line (6)

Column (1) Line (6) will also be manual entry if the company has any equity-indexed product amounts subtracted from Line (5) above. Line (6) is calculated as LR027 Interest Rate Risk and Market Risk Column (3) (Line (22) $+(27)+(29)+(30)+(31)+(35)) \times(1$-enacted maximum federal corporate income tax rate) plus any equity-indexed amounts subtracted in the Line (5) calculation.

Line (16)
Column (1) Line (16) will need to be manual entry if the company has any equity-indexed product amounts included in the totals from LR027 Interest Rate Risk and Market Risk. Line (16) is calculated as LR027 Interest Rate Risk and Market Risk Column (3) Line (17) times (1-enacted maximum federal corporate income tax rate) plus LR027 Interest Rate Risk and Market Risk Column (3) Line (16) times (1-enacted maximum federal corporate income tax rate) minus any equity-indexed product amounts included in these totals times (1-enacted maximum federal corporate income tax rate).

## Line (17)

Column (1) Line (17) will need to be manual entry if the company has any equity indexed product amounts included in the totals from LR027 Interest Rate Risk and Market Risk. Line (17) is calculated as LR027 Interest Rate Risk and Market Risk Column (3) Line (17) times 6.5 times (1-enacted maximum federal corporate income tax rate) minus any equityindexed product amounts included in these totals times 6.5 times (1-enacted maximum federal corporate income tax rate).

## Line (18)

Column (1) Line (18) will also be manual entry if the company has any equity-indexed product amounts subtracted from Line (16) above. Line (18) is calculated as LR027 Interest Rate Risk and Market Risk Column (3) (Line (22) $+(27)+(29)+(30)+(31)+(35)) x$ (1-enacted maximum federal corporate income tax rate) plus any equity-indexed amounts subtracted in the Line (5) calculation.


## Appendix 1 - Cash Flow Modeling for C-3 RBC

This appendix is applicable for all companies who do Cash Flow Testing for C-3 RBC for Certain Annuities and Single Premium Life products.
The method of developing the C-3 component for these products is building on the work of the asset adequacy modeling, but using interest scenarios designed to help approximate the $95^{\text {th }}$ percentile C-3 risk.

The C-3 component is to be calculated as the sum of four amounts, but subject to a minimum. The calculation is:
(a) For Certain Annuities or Single Premium Life Insurance products other than equity-indexed products, whether written directly or assumed through reinsurance, that the company tests for asset adequacy analysis using cash flow testing, an actuary should calculate the C-3 requirement based on the same cash flow models and assumptions used and same "asof" date as for asset adequacy, but with a different set of interest scenarios and a different measurement of results. A weighted average of a subset of the scenario-specific results is used to determine the C-3 requirement. The result is to be divided by (1-enacted maximum federal corporate income tax rate) to put it on a pre-tax basis for LR027 Interest Rate Risk and Market Risk Column (2) Line (33).

If the "as-of" date of this testing is not Dec. 31, the ratio of the C-3 requirement to reserves on the "as-of" date is applied to the year-end reserves, similarly grouped, to determine the year-end C-3 requirement for this category.
(b) Equity-indexed products are to use the existing C-3 RBC factors, not the results of cash flow testing
(c) For all other products (either non-cash-flow-tested or those outside the product scope defined above) the C-3 requirements are calculated using current existing C-3 RBC factors and instructions.
(d) For callable/pre-payable assets (including IOs and similar investments other than those used for testing in component a) above, the after-tax C-3 requirement is 50.0 percent of the excess, if any, of book/adjusted carrying value above current call price. The calculation is to be done on an asset-by-asset basis. For callable/pre-payable assets used for testing in component a) above as well as those used in $\mathrm{C}-3 \mathrm{P} 2$ testing, the $\mathrm{C}-3$ factor requirement is zero.

The total C-3 component is the sum of (a), (b), (c) and (d), but not less than half the C-3 component based on current factors and instructions.

- For this C-3 calculation, "Certain Annuities" means products with the characteristics of deferred and immediate annuities, structured settlements, guaranteed separate accounts (excluding guaranteed indexed separate accounts following a Class II investment strategy) and GICs (including synthetic GICs and funding agreements). Debt incurred for funding an investment account is included if cash flow testing of the arrangement is required by the insurer's state of domicile for asset adequacy analysis. Variable annuity products are not to be included, including guaranteed fixed options within such products, as they are separately tested under the requirements for Variable Annuities and Similar Products. See Appendix 1b for further discussion.
- The company may use either a standard 50 scenario set of interest rates or an alternative, but more conservative, 12 scenario set (for part a, above). It may use the smaller set for some products and the larger one for others. Details of the cash flow testing for C-3 RBC methodology are contained in Appendix 1a.
- In order to allow time for the additional work effort, an estimated value is permitted for the year-end annual statement. For the RBC electronic filing, the actual results of the cash flow testing for C-3 RBC will be required. If the actual RBC value exceeds that estimated earlier in the blanks filing by more than 5 percent, or if the actual value triggers regulatory action, a revised filing with the NAIC and the state of domicile is required by June 15; otherwise, re-filing is permitted but not required.
- The risk-based capital submission is to be accompanied by a statement from the appointed actuary certifying that in his or her opinion the assumptions used for these calculations are not unreasonable for the products, scenarios and purpose being tested. This C-3 Assumption Statement is required from the appointed actuary even if the cash flow testing for C-3 RBC is done by a different actuary.
- The cash flow testing used for this purpose will use assumptions as to cash flows, assets associated with tested liabilities, future investment strategy, rate spreads, "as-of" date and how negative cash flow is reflected consistent with those used for cash flow testing for asset adequacy purposes (except that if negative cash flow is modeled by borrowing, the actuary needs to make sure that the amount and cost of borrowing are reasonable for that particular scenario of the C-3 testing). The other differences are the interest scenarios assumptions and how the results are used.

It is important that assumptions be reviewed for reasonableness under the severe scenarios used for C-3 RBC cash flow testing. The assumptions used for cash flow testing may need to be modified so as to produce reasonable results in severe scenarios.

- The actuary must also ensure that the cash flow testing used for the 50 or 12 scenarios does not double-count cash flow offsets to the interest rate risks. That is, that the calculations do not reduce C-3 and another RBC component for the same margins. For example, certain reserve margins on some guaranteed separate account products serve an AVR role and are credited against the C-1o requirement. To that degree, these margins should be removed from the reserve used for C-3 RBC cash flow testing.



## Appendix 1a - Cash Flow Modeling for C-3 RBC Methodology

## General Approach

1. The underlying asset and liability model(s) are those used for year-end Asset Adequacy Analysis cash flow testing, or a consistent model
2. Run the scenarios ( 12 or 50 ) produced from the interest-rate scenario generator.
3. The statutory capital and surplus position, $\mathrm{S}(\mathrm{t})$, should be captured for every scenario for each calendar year-end of the testing horizon. The capital and surplus position is equal to statutory assets less statutory liabilities for the portfolio.
4. For each scenario, the C-3 measure is the most negative of the series of present values $S(t) * p v(t)$, where $p v(t)$ is the accumulated discount factor for $t$ years using 105 percent of the after-tax one-year Treasury rates for that scenario. In other words:

$$
p v(t)=\prod_{1}^{t} 1 /\left(1+i_{t}\right)
$$

5. Rank the scenario-specific C-3 measures in descending order, with scenario number 1 's measure being the positive capital amount needed to equal the very worst present value measure.
6. Taking the weighted average of a subset of the scenario specific C-3 scores derives the final C-3 after-tax factor.
(a) For the 50 scenario set, the C-3 scores are multiplied by the following series of weights:

(b) For the 12 scenario set, the charge is calculated as the average of the C-3 scores ranked 2 and 3, but cannot be less than half the worst scenario score.
7. If multiple asset/liability portfolios are tested and aggregated, an aggregate $\mathrm{C}-3$ charge can be derived by first summing the $\mathrm{S}(\mathrm{t})$ 's from all the portfolios (by scenario) and then following Steps 2 through 6 above. An alternative method is to calculate the C-3 score by scenario for each product, sum them by scenario, then order them by rank and apply the above weights.

## Single Scenario C-3 Measurement Considerations

1. GENERAL METHOD - This approach incorporates interim values, consistent with the approach used for bond, mortgage and mortality RBC factor quantification. The approach establishes the risk measure in terms of an absolute level of risk (e.g., solvency) rather than volatility around an expected level of risk. It also recognizes reserve conservatism, to the degree that such conservatism has not been used elsewhere.
2. INITIAL ASSETS = RESERVES - Consistent with appointed actuary practice, the cash flow models are run with initial assets equal to reserves; that is, no surplus assets are used.
3. AVR - Existing AVR-related assets should not be included in the initial assets used in the C-3 modeling. 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 cash flow modeling. (Deviations from expected are covered by both the AVR and the C-1 risk capital.)
4. IMR - IMR assets should be used for C-3 modeling. (Also see \#9 - Disinvestment Strategy.)
5. INTERIM MEASURE - Retained statutory surplus (i.e., statutory assets less statutory liabilities) is used as the year-to-year interim measure.
6. TESTING HORIZONS - Surplus adequacy should be tested over a period that extends to a point at which contributions to surplus on a closed block are immaterial in relationship to the analysis. If some products are being cash flow tested for Asset Adequacy Analysis over a longer period than the 30 years generated by the interest-rate scenario generator, the scenario rates should be held constant at the year 30 level for all future years. A consistent testing horizon is important for all lines if the C-3 results from different lines of business are aggregated.
7. TAX TREATMENT - The tax treatment should be consistent with that used in Asset Adequacy Analysis. Appropriate disclosure of tax assumptions may be required.
8. REINVESTMENT STRATEGY - The reinvestment strategy should be that used in Asset Adequacy Analysis modeling.
9. DISINVESTMENT STRATEGY - In general, negative cash flows should be handled just as they are in the Asset Adequacy Analysis. The one caveat is, since the RBC scenarios are more severe, models that depend on borrowing need to be reviewed to be confident that loans in the necessary volume are likely to be available under these circumstances at a rate consistent with the model's assumptions. If not, adjustments need to be made.

If negative cash flows are handled by selling assets, then appropriate modeling of contributions and withdrawals to the IMR need to be reflected in the modeling.
10. STATUTORY PROFITS RETAINED - The measure is based on a profits retained model, anticipating that statutory net income earned one period is retained to support capital requirements in future periods. In other words, no stockholder dividends are withdrawn, but policyholder dividends, excess interest, declared rates, etc., are modeled realistically and assumed, paid or credited.
11. LIABILITY and ASSET ASSUMPTIONS - The liability and asset assumptions should be those used in Asset Adequacy Analysis modeling. Disclosure of these assumptions may be required.
12. SENSITIVITY TESTING - Key assumptions shall be stress tested (e.g., lapses increased by 50 percent) to evaluate sensitivity of the resulting C-3 requirement to the various assumptions made by the actuary. Disclosure of these results may be required.

## Appendix 1b - Frequently Asked Questions for Cash Flow Modeling for C-3 RBC

1. Where can the scenario generator be found? What is needed to run it?

The scenario generator is a Microsoft Excel spreadsheet. By entering the Treasury yield curve at the date for which the testing is done, it will generate the sets of 50 or 12 scenarios. It requires Windows 95 or higher. This spreadsheet and instructions are available on the NAIC Web site at (http://www.naic.org/cmte_e_lrbc.htm). It is also available on diskette from the American Academy of Actuaries.
2. The results may include sensitive information in some instances. How can it be kept confidential?

As provided for in Section 8 of the Risk-Based Capital (RBC) For Insurers Model Act, all information in support of and provided in the RBC reports (to the extent the information therein is not required to be set forth in a publicly available annual statement schedule), with respect to any domestic or foreign insurer, which is filed with the commissioner constitute information that might be damaging to the insurer if made available to its competitors, and therefore shall be kept confidential by the commissioner. This information shall not be made public or be subject to subpoena, other than by the commissioner and then only for the purpose of enforcement actions taken by the commissioner under the Risk-Based Capital (RBC) For Insurers Model Act or any other provision of the insurance laws of the state.
3. The definition of the annuities category talks about "debt incurred for funding an investment account..." Could you give a specific description of what is intended?

One example is a situation where an insurer is borrowing under an advance agreement with a federal home loan bank, under which agreement collateral, on a current fair value basis, is required to be maintained with the bank. This arrangement has many of the characteristics of a GIC, but is classified as debt.
4. The instructions specify that assumptions consistent with those used for Asset Adequacy Analysis testing be used for C-3 RBC, but my company cash flow tests a combination of universal life and annuities for that analysis and using the same assumptions will produce incorrect results. What was intended in this situation?

Where this situation exists, assumptions should be used for the risk-based capital work that are consistent with those used for the Asset Adequacy Cash Flow Testing. In other words, the assumptions used should be appropriate to the annuity component being evaluated for RBC and consistent with the overall assumption set used for Asset Adequacy Analysis.


## Appendix 2 - Alternative Method for GMDB Risks

## \{Drafting Note: the following is copied from the American Academy of Actuaries June 2005 Report to the NAIC Capital Adequacy Task Force

This Appendix describes the Alternative Method for GMDB exposure in significant detail; how it is to be applied and how the factors were developed. Factor tables have been developed using the Conditional Tail Expectation ("CTE") risk measure at two confidence levels: $\mathbf{6 5 \%} \mathbf{~ a n d ~} \mathbf{9 0 \%}$. The latter is determined on an "after tax" basis and is required for the RBC C3 Phase II standard for Total Asset Requirement ("TAR"). The former is a pre-tax calculation and should assist the Variable Annuity Reserve Working Group ("VARWG") in formulating a consistent "alternative method" for statutory reserves.

## General

1. It is expected that the Alternative Method ("AltM") will be applied on a policy-by-policy basis (i.e., seriatim). If the company adopts a cell-based approach, only materially similar contracts should be grouped together. Specifically, all policies comprising a "cell" must display substantially similar characteristics for those attributes expected to affect risk-based capital (e.g., definition of guaranteed benefits, attained age, policy duration, years-to-maturity, market-to-guaranteed value, asset mix, etc.).
2. The Alternative Method determines the TAR as the sum of the Cash Surrender Value and the following three (3) provisions, collectively referred to as the Additional Asset Requirement ("AAR"):

- Provision for amortization of the outstanding (unamortized) surrender charges - "Charge Amortization" or "CA";
- Provision for fixed dollar expenses/costs net of fixed dollar revenue - "Fixed Expenses" or "FE"; and
- Provision for claims (in excess of account value) under the guaranteed benefits net of available spread-based revenue ("margin offset") - "Guaranteed Cost" or "GC". All of these components reflect the impact of income taxes and are explained in more detail later in this Appendix.
The Risk Based Capital amount (C-3 RBC) is determined in aggregate for the block of policies as the TAR less the reserve determined based on Section 7 of VM-21.
Note the following regarding income taxes:
The company determines the CA and FE amounts by projecting the inforce data and incorporating a $21 \%$ tax rate and a post-tax discount rate of $4.54 \%$ (= $5.75 \%$ x [1-21\%]).
In determining the GC amounts, a "look-up" function is used which provides a GMDB Cost Factor " f " and Base Margin Offset Factor " g ". These factors (" f " and " g ") represent CTE90 factors on a post-tax basis where a $35 \%$ tax rates and $3.74 \%(=5.75 \% \times(1-35 \%))$ discount rate has been used. The company needs to multiply these factors by (.79/.65) to adjust the factors for a $21 \%$ tax rate basis. It is noted that this adjustment overstates the impact of the lower tax rate as the impact of the higher discount rate has not been reflected.

3. The total AAR (in excess of cash surrender value) is the sum of the AAR calculations for each policy or cell. The result for any given policy (cell) may be negative, zero or positive.
4. For variable annuities without guarantees, the Alternative Method for capital uses the methodology which applied previously to all variable annuities. The charge is 11 percent of the difference between fund balance and cash surrender value if the current surrender charge is based on fund balance. If the current surrender charge is based on fund contributions, the charge is 2.4 percent of the difference for those contracts for which the fund balance exceeds the sum of premiums less withdrawals and 11 percent for those for which that is not the case. In all cases, the result is to be multiplied by 0.79 to adjust for Federal Income Tax. For in-scope contracts, such as many payout annuities with no cash surrender value and no performance guarantees, there is no capital charge.
5. For variable annuities with death benefit guarantees, the AAR for a given policy is equal to: $R \times(C A+F E)+G C$ where:

CA (Charge Amortization) $=$ Provision for amortization of the outstanding (unamortized) surrender charges
$F E$ (Fixed Expense) $\quad=\quad$ Provision for fixed dollar expenses/costs net of fixed dollar revenue
GC (Guaranteed Cost) $\quad=\quad$ Provision for claims (in excess of account value) under the guaranteed benefits net of available spread-based revenue ("margin offset")

The components $C A, F E$ and $G C$ are calculated separately. $C A$ and $F E$ are defined by deterministic "single-scenario" calculations which account for asset growth, interest, inflation and tax at prescribed rates. Mortality is ignored. However, the actuary determines the appropriate "prudent best estimate" lapses/withdrawal rates for the calculations. The components $C A, F E$ and $G C$ may be positive, zero or negative. $R=h(\circ)$ is a "scaling factor" that depends on certain risk attributes $\tilde{\theta}$ for the policy and the product portfolio.
6. The "Alternative Method" factors and formulas for GMDB risks (component $G C$ ) have been developed from stochastic testing using the 10,000 "Pre-packaged" scenarios (March 2005). The pre-packaged scenarios have been fully documented under separate cover - see http://www.actuary.org/pdf/life/c3supp_march05.pdf at the American Academy of Actuaries' website.
7. The model assumptions for the AltM Factors (component GC) are documented in the section of this Appendix entitled Component GC.
8. The table of GC factors that has been developed assumes male mortality at $100 \%$ of the MGDB 94 ALB table, and uses a 5 -year age setback for female annuitants. Companies using the Alternative Method may use these factors, or may use the procedure described in Methodology Note C3-05 in the report "Recommended Approach for Setting RiskBased 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 (E) Task Force (June 2005)" to adjust for the actuary's Prudent Best Estimate of mortality. If the company does not have a Prudent Best Estimate mortality assumption, the company may use the procedure described in Methodology Note C3-05 to adjust to the 2012 IAM as modified in VM-21 Section 11.C. Once a company uses the modified method for a block of business, the option to use the unadjusted table is no longer available for that part of its business.
9. There are five (5) major steps in using the $G C$ factors to determine the " $G C$ " component of the AAR for a given policy/cell:
a) Classifying the asset exposure;
b) Determining the risk attributes;
c) Retrieving the appropriate nodes from the factor grid;
d) Interpolating the nodal factors, where applicable (optional);
e) Applying the factors to the policy values.


Categorizing the asset value for the given policy or cell involves mapping the entire exposure to one of the eight (8) prescribed "fund classes". Alternative Method factors are provided for each asset class.
The second step requires the company to determine (or derive) the appropriate attributes for the given policy or cell. These attributes are needed to calculate the required values and access the factor tables:

- Product form ("Guarantee Definition"), $P$,
- Adjustment to guaranteed value upon partial withdrawal ("GMDB Adjustment"), $A$.
- Fund class, $F$.
- Attained age of the annuitant, $X$.
- Policy duration since issue, $D$.
- Ratio of account value to guaranteed value, $\phi$.
- Total account charges, MER.

Other required policy values include:

- Account value, $A V$.
- Current guaranteed minimum death benefit, $G M D B$.
- Net deposit value (sum of deposits less sum of withdrawals), NetDeposits ${ }^{2}$.
- Net spread available to fund guaranteed benefits ("margin offset"), $\alpha$.

The next steps - retrieving the appropriate nodes from the factor grid and interpolation - are explained in the section entitled Component GC of this Appendix. Tools are provided to assist the company in these efforts (see Appendix 9), but their use is not mandatory. This documentation is sufficiently detailed to permit the company to write its own lookup and extraction routines. A calculation example to demonstrate the application of the various component factors to sample policy values is shown in the section Component $G C$ of this Appendix.
10. The total account charges should include all amounts assessed against policyholder accounts, expressed as a level spread per year (in basis points). This quantity is called the Management Expense Ratio ("MER") and is defined as the average amount (in dollars) charged against policyholder funds in a given year divided by average account value. Normally, the MER would vary by fund class and be the sum of investment management fees, mortality \& expense charges, guarantee fees/risk premiums, etc. The spread available to fund the GMDB costs ("margin offset", denoted by $\alpha$ ) should be net of spread-based costs and expenses (e.g., net of maintenance expenses, investment management fees, trail commissions, etc.), but may be increased for Revenue Sharing as can be reflected in modeling (i.e, had the Alternative Method not been elected) by adhering to the requirements set forth in section 6 of the Modeling Methodology. The section of this Appendix on Component GC describes how to determine MER and $\alpha$. 'Time-to-maturity' is uniquely defined in the factor modeling by $T=95-X$. (This assumes an assumed maturity age of 95 and a current attained age of $X$.) Net deposits are used in determining benefit caps under the GMDB Roll-up and Enhanced Death Benefit ("EDB") designs.
11. The GMDB definition for a given policy/cell may not exactly correspond to those provided. In some cases, it may be reasonable to use the factors/formulas for a different product form (e.g., for a "roll-up" GMDB policy near or beyond the maximum reset age or amount, the company should use the "return-of-premium" GMDB factors/formulas, possibly adjusting the guaranteed value to reflect further resets, if any). In other cases, the company might determine the RBC based on two different guarantee definitions and interpolate the results to obtain an appropriate value for the given policy/cell. However, if the policy form (definition of the guaranteed benefit) is sufficiently different from those provided and there is no practical or obvious way to obtain a good result from the prescribed factors/formulas, the company must select one of the following options:
a) Model the "C3 Phase II RBC" using stochastic projections according to the approved methodology;
b) Select factors/formulas from the prescribed set such that the values obtained conservatively estimate the required capital; or
c) Calculate company-specific factors or adjustments to the published factors based on stochastic testing of its actual business. This option is described more fully in the section of this Appendix on Component GC.
12. The actuary must decide if existing reinsurance arrangements can be accommodated by a straight-forward adjustment to the factors and formulas (e.g., quota-share reinsurance without caps, floors or sliding scales would normally be reflected by a simple pro-rata adjustment to the "gross" GC results). For more complicated forms of reinsurance, the company will need to justify any adjustments or approximations by stochastic modeling. However, this modeling need not be performed on the whole portfolio but can be undertaken on an appropriate set of representative policies. See the section of this Appendix on Component GC.

## Component $C A$

Component $C A$ provides for the amortization of the unamertized surrender charges using the actual surrender charge schedule applicable to the policy. Over time, the surrender charge is reduced and a portion of the charges in the policy are needed to fund the resulting increase in surrender value. This component can be interpreted as the "amount needed to amortize the unamortized surrender charge allowance for the persisting policies plus an implied borrowing cost". By definition, the amortization for non-persisting lives in each time period is exactly offset by the collected surrender charge revenue (ignoring timing differences and any waiver upon death). The company must project the unamortized balance to the end of the surrender charge period and discount the year-by-year amortization under the following assumptions. All calculations should reflect the impact of income taxes.

[^1]- Net asset return (i.e., after fees) as shown in Table 1 below. These rates roughly equate to an annualized 5 th percentile return over a 10 -year horizon 3 . The 10 -year horizon was selected as a reasonable compromise between the length of a typical surrender charge period and the longer testing period usually needed to capture all the costs on "more expensive" portfolios (i.e., lower available spread, lower AV/GV ratio, older ages, etc.). Note, however, that it may not be necessary to use these returns if surrender charges are a function of deposits/premiums.
- Income tax and discount rates (after-tax) as defined in Table 9 of this Appendix.
- The "Dynamic Lapse Multiplier" calculated at the valuation date (a function of Account Value (AV) $\div$ Guaranteed Value (GV) ratio) is assumed to apply in each future year. This factor adjusts the lapse rate to reflect the antiselection present when the guarantee is in-the-money. Lapse rates may be lower when the guarantees have more value.
- Surrender charges and free partial withdrawal provisions should be reflected as per the contract specifications.
- "Prudent best estimate" lapse and withdrawal rates. Rates may vary according to the attributes of the business being valued, including, but not limited to, attained age, policy duration, etc.
- For simplicity, mortality may be ignored in the calculations.

Unlike the GC component, which requires the actuary to map the entire contract exposure to a single "equivalent" asset class, the $C A$ calculation separately projects each fund (as mapped to the 8 prescribed categories) using the net asset returns in Table 2-1.

Table 2-1: Net Asset Returns for "CA" Component

| Asset Class/Fund | Net Annualized <br> Return |
| :---: | :---: |
| Fixed Account | Guaranteed Rate |
| Money Market and Fixed Income | $0 \%$ |
| Balanced | $-1 \%$ |
| Diversified Equity | $-2 \%$ |
| Diversified International Equity | $-3 \%$ |
| Intermediate Risk Equity | $-5 \%$ |
| Aggressive or Exotic Equity | $-8 \%$ |

## Component FE

Component $F E$ establishes a provision for fixed dollar costs (i.e., allocated costs, including overhead and those expenses defined on a "per policy" basis) less any fixed dollar revenue (e.g., annual administrative charges or policy fees). The company must project fixed expenses net of any "fixed revenue" to the earlier of contract maturity or 30 years and discount the year-by-year amounts under the following assumptions. All calculations should reflect the impact of income taxes.

- Income tax and discount rates (after-tax) as defined in Table 9 of this Appendix.
- The "Dynamic Lapse Multiplier" calculated at the valuation date (a function of MV $\div \mathrm{GV}$ ratio) is assumed to apply in each future year. This factor adjusts the lapse rate to reflect the antiselection present when the guarantee is in-the-money. Lapse rates may be lower when the guarantees have more value.

[^2]- Per policy expenses are assumed to grow with inflation starting in the second projection year. The ultimate inflation rate of $3 \%$ per annum is reached in the 8 th year after the valuation date. The company must grade linearly from the current inflation rate ("CIR") to the ultimate rate. The CIR is the higher of $3 \%$ and the inflation rate assumed for expenses in the company's most recent asset adequacy analysis for similar business.
- "Prudent best estimate" for policy termination (i.e., total surrender). Rates may vary according to the attributes of the business being valued, including, but not limited to, attained age, policy duration, etc. Partial withdrawals should be ignored as they do not affect survivorship.
- For simplicity, mortality may be ignored in the calculations.


## Component GC

The general format for $G C$ may be written as: $G C=G V \times f(\tilde{\theta})-A V \times \hat{g}(\tilde{\theta}) \times h(\hat{\theta})$ where $G V=$ current guaranteed minimum death benefit, $A V=$ current account value and $=\frac{\alpha}{\hat{\alpha}} \times g(\tilde{\theta})$. The functions $f(\circ), g(\circ)$, and $h(\circ)$ depend on the risk attributes of the policy $\tilde{\theta}$ and product portfolio $\hat{\theta}$. $h(\circ)=R$ was introduced in the "General" section as a "scaling factor". $\alpha$ is the company-determined net spread ("margin offset") available to fund the guaranteed benefits and $\hat{\alpha}=100$ basis points is the margin offset assumed in the development of the "Base" tabular factors. The functions $f(\circ), g(\circ)$, and $h(\circ)$ are more fully described later in this seetion.

Rearranging terms for $G C$, we have $G C=f(\tilde{\theta}) \times[G V-A V \times z(\tilde{\theta})]$. Admittedly, $z(\tilde{\theta})$ is a complicated function that depends on the risk attribute sets $\tilde{\theta}$ and $\hat{\theta}$, but conceptually we can view $A V \times z(\tilde{\theta})$ as a shock to the current account value (in anticipation of the adverse investment return scenarios that typically comprise the CTE( 90 ) risk measure for the AAR) so that the term in the square brackets is a "modified net amount at risk". Accordingly, $f(\tilde{\theta})$ can be loosely interpreted as a factor that adjusts for interest (i.e., discounting) and mortality (i.e., the probability of the annuitant dying).
In practice, $f(\circ), g(\circ)$, and $h(\circ)$ are not functions in the typical sense, but values interpolated from the factor grid. The factor grid is a large pre-computed table developed from stochastic modeling for a wide array of combinations of the risk attribute set. The risk attribute set is defined by those policy and/or product portfolio characteristics that affect the risk profile (exposure) of the business: attained age, policy duration, AV/GV ratio, fund class, etc.

## Fund Categorization

The following criteria should be used to select the appropriate factors, parameters and formulas for the exposure represented by a specified guaranteed benefit. When available, the volatility of the long-term annualized total return for the fund(s) - or an appropriate benchmark should conform to the limits presented. This calculation should be made over a reasonably long period, such as 25 to 30 years.

Where data for the fund or benchmark are too sparse or unreliable, the fund exposure should be moved to the next higher volatility class than otherwise indicated. In reviewing the asset classifications, care should be taken to reflect any additional volatility of returns added by the presence of currency risk, liquidity (bid-ask) effects, short selling and speculative positions.

All exposures/funds must be categorized into one of the following eight (8) asset classes:

1. Fixed Account
2. Money Market
3. Fixed Income
4. Balanced
5. Diversified Equity
6. Diversified International Equity
7. Intermediate Risk Equity
8. Aggressive or Exotic Equity

Fixed Account. The fund is credited interest at guaranteed rates for a specified term or according to a 'portfolio rate' or 'benchmark' index. The funds offer a minimum positive guaranteed rate that is periodically adjusted according to company policy and market conditions.

Money Market/Short-Term. The fund is invested in money market instruments with an average remaining term-to-maturity of less than 365 days.
Fixed Income. The fund is invested primarily in investment grade fixed income securities. Up to $25 \%$ of the fund within this class may be invested in diversified equities or highyield bonds. The expected volatility of the fund returns will be lower than the Balanced fund class.

Balanced. This class is a combination of fixed income securities with a larger equity component. The fixed income component should exceed $25 \%$ of the portfolio and may include high yield bonds as long as the total long-term volatility of the fund does not exceed the limits noted below. Additionally, any aggressive or 'specialized' equity component should not exceed one-third ( $33.3 \%$ ) of the total equities held. Should the fund violate either of these constraints, it should be categorized as an equity fund. These funds usually have a longterm volatility in the range of $8 \%-13 \%$.
Diversified Equity. The fund is invested in a broad-based mix of U.S. and foreign equities. The foreign equity component (maximum $25 \%$ of total holdings) must be comprised of liquid securities in well-developed markets. Funds in this category would exhibit long-term volatility comparable to that of the S\&P500. These funds should usually have a long-term volatility in the range of $13 \%-18 \%$.

Diversified International Equity. The fund is similar to the Diversified Equity class, except that the majority of fund holdings are in foreign securities. These funds should usually have a long-term volatility in the range of $14 \%-19 \%$.

Intermediate Risk Equity. The fund has a mix of characteristics from both the Diversified and Aggressive Equity Classes. These funds have a long-term volatility in the range of $19 \%-25 \%$.

Aggressive or Exotic Equity. This class comprises more volatile funds where risk can arise from: (a) underdeveloped markets, (b) uncertain markets, (c) high volatility of returns, (d) narrow focus (e.g., specific market sector), etc. The fund (or market benchmark) either does not have sufficient history to allow for the calculation of a long-term expected volatility, or the volatility is very high. This class would be used whenever the long-term expected annualized volatility is indeterminable or exceeds $25 \%$.

THE SELECTION OF AN APPROPRIATE INVESTMENT TYPE SHOULD BE DONE AT THE LEVEL FOR WHICH THE GUARANTEE APPLIES. FOR GUARANTEES APPLYING ON A DEPOSIT-BY-DEPOSIT BASIS, THE FUND SELECTION IS STRAIGHTFORWARD. HOWEVER, WHERE THE GUARANTEE APPLIES ACROSS DEPOSITS OR FOR AN ENTIRE CONTRACT, THE APPROACH CAN BE MORE COMPLICATED. IN SUCH INSTANCES, THE APPROACH IS TO IDENTIFY FOR EACH POLICY WHERE THE "GROUPED FUND HOLDINGS" FIT WITHIN THE CATEGORIES LISTED AND TO CLASSIFY THE ASSOCIATED ASSETS ON THIS BASIS.

A seriatim process is used to identify the "grouped fund holdings", to assess the risk profile of the current fund holdings (possibly calculating the expected long-term volatility of the funds held with reference to the indicated market proxies), and to classify the entire "asset exposure" into one of the specified choices. Here, "asset exposure" refers to the underlying assets (separate and/or general account investment options) on which the guarantee will be determined. For example, if the guarantee applies separately for each deposit year within the contract, then the classification process would be applied separately for the exposure of each deposit year.

In summary, mapping the benefit exposure (i.e., the asset exposure that applies to the calculation of the guaranteed minimum death benefits) to one of the prescribed asset classes is a multi-step process:

1. Map each separate and/or general account investment option to one of the prescribed asset classes. For some funds, this mapping will be obvious, but for others it will involve a review of the fund's investment policy, performance benchmarks, composition and expected long-term volatility.
2. Combine the mapped exposure to determine the expected long-term "volatility of current fund holdings". This will require a calculation based on the expected long-term volatilities for each fund and the correlations between the prescribed asset classes as given in Table 2-2.
3. Evaluate the asset composition and expected volatility (as calculated in step 2) of current holdings to determine the single asset class that best represents the exposure, with due consideration to the constraints and guidelines presented earlier in this section.

In step 1., the company should use the fund's actual experience (i.e., historical performance, inclusive of reinvestment) only as a guide in determining the expected long-term volatility. Due to limited data and changes in investment objectives, style and/or management (e.g., fund mergers, revised investment policy, different fund managers, etc.), the company may need to give more weight to the expected long-term volatility of the fund's benchmarks. In general, the company should exercise caution and not be overly optimistic in assuming that future returns will consistently be less volatile than the underlying markets.

In step 2., the company should calculate the "volatility of current fund holdings" ( $\sigma$ for the exposure being categorized) by the following formula using the volatilities and correlations in Table 2.

$$
\sigma=\sqrt{\sum_{i=1}^{n} \sum_{j=1}^{n} w_{i} w_{j} \rho_{i j} \sigma_{i} \sigma_{j}}
$$

where $w_{i}=\frac{A V_{i}}{\sum_{k} A V_{k}}$ is the relative value of fund $i$ expressed as a proportion of total contract value, $\rho_{i j}$ is the correlation between asset classes $i$ and $j$ and $\sigma_{i}$ is the volatility of asset class $i$ (see Table 2). An example is provided at the end of this section.


Table 2-2: Volatilities and Correlations for Prescribed Asset Classes

| ANNUAL VOLATILITY |  | $\begin{gathered} \text { FIXED } \\ \text { ACCOUNT } \end{gathered}$ | MONEY MARKET | $\begin{aligned} & \text { FIXED } \\ & \text { INCOME } \end{aligned}$ | BALANCED | DIVERSE EQUITY | INTL EQUITY | INTERM EQUITY | AGGR <br> EQUITY |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1.0\% | $\begin{gathered} \text { FIXED } \\ \text { ACCOUNT } \end{gathered}$ | 1 | 0.50 | 0.15 | 0 | 0 | 0 | 0 | 0 |
| 1.5\% | MONEY MARKET | 0.50 | 1 | 0.20 | 0 | 0 |  | 0 | 0 |
| 5.0\% | $\begin{aligned} & \text { FIXED } \\ & \text { INCOME } \end{aligned}$ | 0.15 | 0.20 | 1 | 0.30 | 0.10 | 0. | 0.10 | 0.05 |
| 10.0\% | BALANCED | 0 | 0 | 0.30 |  | 0. | 0.60 | 0.75 | 0.60 |
| 15.5\% | DIVERSE EQUITY | 0 | 0 | 0.10 |  | 1 | 0.60 | 0.80 | 0.70 |
| 17.5\% | INTL EQUITY | 0 | 0 | 0.10 | 0.6 | 0.60 | 1 | 0.50 | 0.60 |
| 21.5\% | INTERM EQUITY | 0 |  |  | 0.75 | 0.80 | 0.50 | 1 | 0.70 |
| 26.0\% | $\begin{gathered} \text { AGGR } \\ \text { EQUITY } \end{gathered}$ | 0 |  | 0.05 | 0.60 | 0.70 | 0.60 | 0.70 | 1 |

As an example, suppose three funds (Fixed Income, diversified U.S. Equity and Aggressive Equity) are offered to clients on a product with a contract level guarantee (i.e., across all funds held within the policy). The current fund holdings (in dollars) for five sample contracts are shown in Table 2-3.

TABLE 2-3: FUND CATEGORIZATION EXAMPLE

|  | 1 | 2 | 3 | 4 | 5 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| MV Fund X (Fixed Income): | 5,000 | 4,000 | 8,000 | - | 5,000 |
| MV Fund Y (Diversified Equity): | 9,000 | 7,000 | 2,000 | 5,000 | - |
| MV Fund Z (Aggressive Equity): | 1,000 | 4,000 | - | 5,000 | 5,000 |
| Total Market Value: | 15,000 | 15,000 | 10,000 | 10,000 | 10,000 |
| Total Equity Market Value: | 10,000 | 11,000 | 2,000 | 10,000 | 5,000 |
| Fixed Income \% ( $A$ ): | 33\% | 27\% | 80\% | 0\% | 50\% |
| Fixed Income Test ( $A>75 \%$ ): | No |  | Yes | No | No |
| Aggressive \% of Equity (B): | 10\% | 36\% | n/a | 50\% | 100\% |
| Balanced Test ( $A>25 \%$ \& B<33.3\%): | Yes | No | n/a | No | No |
| Volatility of Current Fund Holdings: | 10.9\% | 3.2\% | 5.3\% | 19.2\% | 13.4\% |
| Fund Classification: | Balanced | versified* | Fixed Income | Intermediate | Diversified |

* Although the volatility suggests "Balanced Fund", the Balanced Fund criteria were not met. Therefore, this 'exposure' is moved "up" to Diversified Equity. For those funds classified as Diversified Equity, additional analysis would be required to assess whether they should be instead designated as "Diversified International Equity".
As an example, the "Volatility of Current Fund Holdings" for policy $\# 1$ is calculated as $\sqrt{A+B}$ where:
$\left.A=\left(\frac{5}{15} \times 0.05\right)^{2}+\left(\frac{9}{15} \times 0.155\right)^{2}+\left(\frac{1}{15} \times 0.26\right)^{2}\right)$
$B=2 \cdot\left(\frac{5}{15} \cdot \frac{9}{15}\right)(0.1 \times 0.05 \times 0.155)+2 \cdot\left(\frac{5}{15} \cdot \frac{1}{15}\right)(0.05 \times 0.05 \times 0.26)+2 \cdot\left(\frac{9}{15} \cdot \frac{1}{15}\right)(0.7 \times 0.155 \times 0.26)$
So, the volatility for contract $\# 1=\sqrt{0.0092+0.0026}=0.109$ or $10.9 \%$.


## Derivation of Total Equivalent Account Charges (MER) and Margin Offset ( $\alpha$ )

The total equivalent account charge ("MER") is meant to capture all amounts that are deducted from policyholder funds, not only those that are commonly expressed as spread-based fees. The MER, expressed as an equivalent annual basis point charge against account value, should include (but not be limited to) the following: investment management fees, mortality \& expense charges, administrative loads, policy fees and risk premiums. In light of the foregoing, it may be necessary to estimate the "equivalent MER" if there are fees withdrawn from policyholder accounts that are not expressed as basis point charges against account value.
The margin offset, $\alpha$, represents the total amount available to fund the guaranteed benefit claims and amortization of the unamortized surrender charge allowance after considering most other policy expenses (including overhead). The margin offset, expressed as an equivalent annual basis point charge against account value, may include the effect of Revenue Sharing in the same manner as would be done for modeling as described in section 6 of the Modeling Methodology, except as may be thereby permitted, should be deemed "permanently available" in all future scenarios. However, the margin offset should not include per policy charges (e.g., annual policy fees) since these are included in $F E$. It is often helpful to interpret the margin offset as $\alpha=M E R-X+R S$, where $X$ is the sum of:

- Investment management expenses and advisory fees;
- Commissions, bonuses (dividends) and overrides;
- Maintenance expenses, other than those included in $F E$; and
- Unamortized acquisition costs not reflected in $C A$.

And $R S$ is the Revenue Sharing to the extent permitted as described above.

## Product Attributes and Factor Tables

The tabular approach for the $G C$ component creates a multi-dimensional grid (array) by testing a yery large number of combinations for the policy attributes. The results are expressed as factors. Given the seven (7) attributes for a policy (i.e., $P, A, F, X, D, \phi, M E R$ ), two factors are returned for $f(\circ)$ and $g(\circ)$. The factors are determined by looking up (based on a "key") into the large, pre-computed multi-dimensional tables and using multi-dimensional linear interpolation.
The policy attributes for constructing the test cases and the lookup keys are given in Table 2-4.
As can be seen, there are $6 \times 2 \times 8 \times 8 \times 5 \times 7 \times 3=80,640$ "nodes" in the factor grid. Interpolation is only permitted across the last four (4) dimensions: Attained Age ( $X$ ), Policy Duration ( $D$ ) , AV $\div$ GV Ratio ( $\phi$ ) and MER. The "MER Delta" is calculated based on the difference between the actual MER and that assumed in the factor testing (see Table 10), subject to a cap (floor) of $100 \mathrm{bps}(-100 \mathrm{bps})$.
Functions are available to assist the company in applying the Alternative Method for GMDB risks. These functions perform the factor table lookups and associated multi-dimensional linear interpolations. Their use is not mandatory. Based on the information in this document, the company should be able to write its own lookup and retrieval routines. Interpolation in the factor tables is described further later in this section.

Table 2-4: Nodes of the Factor Grid

| Policy Attribute | Key: Possible Values \& Description |
| :---: | :---: |
| Product Definition, $P$. | $0: 0$ Return-of-premium. <br> $1: 1$ Roll-up (3\% per annum). <br> $2: 2$ Roll-up (5\% per annum). <br> $3: 3$ Maximum Anniversary Value (MAV). <br> $4: 4$ High of MAV and 5\% Roll-up. <br> $5: 5$ Enhanced Death Benefit (excl. GMDB) |
| GV Adjustment Upon Partial Withdrawal, $A$. | 0:0 Pro-rata by market value. <br> 1:1 Dollar-for-dollar. |
| Fund Class, $F$. | $0: 0$ Fixed Account. <br> $1: 1$ Money Market. <br> $2: 2$ Fixed Income (Bond). <br> $3: 3$ Balanced Asset Allocation. <br> $4: 4$ Diversified Equity. <br> $5: 5$ International Equity. <br> $6: 6$ Intermediate Risk Equity. <br> $7: 7$ Aggressive / Exotic Equity. |
| Attained Age (Last Birthday), $X$. | $0: 35$  $4: 65$ <br> $1: 45$  $5: 70$ <br> $2: 55$  $6: 75$ <br> $3: 60$  $7: 80$ |
| Policy Duration (years-since-issue), $D$. | $\begin{aligned} & 0: 0.5 \\ & 1: 3.5 \\ & 2: 6.5 \\ & 3: 9.5 \\ & 4: 12.5 \\ & \hline \end{aligned}$ |
| Account Value-to-Guaranteed Value Ratio, $\phi$. | $0: 0.25$ $4: 1.25$ <br> $1: 0.50$ $5: 1.50$ <br> $2: 0.75$ $6: 2.00$ <br> $3: 1.00$  |
| Annualized Account Charge Differential from Table 2-10 Assumptions ("MER Delta") | $\begin{aligned} & 0:-100 \mathrm{bps} \\ & 1:+0 \\ & 2:+100 \end{aligned}$ |

A test case (i.e., a node on the multi-dimensional matrix of factors) can be uniquely identified by its key, which is the concatenation of the individual 'policy attribute' keys, prefixed by a leading ' 1 '. For example, the key ' 12034121 ' indicates the factor for a $5 \%$ roll-up GMDB, where the GV is adjusted pro-rata upon partial withdrawal, balanced asset allocation, attained age 65 , policy duration $3.5,75 \%$ AV/GV ratio and "equivalent" annualized fund based charges equal to the 'base' assumption (i.e., 250 bps p.a.). The factors are contained in the file "C3-II GMDB Factors $100 \%$ Mort CTE(90) (2005-03-29).csv", a comma-separated value text file. Each "row" represents the factors/parameters for a test policy as identified by the lookup keys shown in Table 2-4. Rows are terminated by new line and line feed characters.

Each row consists of 5 entries, described further below.

| 1 | 2 | 3 | 4 | 5 |
| :---: | :---: | :---: | :---: | :---: |
| Test Case Identifier <br> (Key) | Base GMDB Cost <br> Factor | Base Margin Offset <br> Factor | Scaling Adjustment <br> (Intercept) | Scaling Adjustment <br> (Slope) |

GMDB Cost Factor. This is the term $f(\tilde{\theta})$ in the formula for $G C$. The parameter set $\tilde{\theta}$ is defined by $(P, A, F, X, D, \varphi, M E R)$. Here, $\varphi$ is the AV/GV ratio for the benefit exposure (e.g., policy) under consideration. The values in the factor grid represent $\operatorname{CTE}(90)$ of the sample distribution ${ }^{4}$ for the present value of guaranteed benefit cash flows (in excess of account value) in all future years (i.e., to the earlier of contract maturity and 30 years), normalized by guaranteed value.

Base Margin Offset Factor. This is the term $g(\tilde{\theta})$ in the formula for $G C$. The parameter set $\tilde{\theta}$ is defined by $(P, A, F, X, D, \varphi, M E R)$. Here, $\varphi$ is the AV/GV ratio for the benefit exposure (e.g., policy) under consideration. The values in the factor grid represent CTE(90) of the sample distribution for the present value of margin offset cash flows in all future years (i.e., to the earlier of contract maturity and 30 years), normalized by account value. Note that the Base Margin Offset Factors assume $\hat{\alpha}=100$ basis points of "margin offset" (net spread available to fund the guaranteed benefits).
All else being equal, the margin offset $\alpha$ has a profound effect on the resulting AAR. In comparing the Alternative Method against models for a variety of GMDB portfolios, it became clear that some adjustment factor would be required to "scale" the results to account for the diversification effects 5 of attained age, policy duration and AV/GV ratio. The testing examined $W_{1}=\frac{\alpha}{M E R}=0.20$ and $W_{2}=\frac{\alpha}{M E R}=0.60$, where $\alpha=$ available margin offset and $M E R=$ total "equivalent" account based charges, in order to understand the interaction between the margin ratio (" $W$ ") and AAR.

Based on this analysis, the Scaling Factor is defined as:

$$
h(\hat{\theta})=R=\beta_{0}+\beta_{1} \times W
$$

$\beta_{0}$ and $\beta_{1}$ are respectively the intercept and slope for the linear relationship, defined by the parameter set $\hat{\theta}=(P, F, \hat{\varphi})$. Here, $\hat{\varphi}$ is $90 \%$ of the aggregate $\mathrm{AV} / \mathrm{GV}$ for the product form (i.e., not for the individual policy or cell) under consideration. Incalculating the Scaling Factor directly from this linear function, the margin ratio " $W$ " must be constrained ${ }^{6}$ to the range $[0.2,0.6]$.
It is important to remember that $\hat{\varphi}=0.90 \times \frac{\sum A V}{\sum G V}$ for the product form being evaluated (e.g., all $5 \%$ Roll-up policies). The $90 \%$ factor is meant to reflect the fact that the cost (payoff structure) for a basket of otherwise identical put options (e.g., GMDB) with varying degrees of in-the-moneyness (i.e., AV/GV ratios) is more left-skewed than the cost for a single put option at the "weighted average" asset-to-strike ratio.
 Hence, the "GMDB Cost Factors" and "Base Margin Offset Factors" are calculated from the same scenarios.

5 By design, the Alternative Methodology does not directly capture the diversification benefits due to a varied asset profile and product mix. This is not a flaw of the methodology, but a consequence of the structure. Specific assumptions would be required to capture such diversification effects. Unfortunately, such assumptions might not be applicable to a given company and could grossly overestimate the ensuing reduction in required capital.

6 The scaling factors were developed by testing "margin ratios" $W_{1}=0.2$ and $W_{2}=0.6$. Using values outside this range could give anomalous results.

To appreciate the foregoing comment, consider a basket of two 10-year European put options as shown in Table 2-5. These options are otherwise identical except for their "market-tostrike price" ratios. The option values are calculated assuming a $5 \%$ continuous risk-free rate and $16 \%$ annualized volatility. The combined option value of the portfolio is $\$ 9.00$, equivalent to a single put option with $S=\$ 180.92$ and $X=\$ 200$. The market-to-strike (i.e., $A V / G V$ ) ratio is 0.905 , which is less than the average $A V / G V=1=\frac{\$ 75+\$ 125}{\$ 100+\$ 100}$.

Table 2-5: Equivalent Single European Put Option

|  | Equivalent Single <br> Put Option | Put Option A <br> ("in-the-money") | Put Option B <br> ("out-of-the- <br> money") |
| :---: | :---: | :---: | :---: |
| Market value (AV) | $\$ 180.92$ | $\$ 75$ | $\$ 125$ |
| Strike price (GV) | $\$ 200.00$ | $\$ 100$ | $\$ 100$ |
| Option Value | $\$ 9.00$ | $\$ 7.52$ | $\$ 1.48$ |

Scaling Adjustment (Intercept). The scaling factor $h(\hat{\theta})=R$ is a linear function of $W$, the ratio of margin offset to MER. This is the intercept $\beta_{0}$ that defines the line.
Scaling Adjustment (Slope). The scaling factor $h(\hat{\theta})=R$ is a linear function of $W$, the ratio of margin offset to MER. This is the slope $\beta_{1}$ that defines the line. Table 2-6 shows the "Base Cost" and "Base Margin Offset" values from the factor grid for some sample policies. As mentioned earlier, the Base Margin Offset factors assume 100 basis points of "available spread". The "Margin Factors" are therefore scaled by the ratio $\frac{\alpha}{100}$, where $\alpha=$ the actual margin offset (in basis points per annum) for the policy being valued. Hence, the margin factor for the $7^{\text {th }}$ sample policy is exactly half the factor for node 12044121 (the $4^{\text {th }}$ sample policy in Table 6 ). That is, $0.02160=0.5 \times 0.04319$.

Table 2-6: Sample Nodes on the Factor Grid

| KEY | $\begin{gathered} \hline \text { GMDB } \\ \text { TYPE } \\ \hline \end{gathered}$ | $\begin{gathered} \text { GV } \\ \text { ADJUST } \end{gathered}$ | $\begin{aligned} & \text { FUND } \\ & \text { CLASS } \end{aligned}$ | AGE | $\begin{gathered} \hline \text { POLICY } \\ \text { DUR } \end{gathered}$ | AV/GV | $\begin{aligned} & \text { MER } \\ & \text { (bps) } \end{aligned}$ | OFFSET | $\begin{gathered} \text { COST } \\ \text { FACTOR } \end{gathered}$ | MARGIN FACTOR |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 10132031 | ROP | \$-for-\$ | Balanced Allocatio n | 55 | 0.5 | 1.00 | 250 | 100 | 0.01073 | 0.04172 |
| 10133031 | ROP | \$-for-\$ | Balanced Allocatio n | 60 | 0.5 | 1.00 | 250 |  | 0.01619 | 0.03940 |
| 10134031 | ROP | \$-for-\$ | Balanced Allocatio n | 65 | 0.5 | 1.00 | 250 | 10 | 0.02286 | 0.03634 |
|  |  |  |  |  |  |  |  |  |  |  |
| 12044121 | 5\% Rollup | Pro-rata | Diverse Equity | 65 | 3.5 | 0.75 | 25 | 100 | 0.18484 | 0.04319 |
| 12044131 | 5\% Rollup | Pro-rata | Diverse Equity | 65 | 3.5 | 1.00 | 250 | 100 | 0.12931 | 0.03944 |
| 12044141 | 5\% Rollup | Pro-rata | Diverse <br> Equity | 65 |  | 1.2 | 250 | 100 | 0.08757 | 0.03707 |
|  |  |  |  |  |  |  |  |  |  |  |
| 12044121 | 5\% Rollup | Pro-rata | Diverse Equity | 65 | $3.5$ | 0.75 | 250 | 50 | 0.18484 | 0.02160 |

## Interpolation in the Factor Tables

Interpolation is only permitted across the last four (4) dimensions of the risk parameter set $\tilde{\theta}$ : Attained Age ( $X$ ), Policy Duration ( $D$ ), AV $\div \mathrm{GV}$ Ratio ( $\phi$ ) and MER. The "MER Delta" is calculated based on the difference between the actual MER and that assumed in the factor testing (see Table 2-10), subject to a cap (floor) of 100 bps ( -100 bps). In general, the calculation for a single policy will require three applications of multi-dimensional linear interpolation between the $16=2^{4}$ factors/values in the grid:
(1) To obtain the Base Factors $f(\bar{\theta})$ and $g(\bar{\theta})$.
(2) To obtain the Scaling Factor $h(\hat{\theta})=R$.

Based on the input parameters, the supplied functions (see Appendix 9) will automatically perform the required lookups, interpolations and calculations for $h(\hat{\theta})=R$., including the constraints imposed on the margin ratio $W$. Use of the tools noted in Appendix 9 is not mandatory.

Multi-dimensional interpolation is an iterative extension of the familiar two-dimensional linear interpolation for a discrete function $V(x)$ :

$$
\begin{aligned}
\tilde{V}\left(x_{k}+\delta\right)= & (1-\xi) \times V\left(x_{k}\right)+\xi \times V\left(x_{k+1}\right) \\
& \text { and } \\
\xi= & \frac{\delta}{x_{k+1}-x_{x}}
\end{aligned}
$$

In the above formulation, $\mathscr{V}(x)$ is assumed continuous and $x_{k}$ and $x_{k+1}$ are defined values ("nodes") for $V(x)$. By definition, $x_{k} \leq\left(x_{k}+\delta\right) \leq x_{k+1}$ so that $0 \leq \xi \leq 1$. In effect, multi-dimensional interpolation repeatedly applies simple linear interpolation one dimension at a time until a single value is obtained.
Multi-dimensional interpolation across all four dimensions is not required. However, simple linear interpolation for $A V \div G V$ Ratio ( $\phi$ ) is mandatory. In this case, the company must choose nodes for the other three (3) dimensions according to the following rules:

| Risk Attribute (Dimension) | Node Determination |
| :--- | :--- |
| Attained Age | Use next higher attained age. |
| Policy Duration | Use nearest. |
| MER Delta | Use nearest (capped at $+100 \&$ floored at -100 bps. |

For example, if the actual policy/cell is attained age 62 , policy duration 4.25 and MER Delta $=+55 \mathrm{bps}$, the company should use the nodes defined by attained age 65 , policy duration 3.5 and MER Delta $=+100$.

Table 2-7 provides an example of the fully interpolated results for a $5 \%$ Roll-up "Pro Rata" policy mapped to the Diversified Equity class (first row). While Table 2-7 does not demonstrate how to perform the multi-dimensional interpolation, it does show the required 16 nodes from the Base Factors. The margin offset is assumed to be 100 basis points.

Table 2-7: Base Factors for a 5\% Rollup GMDB Policy, Diversified Equity

| Key | Age | Policy <br> Dur | Policy <br> Av/Gv | Mer <br> (Bps) | Base Cost <br> Factor | Base Margin <br> Factor |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| INTERPOLATED | 62 | 4.25 | 0.80 | 265 | 0.15010 | 0.04491 |
|  |  |  |  |  |  |  |
| 12043121 | 60 | 3.5 | 0.75 | 250 | 0.14634 | 0.04815 |
| 12043122 | 60 | 3.5 | 0.75 | 350 | 0.15914 | 0.04511 |
| 12043131 | 60 | 3.5 | 1.00 | 250 | 0.10263 | 0.04365 |
| 12043132 | 60 | 3.5 | 1.00 | 350 | 0.11859 | 0.04139 |
| 12043221 | 60 | 6.5 | 0.75 | 250 | 0.12946 | 0.04807 |
| 12043222 | 60 | 6.5 | 0.75 | 350 | 0.14206 | 0.04511 |
| 12043231 | 60 | 6.5 | 1.00 | 250 | 0.08825 | 0.04349 |
| 12043232 | 60 | 6.5 | 1.00 | 350 | 0.10331 | 0.04129 |
|  |  |  |  |  | 0.04319 |  |
| 12044121 | 65 | 3.5 | 0.75 | 250 | 0.18484 | 0.04074 |
| 12044122 | 65 | 3.5 | 0.75 | 350 | 0.19940 | 0.04074 |
| 12044131 | 65 | 3.5 | 1.00 | 250 | 0.12931 | 0.03944 |
| 12044132 | 65 | 3.5 | 1.00 | 350 | 0.14747 | 0.03757 |
| 12044221 | 65 | 6.5 | 0.75 | 250 | 0.16829 | 0.04313 |
| 12044222 | 65 | 6.5 | 0.75 | 350 | 0.18263 | 0.04072 |
| 12044231 | 65 | 6.5 | 1.00 | 250 | 0.11509 | 0.03934 |
| 12044232 | 65 | 6.5 | 1.00 | 350 | 0.13245 | 0.03751 |

The interpolations required to compute the Scaling Factor are slightly different from those needed for the Base Factors. Specifically, the user should not interpolate the intercept and slope terms for each surrounding node, but rather interpolate the Scaling Factors applicable to each of the nodes.

Table 2-8 provides an example of the Scaling Factor for the sample policy given earlier in Table 2-7 (i.e., a 5\% Roll-up "Pro Rata" policy mapped to the Diversified Equity class) as well as the nodes used in the interpolation. The aggregate AV/GV for the product portfolio (i.e., all $5 \%$ Roll-up policies combined) is 0.75 ; hence, $90 \%$ of this value is 0.675 as shown under "Adjusted Product AV/GV". As before, the margin offset is 100 basis points per annum.

Table 2-8: Interpolated Scaling Factors for a 5\% Rollup GMDB Policy, Diversified Equity

| Key | Age | Policy Dur | Adjusted <br> Product <br> Av/Gv | Mer <br> (Bps) | Intercept | Slope | Scaling <br> Factor |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| INTERPOLATED | 62 | 4.25 | 0.675 | 265 | $\mathrm{n} / \mathrm{a}$ | $\mathrm{n} / \mathrm{a}$ | 0.871996 |  |
|  |  |  |  |  |  |  |  |  |
| 12043111 | 60 | 3.5 | 0.50 | 250 | 0.855724 | 0.092887 | 0.892879 |  |
| 12043112 | 60 | 3.5 | 0.50 | 350 | 0.855724 | 0.092887 | 0.882263 |  |
| 12043121 | 60 | 3.5 | 0.75 | 250 | 0.834207 | 0.078812 | 0.865732 |  |
| 12043122 | 60 | 3.5 | 0.75 | 350 | 0.834207 | 0.078812 | 0.856725 |  |
| 12043211 | 60 | 6.5 | 0.50 | 250 | 0.855724 | 0.092887 | 0.892879 |  |
| 12043212 | 60 | 6.5 | 0.50 | 350 | 0.855724 | 0.092887 | 0.882263 |  |
| 12043221 | 60 | 6.5 | 0.75 | 250 | 0.834207 | 0.078812 | 0.865732 |  |
| 12043222 | 60 | 6.5 | 0.75 | 350 | 0.834207 | 0.078812 | 0.856725 |  |
| 12044111 | 65 | 3.5 | 0.50 | 250 | 0.855724 | 0.092887 | 0.892879 |  |
| 12044112 | 65 | 3.5 | 0.50 | 350 | 0.855724 | 0.092887 | 0.882263 |  |
| 12044121 | 65 | 3.5 | 0.75 | 250 | 0.834207 | 0.078812 | 0.865732 |  |
| 12044122 | 65 | 3.5 | 0.75 | 350 | 0.834207 | 0.078812 | 0.856725 |  |
| 12044211 | 65 | 6.5 | 0.50 | 250 | 0.855724 | 0.092887 | 0.892879 |  |
| 12044212 | 65 | 6.5 | 0.50 | 350 | 0.855724 | 0.092887 | 0.882263 |  |
| 12044221 | 65 | 6.5 | 0.75 | 250 | 0.834207 | 0.078812 | 0.865732 |  |
| 12044222 | 65 | 6.5 | 0.75 | 350 | 0.834207 | 0.078812 | 0.856725 |  |

## Adjustments to GC for Product Variations \& Risk Mitigation/Transfer

In some cases, it may be necessary for the company to make adjustments to the published factors due to:

1. A variation in product form wherein the definition of the guaranteed benefit is materially different from those for which factors are available (see Table 2-9); and/or
2. A risk mitigation / management strategy that cannot be accommodated through a straight-forward and direct adjustment to the published values.

Any adjustments to the published factors must be fully documented and supported through stochastic modeling. Such modeling may require stochastic simulations but would not ordinarily be based on full inforce projections. Instead, a representative "model office" should be sufficient. In the absence of material changes to the product design, risk management program and Alternative Method (including the published factors), the company would not be expected to redo this modeling each year.
Note that minor variations in product design do not necessarily require additional effort. In some cases, it may be reasonable to use the factors/formulas for a different product form (e.g., for a "roll-up" GMDB policy near or beyond the maximum reset age or amount, the company should use the "return-of-premium" GMDB factors/formulas, possibly adjusting the guaranteed value to reflect further resets, if any). In other cases, the company might determine the RBC based on two different guarantee definitions and interpolate the results to obtain an appropriate value for the given policy/cell. Likewise, it may be possible to adjust the Alternative Method results for certain risk transfer arrangements without significant additional work (e.g., quota-share reinsurance without caps, floors or sliding scales would normally be reflected by a simple pro-rata adjustment to the "gross" GC results).
However, if the policy design is sufficiently different from those provided and/or the risk mitigation strategy is non-linear in its impact on the AAR, and there is no practical or obvious way to obtain a good result from the prescribed factors/formulas, the company must justify any adjustments or approximations by stochastic modeling. Notably this modeling need not be performed on the whole portfolio but can be undertaken on an appropriate set of representative policies
The remainder of this section suggests a process for adjusting the published "Cost" and "Margin Offset" factors due to a variation in product design (e.g., a "step-up" option at every $7^{\text {th }}$ anniversary whereby the guaranteed value is reset to the account value, if higher). Note that the "Scaling Factors" (as determined by the slope and intercept terms in the factor table) would not be adjusted.
The steps for adjusting the published Cost and Margin Offset factors for product design variations are:

1. Select a policy design in the published tables that is similar to the product being valued. Execute cashflow projections using the documented assumptions (see Tables $2-9$ and $2-10$ ) and the scenarios from the prescribed generators for a set of representative cells (combinations of attained age, policy duration, asset class, AV/GV ratio and MER). These cells should correspond to nodes in the factor grid. Rank (order) the sample distribution of results for the present value of net cost ${ }^{7}$. Determine those scenarios which comprise CTE(90).
2. Using the results from step 1., average the present value of cost for the $\operatorname{CTE}(90)$ scenarios and divide by the current guaranteed value. For a the $J^{\text {th }}$ cell, denote this value by $F_{I}$. Similarly, average the present value of margin offset revenue for the same subset of scenarios and divide by account value. For the $J^{\text {th }}$ cell, denote this value by $G_{I}$.
3. Extract the corresponding factors from the published grid. For each cell, calibrate to the published tables by defining a "model adjustment factor" (denoted by asterisk) separately for the "cost" and "margin offset" components:

$$
F_{J}^{*}=\frac{f(\widetilde{\theta})}{F_{I}} \text { and } G_{J}^{*}=\frac{\hat{g}(\tilde{\theta})}{G_{I}}
$$

[^3]4. Execute "product specific" cashflow projections using the documented assumptions and scenarios from the prescribed generators for the same set of representative cells. Here, the company should model the actual product design. Rank (order) the sample distribution of results for the present value of net cost. Determine those scenarios which comprise CTE(90).
5. Using the results from step 4., average the present value of cost for the $\mathrm{CTE}(90)$ scenarios and divide by the current guaranteed value. For a the $J^{\text {th }}$ cell, denote this value by $\bar{F}_{I}$. Similarly, average the present value of margin offset revenue for the same subset of scenarios and divide by account value. For a the $J^{\text {th }}$ cell, denote this value by $\bar{G}_{I}$.
6. To calculate the AAR for the specific product in question, the company should implement the Alternative Method as documented, but use $\bar{F}_{I} \times F_{I}^{*}$ in place of $f(\tilde{\theta})$ and $\bar{G}_{I} \times G_{I}^{*}$ instead of $\hat{g}(\tilde{\theta})$. The company must use the "Scaling Factors" for the product evaluated in step 1. (i.e., the product used to calibrate the company's cashflow model).

## Assumptions for the Alternative Method Published GMDB Factors

This subsection reviews the model assumptions used to develop the Alternative Method factors. Each node in the factor grid is effectively the modeled result for a given "cell".
Table 2-9: Model Assumptions \& Product Characteristics

| Account Charges (MER) | Vary by fund class. See Table 2-10 later in this section. |
| :---: | :---: |
| Base Margin Offset | 100 basis points per annum |
| GMDB Description | 1. $R O P=$ return of premium ROP. <br> 2. ROLL $=5 \%$ roll-up, capped at $2.5 \times$ premium, frozen at age 80 . <br> 3. $\mathrm{MAV}=$ annual ratchet (maximum anniversary value), frozen at age 80 . <br> 4. $\mathrm{HIGH}=$ Higher of $5 \%$ roll-up and annual ratchet frozen at age 80 . <br> 5. $\mathrm{EDB}=\mathrm{ROP}+40 \%$ Enhanced Death Benefit (capped at $40 \%$ of deposit). |
| Adjustment to GMDB Upon Partial Withdrawal | "Pro-Rata by Market Value" and "Dollar-for-Dollar" are tested separately. |
| Surrender Charges | Ignored (i.e., zero). Reflected in the "CA" component of the AAR. |
| Single Premium / Deposit | \$100,000. No future deposits; no intra-policy fund rebalancing. |
| Base Policy Lapse Rate | Pro-rata by MV: $10 \%$ p.a. at all policy durations (before dynamics) <br> - Dollar-for-dollar: $2 \%$ p.a. at all policy durations (no dynamics) |
| Partial Withdrawals | - Pro-rata by MV: None (i.e., zero) <br> - Dollar-for-dollar: Flat 8\% p.a. at all policy durations (as a \% of AV). No dynamics or anti-selective behavior. |
| Mortality | 100\% of MGDB 94 ALB. |


| Gender /Age Distribution | $100 \%$ male. Methodology accommodates different attained ages and policy durations. <br> A 5-year age setback will be used for female annuitants. |
| :--- | :--- |
| Max. Annuitization Age | All policies terminate at age 95. |
| Fixed Expenses, Annual Fees | Ignored (i.e., zero). Reflected in the "FE" component of the AAR. |
| Income Tax Rate | $21 \%$ |
| Discount Rate | $4.54 \%$ (after-tax) effective $=5.75 \%$ pre-tax. |
| Dynamic Lapse Multiplier <br> (Applies only to policies where <br> GMDB is adjusted "pro-rata by <br> MV" upon withdrawal)$U=1, L=0.5, M=1.25, D=1.1$ <br> - Applied to the 'Base Policy Lapse Rate' (not withdrawals). |  |

## Notes on GMDB Factor Development

- The roll-up is continuous (not simple interest, not stepped at each anniversary) and is applied to the previous roll-up guaranteed value (i.e., not the contract guaranteed value under HIGH).
- The Enhanced Death Benefit ("EDB") is floored at zero. It pays out $40 \%$ of the gain in the policy upon death at time $t$ : $B_{t}=\operatorname{MIN}\left[0.40 \times\right.$ Deposit, $0.40 \times \operatorname{MAX}\left(0, A V_{t}-\right.$ Deposit $\left.)\right]$. The test policy also has a $100 \%$ return-of-premium GMDB, but the EDB Alternative Factors will be net of the GMDB component. That is, the EDB factors are 'stand-alone' and applied in addition to the GMDB factors.
- The "Base Policy Lapse Rate" is the rate of policy termination (total surrenders). Policy terminations (surrenders) are assumed to occur throughout the policy year (not only on anniversaries).
- Partial withdrawals (if applicable) are assumed to occur at the end of each time period (quarterly).
- Account charges ("MER") represent the total amount (annualized, in basis points) assessed against policyholder funds (e.g., sum of investment management fees, mortality and expense charges, risk premiums, policy/administrative fees, etc.). They are assumed to occur throughout the policy year (not only on anniversaries).

Table 2-10: Account-Based Fund Charges (bps per annum)


Continuing the previous example (see Tables 2-7 and 2-8) for a $5 \%$ Roll-up GMDB policy mapped to Diversified Equity, suppose we have the policy/product parameters as specified in Table 2-11.

Table 2-11: Sample Policy Results for 5\% Roll-up GMDB, Diversified Equity

| Parameter | Value |  |
| :--- | :---: | :--- |
| Deposit Value | $\$ 100.00$ | Total deposits adjusted for partial withdrawals. |
| Account Value | $\$ 98.43$ | Total account value at valuation date, in dollars. |
| GMDB | $\$ 123.04$ | Current guaranteed minimum death benefit, in dollars. |
| Attained Age | 62 | Attained age at the valuation date (in years). |
| Policy Duration | 4.25 | Policy duration at the valuation date (in years). |
| GV Adjustment | Pro-Rata | GMDB adjusted pro-rata by MV upon partial withdrawal. |
| Fund Class | Diversified Equity | Contract exposure mapped to Diversified Equity as per the Fund <br> Categorization instructions in the section of this Appendix on <br> Component GC. |
| MER | 265 | Total charge against policyholder funds (bps). |
| ProductCode | 2 | Product Definition code as per lookup key in Table 4. |
| GVAdjust | 0 | GV Adjustment Upon Partial Withdrawal as per key in Table 2-4. |


| FundCode | 4 | Fund Class code as per lookup key in Table 2-4. |
| :--- | :---: | :--- |
| PolicyMVGV | 0.800 | Contract account value divided by GMDB. |
| AdjProductMVGV | 0.675 | $90 \%$ of the aggregate AV/GV for the Product portfolio. |
| RC | 150 | Margin offset (basis points per annum). |

Using the usual notation, $G C=G V \times f(\tilde{\theta})-A V \times \hat{g}(\tilde{\theta}) \times h(\hat{\theta})$.
$f(\tilde{\theta}) \quad=0.150099=\operatorname{GetCostFactor}(2,0,4,62,4.25,0.8,265)$
$\hat{g}(\tilde{\theta}) \quad=0.067361=\operatorname{GetMarginFactor}(2,0,4,62,4.25,0.8,265,150)$
$h(\hat{\theta}) \quad=0.887663=\operatorname{GetScalingFactor}(2,0,4,62,4.25,0.675,265,150)$
Hence, $G C=\$ 12.58=(123.04 \times 0.150099)-(98.43 \times 0.067361 \times 0.887663)$. As a normalized value, this quantity is $12.78 \%$ of account value, $10.23 \%$ of guaranteed value and $51.1 \%$ of the current net amount at risk (Net amount at risk $=\mathrm{GV}-\mathrm{AV}$ ).

Note that $\hat{g}(\tilde{\theta})=\frac{\alpha}{\hat{\alpha}} \times g(\tilde{\theta})=\frac{150}{100} \times 0.044907$ where $g(\tilde{\theta})$ is "per 100 basis points" of available margin offset. $g(\tilde{\theta}) \quad=0.044907=\operatorname{GetMarginFactor}(2,0,4,62,4.25,0.8,265,100)$

## Appendix 3 - Commonly Used Health Insurance Terms

The Definitions of Commonly Used Terms are frequently duplicates from the main body of the text. If there are any inconsistencies between the definitions in this section and the definitions in the main body of the instructions, the main body definition should be used.

Administrative Expenses - Costs associated with the overall management and operations of the insurer that are not directly related to, or in direct support of providing medical services. Expenses to administer ASC, ASO business and related revenue must be identified separately from underwritten business. Commission payments and premium taxes are excluded for RBC calculation purposes.

Administrative Services Contract (ASC) - A contract where the insurer agrees to provide administrative services, such as claims processing, for a third party that is at risk, and accordingly, the administrator has not issued an insurance policy, regardless of whether an identification card is issued. The administrator may arrange for provision of medical services through a contracted or employed provider network. The plan (whether insured by another reporting entity or self-insured) bears all of the insurance risk, and there is not possibility of loss or liability to the administrator caused by claims incurred related to the plan. Claims are paid from the reporting entity's own bank accounts, and only subsequently receives reimbursement from the uninsured plan sponsor.

ASC Reimbursements - Funds received by the company under an ASC contract as reimbursement for claims payments and for expenses associated with administering the contract.
Administrative Services Only (ASO) - A contract where the insurer agrees to provide administrative services, such as claims processing, for a third party that is at risk, and accordingly, the administrator has not issued an insurance policy, regardless of whether an identification card is issued. The administrator may arrange for provision of medical services through a contracted or employed provider network. The plan (whether insured by another reporting entity or self-insured) bears all of the insurance risk, and there is not possibility of loss or liability to the administrator caused by claims incurred related to the plan. Claims are paid from a bank account owned and funded directly by the uninsured plan sponsor; or, claims are paid from a bank account owned by the reporting entity, but only after the reporting entity has received funds from the uninsured plan sponsor that are adequate to fully cover the claim payments.

ASO Reimbursements - Funds received by the company under an ASO contract as a fee for expenses associated with administering the contract.
Aggregate Cost Payments - The aggregate cost method of reimbursement is 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.

Intermediary - An intermediary is a person, corporation or other business entity (not licensed as a medical provider) that arranges, by contracts with physicians and other licensed medical providers, to deliver health services for an insurer and its enrollees via a separate contract between the intermediary and the insurer.

Incentives, Withhold and Bonus Amounts - Are amounts to be paid to providers by the Health entity as an incentive to achieve goals such as effective management of care. An incentive arrangement may involve paying an agreed-on amount for each claim (e.g. provider agrees practice in an underserved area). While a bonus arrangement may be paid at the end of a contact period after specific goals have been met. Withhold arrangements can involve a set amount to be withheld from each claim, and then paying a portion (which could be none or all) of the withheld amount at the end of the contract period.

Managed Care Organization (MCO) - Any person, corporation or other entity (other than an insurer) that enters into arrangements or agreements with licensed medical providers or intermediaries for the purpose of providing or offering to provide a plan of health benefits directly to individuals or employer groups in consideration for an advance periodic charge (premium) per member covered.

Maximum Retained Risk - The maximum level of potential claim exposure (capped at $\$ 750,000$ for medical coverage and $\$ 25,000$ for all other coverage) resulting from coverage on a single member of an insurer. Maximum retained risk for companies providing "professional component" (non-hospital) coverage will be capped at $\$ 375,000$. Where specific stop-loss reinsurance protection is in place, this is equal to the highest attachment point on such stop-loss reinsurance, subject to the following:

Where coverage under the stop-loss protection (plus retention) with the highest attachment point is capped at less than $\$ 750,000$ per member ( $\$ 375,000$ for companies providing "professional component" coverage only), the maximum retained loss will be equal to such attachment point plus the difference between the coverage (plus retention) and $\$ 750,000$.

Where the stop-loss layer is subject to participation by the insurer, the maximum retained risk as calculated above will be increased by the insurer's participation in the stop-loss layer (up to $\$ 750,000$ less retention).

Professional Services - Health care services provided by a physician or other health care practitioner licensed, accredited or certified to perform specified health services consistent with state law.

Provider Stop-loss - Coverage afforded to a provider via the risk-sharing mechanisms within the contract with such provider in exchange for a reduced payment to the provider. Also includes insurance (not reinsurance) purchased by the provider (or an intermediary) directly from a licensed insurer.

Regulated Intermediary - A regulated intermediary is an intermediary (affiliated or not) subject to state regulation and required to file the MCO RBC formula with the state. (See also Intermediary.)

Risk Revenue - Amounts charged by the reporting insurer as a provider or intermediary for specified medical services provided to the policyholders or members of another insurer or 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 reporting 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 at the same factor as premiums and are subject to the same managed care credit categories. NOTE: RISK REVENUE IS VERY SIMILAR TO REINSURANCE ASSUMED.

Specified Disease Coverage - Coverage that provides primarily pre-determined benefits for expenses in the care of cancer and/or other specified diseases.
Stop-Loss Coverage - Coverage for a self-insured group plan, a provider/provider group or non-proportional reinsurance of a medical insurance product. Coverage may apply on a specific basis, an aggregate basis or both. Specific coverage means that the stop-loss carriers risk begins after a minimum of at least $\$ 5,000$ of claims for any one covered life has been covered by the group plan, provider/provider group or direct writer. Aggregate coverage means that the stop-loss carriers risk begins after the group plan, provider/provider group or direct writer has retained at least 90 percent of expected clatims or the economic equivalent.

## Appendix 4 - Commonly Used Terms for Stand-Alone Medicare Part D Coverage

The federal Centers for Medicare and Medicaid Services (CMS) oversee the Stand-Alone Medicare Part D prescription drug coverage, including both coverage provided through a stand-alone Prescription Drug Plan (PDP) and coverage provided as part of a Medicare Advantage plan. The terms are defined in INT 05-05: Accounting for Revenue under Medicare Part D Coverage.


# COMPANY INFORMATION PAGE (JURAT) 

Life and Fraternal Risk-Based Capital
For the Year Ending December 31, 2022
(A) Company Name
(B) NAIC Group Code


Each says that they are the above described officers of the said insurer, and that this risk-based capital report is a true and fair representation of the company's affairs and has been completed in accordance with the NAIC instructions according to the best of their information, knowledge and belief, respectively.Denotes items that must be manually entered on the filing software.

Designation Categor
(1) Long Term Bonds
$\begin{array}{ll}\text { (1) } & \text { Exempt Obligations } \\ \text { (2.1) } & \text { NAIC Designation Category 1.A }\end{array}$
(2.2) NAIC Designation Category 1.B
(2.3) NAIC Designation Category $1 . \mathrm{C}$
$\begin{array}{ll}(2.4) & \text { NAIC Designation Category } 1 . \mathrm{D} \\ (2.5) & \text { NAIC Designation Cotegry }\end{array}$
(2.6) NAIC Designation Category 1.F
(2.7) NAIC Designation Category 1.G
(2.8) Subtotal NAIC 1
$\begin{array}{ll}\text { (3.1) } & \text { NAIC Designation Category 2.A } \\ \text { (3.2) } & \text { NAIC Designation Category }\end{array}$
(3.2) NAIC Designation Category 2.B
(3.4) Subtotal NAIC 2
(4.1) NAIC Designation Category 3.A
(4.2) NAIC Designation Category $3 . \mathrm{B}$
(4.3) NAIC Designation Category $3 . \mathrm{C}$
(4.4) Subtotal NAIC 3
$\begin{array}{ll}(5.1) & \text { NAIC Designation Category 4.A } \\ (5.2) & \text { NAIC Desiganation Cater }\end{array}$
(5.3) NAIC Designation Category $4 . \mathrm{C}$
(5.4) Subtotal NAIC 4
(6.1) NAIC Designation Category $5 . \mathrm{A}$
(6.2) NAIC Designation Category 5.B
(6.3) NAIC Designation Category $5 . \mathrm{C}$
(6.4)
Subtotal NaIC 5
(6.4) Subtatal NAIC
(7)
NAIC 6
(7) NAIC
${ }^{\prime}$
Total Long-Term Bonds
(Column (1) should equal
Sum of Lines $(1)+(2.8)+(3.4)+(4.4)+(5.4)+(6.4)$
AVR Default Component Column 1 Line 1
AVR Default Component Column 1 Line 2.1 AVR Default Component Column 1 Line 2.2 AVR Default Component Column 1 Line 2.3 AVR Default Component Column 1 Line 2.4 AVR Default Component Column 1 Line 2.5 AVR Default Component Column 1 Line 2.7 Sum of Lines (2.1) through (2.7)
AVR Default Component Column 1 Line 3.1 AVR Default Component Column 1 Line 3.2 AVR Default Component Column 1 L Sum of Lines (3.1) through (3.3)
AVR Default Component Column 1 Line 4.2 AVR Default Component Column 1 Line 4.3 Sum of Lines (4.1) through (4.3)
AVR Default Component Column 1 Line 5.1 AVR Default Component Column 1 Line 5.2
AVR Default Component Column 1 Line 5.3 Sum of Lines (5.1) through (5.3)
AVR Default Component Column 1 Line 6.1
AVR Default Component Column 1 Line 6.2 AVR Default Component Column 1 Line 6.3 Sum of Lines (6.1) through (6.3) AVR Default Component Column 1 Line
$1+$ Schedule DL Part 1 Column 6 Line 2509999999)


$\dagger$ Only investments in-U.S. Goverrmment agency bonds previously reported in Lines (2.8) and (10.8), net of those included on Line (19), plus the
portion of Line ( 20 ) attributable to ceding companies' Lines (2.8) and (10.8) should be included on Line (22). No other bonds should be included on this bonds shown on Lines (1) and (9) should not be included on Line (22). Refer to the bond section of the risk-based capit instructions for more clarification.

[^4]MORTGAGE EXPERIENCE ADJUSTMENT

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


In Good Standing
(1) Residential Mortgages-Insured or Guaranteed
(2) Residential Mortgages-All Other
(3) Commercial Mortgages-Insured or Guaranteed
(4) Commercial Mortgages - All Other - Category CM1 (5) Commercial Mortgages - All Other - Category CM2 (6) Commercial Mortgages - All Other - Category CM3 (7) Commercial Mortgages - All Other - Category CM4 (8) Commercial Mortgages - All Other - Category CM5
(9) Total Commercial Mortgages-All Other
(10) Farm Mortgages - Category CM
(11) Farm Mortgages - Category CM2
(12) Farm Mortgages - Category CM
(13) Farm Mortgages - Category CM4
(14) Farm Mortgages - Category CM5
(15) Total Farm Mortgages

90 Days Overdue, Not in Process of Foreclosure
(16) Farm Mortgages - Category CM
(17) Residential Mortgages-Insured or Guaranteed
(18) Residential Mortgages-All Other
(19) Commercial Mortgages-Insured or Guaranteed
(20) Commercial Mortgages-All Other - Category CM6 In Process of Foreclosure
(21) Farm Mortgages - Category CM7
(22) Residential Mortgages-Insured or Guaranteed
(22) Residential Mortgages-Insured of
(24) Commercial Mortgages-Insured or Guaranteed
(24) Commercial Mortgages-Insured or Guaranteed
(25) Commercial Mortgages-All Other - Category CM7 Due and Unpaid Taxes
(26) Due and Unpaid Taxes on Mortgages Overdue, Not in Process of Foreclosure
(27) Due and Unpaid Taxes on Foreclosed Mortgages
(28) Total Mortgages (including due and unpaid taxes) (Column (1) should equal Page 2 Column 3 Lines 3. $+3.2+$ Schedule B Part 1 Footnote \#3 1st amount + Schedule B Part 1 Footnote \#4 1st amount).
(29) Reduction in RBC for MODCO/Funds Withheld Reinsurance Ceded Agreements
(30) Increase in RBC for MODCO/Funds Withheld Reinsurance Assumed Agreements
(31) Total Mortgages
(including MODCO/Funds Withheld.)
Annual Statement Source

AVR Default Component Column 1 Line 40 AVR Default Component Column 1 Line 41 AVR Default Component Column 1 Line 42

AVR Default Component Column 1 Line 43 AVR Defaur Compon Column 1 Line 43 AVR Default Connent Column 1 Line 45 AVR Defoul Compent Coun I Line 45 AVR D 1 Con Corn Line 46

Lines (4) $+(5)+(6)+(7)+(8)$
AVR Default Component Column 1 Line 35 AVR Default Component Column 1 Line 36 AVR Default Component Column 1 Line 37 AVR Default Component Column 1 Line 38 AVR Default Component Column 1 Line 39

Lines $(10)+(11)+(12)+(13)+(14)$

AVR Default Component Column 1 Line 48 AVR Default Component Column 1 Line 49 AVR Default Component Column 1 Line 50 AVR Default Component Column 1 Line 51 AVR Default Component Column 1 Line 52

AVR Default Component Column 1 Line 53 AVR Default Component Column 1 Line 54 AVR Default Component Column 1 Line 55 AVR Default Component Column 1 Line 56
AVR Default Component Column 1 Line 57


Lines $(1)+(2)+(3)+(9)+(15)$ plus th Sum of Lines (16) through (27)

${ }^{(2)}$
(3) Involuntary
Reserve Adjustment $\dagger$

RBC Subtotal
(4)
(5)
(6)

Book / Adjusted Carrying Value

_ $0.0014=$ Requirement
$\dagger$ 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.
$\ddagger$ Cumulative writedowns include the total amount of writedowns, non-admissions, and involuntary reserves that have been taken or established with respect to a particular mortgage. $£$ For Lines (16) through (20) and Lines (21) through (25), Column (5) is calculated as Column (6) divided by Column (3).

Denotes items that must be manually entered on the filing software
(3)
(4)

| RBC Subtotal | Factor | Requirement |
| :---: | :---: | :---: |

(1) Preferred Stock Asset NAIC
(2) Preferred Stock Asset NAIC 2
(3) Preferred Stock Asset NAIC 3
(4) Preferred Stock Asset NAIC 4
(5) Preferred Stock Asset NAIC 5
(6) Preferred Stock Asset NAIC 6
(7) Total Unaffiliated Preferred Stock (pre-MODCO/Funds Withheld)
(Column (1) should equal Page 2 Column 3 Line 2.1 less Asset Valuation Reserve Default Component Column 1 Line 16.)
(Column (2) should equal Schedule D Summary Column 1 Line 18 less Asset Valuation Reserve Default Component Column 1 Line 16.)
(8) Reduction in RBC for MODCO/Funds Withheld Reinsurance Ceded Agreements
(9) Increase in RBC for MODCO/Funds Withheld Reinsurance Assumed Agreements
(10) Total Unaffiliated Preferred Stock (including MODCO/Funds Withheld.)

Unaffiliated Common Stock
(11) Total Common Stock
(12) Less Affiliated Common Stock
(13) Less Non-Admitted Unaffiliated Common Stock included in Line (11)
(14) Less Federal Home Loan Bank Common Stock
(15) Less Unaffiliated Private Common Stock
(16) Net Other Unaffiliated Public Common Stock
(17) Total Admitted Unaffiliated Common Stock (pre-MODCO/Funds Withheld)

Company Records (enter a pre-tax amount)
(Column 1 should equal Schedule D Summary by Country Column 1 Line 25 less Line 24 less Line (13))
(18) Credit for Hedging
(19) Reduction in RBC for MODCO/Funds Withheld Reinsurance Ceded Agreements
(20) Increase in RBC for MODCO/Funds Withheld Reinsurance Assumed Agreements
(21) Total Admitted Unaffiliated Common Stock Lines (17) - (18) - (19) + (20 (including MODCO/Funds Withheld and Credit for Hedging.)
$\dagger$ The factor for publicly traded common stock should equal 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 in the same manner that the similar 13 percent factor for publicly traded common stock in the Asset Valuation Reserve (AVR) calculation is adjusted up or down. The rules for calculating the beta adjustment are set forth in the AVR section of the annual statement instructions.Denotes items that must be manually entered on the filing software.

## SEPARATE ACCOUNTS


$\dagger$ The amount reported in Column (3) should not be less than zero.
$\ddagger$ The expense allowance transfers for Lines (11) and (12) should be entered as a positive value in Column (1).
$\S$ If Column (1) is not equal to zero, Column (2) is calculated as Column (3) divided by Column (1)

* Column (3) is calculated according to the risk-based capital instructions.Denotes items that must be manually entered on the filing software.


## REAL ESTATE

Real Estate
(1) Company Occupied Real Estate
(2) Company Occupied Encumbrances
(3) Total Company Occupied Real Estate
(4) Foreclosed Real Estate
(5) Foreclosed Encumbrances
(6) Total Foreclosed Real Estate
(7) Investment Real Estate
(8) Investment Encumbrances
(9) Total Investment Real Estate
(10) Total Real Estate (pre-MODCO/Funds Withheld)
11) Reduction in RBC for MODCO/Funds Withheld Reinsurance Ceded Agreements
(12) Increase in RBC for MODCO/Funds Withheld Reinsurance Assumed Agreement
(13) Total Real Estate
(including MODCO/Funds Withheld)
Schedule BA Real Estate
(14) Schedule BA Real Estate
(15) Schedule BA Real Estate Encumbrances
(16) Total Schedule BA Real Estate Excluding Low Income Housing Tax Credits Included Below
(17) Federal Guaranteed Low Income Housing Tax Credits
(18) Federal Non-Guaranteed Low Income Housing Tax Credit
(19) State Guaranteed Low Income Housing Tax Credits
(20) State Non-Guaranteed Low Income Housing Tax Credits
(21) All Other Low Income Housing Tax Credits
22) Total Schedule BA Real Estate (pre-MODCO/Funds Withheld)

Annual Statement Source
AVR Equity Component Column 1 Line 18 AVR Equity Component Column 3 Line 18 Line (1) $+(2)$
AVR Equity Component Column 1 Line 20 AVR Equity Component Column 3 Line 20 Line (4) + (5)
AVR Equity Component Column 1 Line 19 AVR Equity Component Column 3 Line 19
Line (7) $+(8)$
Lines (3) $+(6)+(9)$

Company Records (enter a pre-tax amount)


Lines (22) - (23) $+(24)$
23) Reduction in RBC for MODCO/Funds Withheld Reinsurance Ceded Agreements Reinsurance Assumed Agreements
(25) Total Schedule BA Real Estate (including MODCO/Funds Withheld)
$\dagger$ Column (2) is calculated as Column (3) divided by Column (1).
$\ddagger$ The RBC requirement is calculated for each individual property and then summarized on this page. Refer to the worksheet included in the Real Estate portion of the instructions.Denotes items that must be manually entered on the filing software

## OTHER LONG-TERM ASSETS

Schedule BA - Fixed Income - Bonds
(1) Exempt Obligations
(2) Asset NAIC 1
(3) Asset NAIC 2
(4) Asset NAIC 3
(5) Asset NAIC 4
(6) Asset NAIC 5
(7) Asset NAIC 6
(8) Total Schedule BA Bond (pre-MODCO/Funds Withheld)
(9) Reduction in RBC for MODCO/Funds Withheld Reinsurance Ceded Agreements
(10) Increase in RBC for MODCO/Funds Withheld Reinsurance Assumed Agreements
(11) Total Schedule BA Bonds (including MODCO/Funds Withheld.)

Schedule BA - Fixed Income - Preferred Stock
(12.1) Asset NAIC 1
(12.2) Less Rated/Designated NAIC 1 Surplus Notes and Capital Notes
(12.3) Net Asset NAIC 1
(13) Asset NAIC 2
(14) Asset NAIC 3
(15) Asset NAIC 4
(16) Asset NAIC 5
(17) Asset NAIC 6
(18) Total Schedule BA Preferred Stock (pre-MODCO/Funds Withheld)
(19) Reduction in RBC for MODCO/Funds Withheld Reinsurance Ceded Agreements
(20) Increase in RBC for MODCO/Funds Withheld Reinsurance Assumed Agreements
(21) Total Schedule BA Preferred Stock (including MODCO/Funds Withheld.)

## Annual Statement Source

AVR Equity Component Column 1 Line 22 AVR Equity Component Column 1 Line 23 AVR Equity Component Column 1 Line 24 AVR Equity Component Column 1 Line 25 AVR Equity Component Column 1 Line 26 AVR Equity Component Column 1 Line 27 AVR Equity Component Column 1 Line 28 Sum of Lines (1) through (7)

Company Records (enter a pre-tax amount) Company Records (enter a pre-tax amount)

Lines (8) - (9) $+(10)$

AVR Equity Component Column 1 Line 30 Column (1) Line (22) + Column (1) Line (32 Line (12.1) - (12.2)
AVR Equity Component Column 1 Line 31 AVR Equity Component Column 1 Line 32 AVR Equity Component Column 1 Line 3 AVR Equity Component Column 1 Lime 3 AVR Equity Component Column 1 Line 35 Sum of Lines (12.3) through (17)

$\dagger$ Fixed income instruments and surplus notes designated by the NAIC Capital Markets and Investment Analysis Office or considered exempt from filing as specified in the Purposes and Procedures Manual of the NAIC Investment Analysis Office should be reported in Column (3).
$\ddagger$ Column (2) is calculated as Column (1) less Column (3) for Lines (1) through (17). Column (2) equals Column (3) - Column (1) for Line (52.3).Denotes items that must be manually entered on the filing software
}

## OTHER LONG-TERM ASSETS (CONTINUED)


$\dagger$ Fixed income instruments and surplus notes designated by the NAIC Capital Markets and Investment Analysis Office or considered exempt from filing as specified in the Purposes and Procedures Manual of the NAIC Investment Analysis Office should be reported in Column (3).
$\ddagger$ Column (2) is calculated as Column (1) less Column (3) for Lines (1) through (17). Column (2) equals Column (3) - Column (1) for Line (52.3)
Denotes items that must be manually entered on the filing software.

## Company Name

## OTHER LONG-TERM ASSETS (CONTINUED)

Schedule BA - Unaffiliated Common Stock
(42) Schedule BA Unaffiliated Common Stock-Public
(43) Schedule BA Unaffiliated Common Stock-Private
(44) Total Schedule BA Unaffiliated Common Stock (pre-MODCO/Funds Withheld)
(45) Reduction in RBC for MODCO/Funds Withheld Reinsurance Ceded Agreements
(46) Increase in RBC for MODCO/Funds Withheld Reinsurance Assumed Agreements
(47) Total Schedule BA Unaffiliated Common Stock (including MODCO/Funds Withheld.)

Schedule BA - All Other
(48.1) BA Affiliated Common Stock - Life with AVR
(48.2) BA Affiliated Common Stock - Certain Other
(48.3) Total Schedule BA Affiliated Common Stock - C-1o
(49.1) BA Affiliated Common Stock - All Other
|(49.2) Total Sch. BA Affiliated Common Stock - C-1cs
(50) Schedule BA Collateral Loans
(51.1) NAIC 01 Working Capital Finance Notes
(51.2) NAIC 02 Working Capital Finance Notes
(51.3) Total Admitted Working Capital Finance Notes
(52.1) Other Schedule BA Assets
(52.2) Less NAIC 2 thru 6 Rated/Designated Surplus Notes and Capital Notes
(52.3) Net Other Schedule BA Assets
(53) Total Schedule BA Assets C-1o (pre-MODCO/Funds Withheld)
(54) Reduction in RBC for MODCO/Funds Withheld Reinsurance Ceded Agreements
(55) Increase in RBC for MODCO/Funds Withheld Reinsurance Assumed Agreements
(56) Total Schedule BA Assets C-1o (including MODCO/Funds Withheld.)
(57) Total Schedule BA Assets Excluding Mortgages and Real Estate

# NAIC Company Code 

| (1) | (2) | (3) | (4) |  |
| :---: | :---: | :---: | :---: | :---: |
| Book / Adjusted |  |  |  | RBC |
| Carrying Value | Unrated Items : | $\underline{\text { RBC Subtotal } \dagger}$ | Factor | Requirement |
|  |  |  | § |  |
|  |  |  | 0.3000 |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
| - |  |  |  |  |

Lines (44) - (45) + (46)
AVR Equity Component Column 1 Line 65 AVR Equity Component Column 1 Line 66 Line (42) + (43)
(1)
Book / Adjusted

Company Records (enter a pre-tax amount)
Company Records (enter a pre-tax amount)

AVR Equity Component Column 1 Line 67 AVR Equity Component Column 1 Line 68 Line (48.1) + (48.2)

X $0.3000=$ $\qquad$
AVR Equity Component Column 1 Line 69 Line (49.1) + AVR Equity Component Column 1 Line 93 Schedule BA Part 1 Column 12 Line 2999999 + Line 3099999
AVR Equity Component Column 1 Line 94
AVR Equity Component Column 1 Line 95 Line (51.1) + (51.2)
AVR Equity Component Column 1 Line 96
Column (1) Lines (23) through (27) + Column (1)
Lines (33) through (37)
Line (52.1) less (52.2)
Lines $(11)+(21)+(31)+(41)+(48.3)+(50)+(51.3)+(52.3)$

$\qquad$ $\begin{array}{ll}\mathrm{X} & 0.3000= \\ \mathrm{x} & = \\ \end{array}$ $\qquad$
$\qquad$ X $0.0050=$ $\qquad$ X $0.0163=$

Fixed income instruments and surplus notes designated by the NAIC Capital Markets and Investment Analysis Office or considered exempt from filing as specified in the Purposes and Procedures Manual of the NAIC Investment Analysis Office should be reported in Column (3).

+ Column (2) is calculated as Column (1) less Column (3) for Lines (1) through (17). Column (2) equals Column (3) - Column (1) for Line (52.3).
§ The factor for Schedule BA publicly traded common stock should equal 30 percent adjusted up or down by the weighted average beta for the Schedule BA publicly traded common stock portfolio subject to a minimum of 22.5 percent and a maximum of 45 percent in the same manner that the similar 15.8 percent factor for Schedule BA publicly traded common stock in the Asset Valuation Reserve (AVR) calculation is adjusted up or down. The rules for calculating the beta adjustment are set forth in the AVR section of the annual statement instructions.Denotes items that must be manually entered on the filing software.


## SCHEDULE BA MORTGAGE

## In Good Standing

(1) Insured or Guaranteed
(2) Unaffiliated Mortgages with Covenants
(3) Unaffiliated Mortgages - Defeased with Government Securities
(4) Unaffiliated Mortgages - Primarily Senior
(5) Unaffiliated Mortgages - All Other
(6) Affiliated Mortgages - Category CMI
(7) Affiliated Mortgages - Category CM2
(8) Affiliated Mortgages - Category CM3
(9) Affiliated Mortgages - Category CM4
(10) Affiliated Mortgages - Category CM5
(11) Total In Good Standing

90 Days Overdue, Not in Process of Foreclosure
(12) Insured or Guaranteed 90 Days Overdue
(12) Insured or Guaranteed 90 Days Overdue
(13) All Other 90 Days Overdue - Unaffiliated
(14) All Other 90 Days Overdue - Affiliated
(15) Total 90 Days Overdue, Not in Process of Foreclosure

In Process of Foreclosure
(16) Insured or Guaranteed in Process of Foreclosure
(17) All Other in Process of Foreclosure - Unaffiliated
(18) All Other in Process of Foreclosure - Affiliated
(19) Total In Process of Foreclosure
(20) Total Schedule BA Mortgages (pre-MODCO/Funds Withheld)
(21) Reduction in RBC for MODCO/Funds Withheld Reinsurance Ceded Agreements
(22) Increase in RBC for MODCO/Funds Withheld

Reinsurance Assumed Agreements
(23) Total Schedule BA Mortgages
(including MODCO/Funds Withheld.)

$\dagger$ 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.

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

This will be the factor associated with the risk category determined in the company generated worksheet
$£$ For Lines (12) through (14) and Lines (16) through (18), Column (5) is calculated as Column (6) divided by Column (3).
Denotes items that must be manually entered on the filing software.

$\dagger$ After the ten largest issuer exposures are chosen, any NAIC 1 bonds or preferred stocks from any of these issuers should be included
$\ddagger$ Refer to the instructions for the Asset Concentration Factor for details of this calculation.
Denotes items that must be manually entered on the filing software.
Writedowns


NOTE: Ten issuer sections and a grand total page will be available on the filing software. The grand total page is calculated as the sum of issuers 1-10 by asset type.
$\ddagger$ Refer to the instructions for the Asset Concentration Factor for details of this calculation.
Denotes items that must be manually entered on the filing software.

COMMON STOCK CONCENTRATION FACTOR

$\dagger$ The factor for each common stock holding should equal 15 percent adjusted in the case of publicly traded common stock by the beta of a particular holding subject to a minimum of 11.25 percent and a maximum of 22.5 percent. The rules for calculating the beta adjustment are set forth in the Asset Valuation Reserve (AVR) section of the annual statement instructions.

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

## MISCELLANEOUS ASSETS

## Miscellaneous

(1) Cash
(2.1) Cash Equivalents
(2.2) Less Cash Equivalent Bonds Already Included with Page LR002 Bonds
|(2.3) Less Exempt Money Market Funds
(2.4) Net Cash Equivalents
(3.1) Short-Term Investments
(3.2) Less Short-Term Bonds
(3.3) Net Short-Term Investments
(4) Premium Notes
(5) Receivable for Securities
(6.1) Aggregate Write-ins for Invested Assets
(6.2) Less Derivative Collateral Receivable
(6.3) Net Write-ins for Invested Assets
(7) Total Miscellaneous Excluding Derivative Instruments

## Derivative Instruments

(8) Collateral - Off Balance Sheet
(9) Collateral - On Balance Shee
(10) Exchange Traded and Centrally Cleared
(11) Over the Counter NAIC 1
(12) Over the Counter NAIC 2
(13) Over the Counter NAIC 3
(14) Over the Counter NAIC 4
(15) Over the Counter NAIC 5
(16) Over the Counter NAIC 6
(17) Total Derivative Instruments
(18) Total Miscellaneous Assets (pre-MODCO/Funds Withheld)
(19) Reduction in RBC for MODCO/Funds Withheld Reinsurance Ceded Agreements
(20) Increase in RBC for MODCO/Funds Withheld Reinsurance Assumed Agreements
(21) Total Miscellaneous Assets (including MODCO/Funds Withheld.)

Annual Statement Source
Page 2 Line 5, inside amount 1
Page 2 Line 5, inside amount 2
Schedule E Part 2 Column 7 Line 2509999999, in part
Sch E, Part 2, C7, L8209999999
Line (2.1) - Line (2.2) - Line (2.3)
Page 2 Line 5, inside amount 3
Schedule DA Part 1 Column 7 Line 2509999999
Lines (3.1) - (3.2)
Page 2 Line 6 first inside amount
Page 2 Column 3 Line 9
Page 2 Column 3 Line 11
Page 2 Column 3 Line 11, Derivatives Collateral Receivable reported as part of total Line (6.1) - Line (6.2)

Lines $(1)+(2.4)+(3.3)+(4)+(5)+(6.3)$

Schedule DB Part D Section 1 Column 4 Line 0999999999, in part Schedule DB Part D Section 1 Column 4 Line 0999999999, in part Asset Valuation Reserve Default Component Column 1 Line 33, in part Asset Valuation Reserve Default Component Column 1 Line 33, in par Asset Valuation Reserve Default Component Column 1 Line 33, in part Asset Valuation Reserve Default Component Column 1 Line 33, in part Asset Valuation Reserve Default Component Column 1 Line 33, in part Asset Valuation Reserve Default Component Column 1 Line 33, in part Asset Valuation Reserve Default Component Column 1 Line 33, in part


Company Records (enter a pre-tax amount)
Company Records (enter a pre-tax amount)
Lines (18) - (19) + (20)

| (1) |  | (2) |
| :---: | :---: | :---: |
| Book / Adjusted |  | RBC |
| Carrying Value | $\underline{\text { Factor }}$ |  |

X $0.0039=$ $\qquad$


X $0.0039=$ $\qquad$

X $0.0039=$
$\qquad$

$\qquad$

$\mathrm{X} 0.0039=$ $\qquad$
$\begin{array}{ll}X & 0.000 \\ X & = \\ X & 0.0039=\end{array}$ $\qquad$
$\qquad$

$\qquad$

$\mathrm{X} 0.0126=$ X $0.0446=$ X $0.0970=$ X $0.2231=$ X $0.300=$
$\qquad$
$\qquad$


Lines (18) - (19) +

[^5]REPLICATION (SYNTHETIC ASSET) TRANSACTIONS AND MANDATORY CONVERTIBLE SECURITIES


[^6]
## HEDGED ASSET BOND SCHEDULE



Note: For the intermediate category of hedging, we recommend that the risk mitigation and resulting RBC credit be determined as if each specific security common to both the index/basket hedge and the portfolio is a basic hedge with the entire basic hedge methodology applied to each matching name. This includes the application of the maturity mismatch formula and the maximum RBC credit of $94 \%$ of the $\mathrm{C}-1$ asset charge for fixed income hedges.
$\dagger$ Columns are derived from Investment schedules
$\ddagger$ The portion of Column (2) Notional Amount of the Hedging Instrument that hedges Column (7) Book / Adjusted Carrying Value. This amount cannot exceed Column (7) Book / Adjusted Carrying Value
§ Factor based on Column (10) NAIC Designation and NAIC C-1 RBC factors table.

* Column (7) Book Adjusted Carrying Value multiolied by Column (11) RBC Factor.
$£$ Column (13) is calculated according to the risk-based capital instructions
** Column (12) Gross RBC Charge minus Column (13) RBC Credit for Hedging Instruments.
Denotes manual entry items that do not come directly from the annual statement.

\begin{abstract}
(1)
(2)
(3)
(4)
(5)
(6)
(7)
(8)
(9)
(10)
(11)

Hedging Instruments
Hedged Asset - Common Stock $\qquad$ RBC Credit $\qquad$


Note: For the intermediate category of hedging, we recommend that the risk mitigation and resulting RBC credit be determined as if each specific security common to both the index/basket hedge and the portfolio is a basic hedge with the entire basic hedge methodology applied to each matching name.
This includes the application of the maximum RBC credit of $94 \%$ of the C-1 asset charge for common stock hedges.
$\dagger$ Columns are derived from Investment schedules.
$\$$ 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
§ Factor based on NAIC C-1 RBC factors table

* Column (6) Book Adjusted Carrying Value multiplied by Column (8) RBC Factor.
$£$ 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 Column (8) RBC Factor multiplied by $94 \%$ ** Column (9) Gross RBC Charge minus Column (10) RBC Credit for Hedging Instruments.

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

## Company Name

## REINSURANCE

## Reinsurance Ceded $\dagger$

(1) Recoverable on Paid Losses (Life)
(2) Recoverable on Paid Losses (A\&H)
(3) Recoverable on Unpaid Losses (Life)
(4) Recoverable on Unpaid Losses (A\&H)
(5) Unearned Premiums (A\&H)
(6) Other Reserve Credits (A\&H)
(7) Reserve Credit (Life)

Reinsurance Assumed Credit
(8) Affiliate Reserve Credit (Life)
(9) Affiliate Reinsurance Payable (Life)
(10) Reinsurance Assumed on Unearned Premiums (A\&H)
(11) Reinsurance Assumed Other Reserved Credits (A\&H)
(12) Reinsurance Assumed - Losses (A\&H)

Reinsurance Payable Credit
(13) Reinsurance in Unauthorized and Certified Companies
(14) Funds Held in Unauthorized and Certified Reinsurers
(15) Funds Held in Authorized Reinsurers and Funds Held in Reciprocal Jurisdiction Reinsurers and Trusteed Collateral Supporting Authorized Reinsurance
(16) Other Reinsurance Recoverable or Reserves "Reestablished" on Page 3
(17) Total Reinsurance

$\dagger$ Statement values should be net of policy loans if policy loans are part of the reinsurance transaction.
Denotes items that must be manually entered on the filing software.

## $\frac{\text { Noncontrolled Assets }}{\text { Loaned to Others - Co }}$ <br> Loaned to Others - Conforming Securities Lending Program

(2) Loaned to Others - Securtities Lending

Prograns - Other
Subject to Repurchase Agreements
(4) Subject to Reverse Repurchase Agreements
(6) Subject to Reverse Dollar Repurchase

Agreements
Placed Under O
Placed Under Option Agreements
(8) Letter Stock or Other Securities Restricted as to sale - excluding FHLB Capital Stock
(9) FHLB Capital Stock
(10) On Deposit with States
(11) On Deposit with Other Regulatory Bodies
(11.1) On Deposist with Other Regulatory Bodies
(12.1) Pledged as Collateral - excluding Collateral Pledged to an FHLB
(12.3) Pledged as Collateral -excluding Collateral Pledged to an FHLB Less Derivatives Collateral Pledged
(13) Pledged as Collateral to FHLB - including Assets Backing Funding Agreements
(14) Other
(15) Total Noncontrolled Assets

Derivative Instruments
16) Exchange Traded and Centrally Cleared
(18) Off-Balance Sheet Exposure NAIC 1
(19) Off-Balance Sheet Exposure NAIC 3
20) Off-Balance Sheet Exposure NAIC 4
(21) Off-Balance Sheet Exposure NAIC 5
(22) Off-Balance Sheet Exposure NAIC 6
(23) Total Derivative Instruments Off-Balance
Sheet Exposure

Sheet Exposure
(24) Guarantes for Affiliates
(25) Contingent Liabilitie
(26) Long Term Leases
(27) Total Off-Balance Sheet Items
(pre-MOCCO Fund Withheld)
(28) Reduction in RBC for MODCO Funds Withheld
Reinsurance Ceded Agreements
29) Increase in RBC for MODCO/Funds Withheld

Reinsurance Assumed Agreemen
(50)
Total Off-Balance Shee Items
(including MODCOF Funds Witheld.)
Other Items
Federal i Federal income tax return for the reporting
insurer a regulated insurance company
(32) SSAP No. 101 Paragraph 11 D Deferred Tax Asset
(33) SSAP No. 101 Paragraph 11 b Deferred Tax Assel
(34) Total Off-Balance Sheet and Other Items


available to be recalled by the insurer). For Column (2) also include an amount equal to the lessor of Statement Value of FHLB liabilities subject to C3P1 Cash Flow Testing or $5 \%$ of total net admitted assets.

- If Line (31) Column (6) is "Yes", then the factor is 0.005 . If Line (31) Column ( ( ) is "No", then the factor is 0.010 . If Line ( 31 ) Column ( 6 ) is " $N / A^{\prime}$ ", then the factor is 0.000 .
 factor for a Baa corporate bond assee factor
above the limit Denotes items that must be manually entered on the filing software.


## OFF-BALANCE SHEET COLLATERAL

(Including any Schedule DL, Part 1 Assets not Included in the Asset Valuation Reserve)
(1) Fixed Income - Bonds
(2.1) NAIC Designation Category 1.A
(2.2) NAIC Designation Category 1.B
(2.3) NAIC Designation Category 1.C (2.4) NAIC Designation Category 1.D (2.5) NAIC Designation Category 1.E (2.6) NAIC Designation Category 1.F (2.7) NAIC Designation Category 1.G
(2.8) Subtotal NAIC 1
(3.1) NAIC Designation Category 2.A (3.2) NAIC Designation Category 2.B
(3.3) NAIC Designation Category 2.C (3.4) Subtotal NAIC 2
(4.1) NAIC Designation Category 3.A
(4.1) NAIC Designation Category 3.A
(4.2) NAIC Designation Category 3.B
(4.2) NAIC Designation Category 3.B
(4.3) NAIC Designation Category 3.C
(4.3) NAIC Designation Category 3.C
(4.4)
Subtotal NAIC 3
(4.4) Subtotal NAIC 3
(5.1) NAIC Designation Category 4.A (5.2) NAIC Designation Category 4.B (5.3) NAIC Designation Category 4.C
(5.4) Subtotal NAIC 4
(6.1) NAIC Designation Category 5.A (6.2) NAIC Designation Category 5.B (6.3) NAIC Designation Category 5.C (6.4) Subtotal NAIC 5
(6.4) Subtotal
(7) NAIC 6
(8) Total Bonds

Fixed Income - Preferred Stock
(9) Asset NAIC 1
(10) Asset NAIC 2
(11) Asset NAIC 3
(12) Asset NAIC 4
(13) Asset NAIC 5
(14) Asset NAIC 6
(15) Total Preferred Stock
(16) Common Stock
(17) Schedule BA - Other Invested Assets
(18) Other Invested Assets
(19) Total Off-Balance Sheet Collateral

## Annual Statement Source

Company Records
Company Records
Company Records
Company Records
Company Records
Company Records
Company Records Company Records Sum of Lines (2.1) through (2.7)
Company Records
Company Records
Company Records
Company Records
Sum of Lines (3.1) through (3.3)
Company Records
Company Records
Company Records
Sum of Lines (4.1) through (4.3)
Company Records
Company Records
Company Records
Sum of Lines (5.1) through (5.3)
Company Records
Company Records
Company Records Company Records Sum of Lines (6.1) t
Company Records Sum of Lines $(1)+(2.8)+(3.4)+(4.4)+(5.4)+(6.4)+(7)$


Company Records
Company Records
Company Records
Company Records
Sum of Lines (9) through (14)
Company Records
Company Records
Company Records
Lines (8) + (15) + (16) + (17) + (18)

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

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

|  | (1) |  | (2) |
| :--- | :---: | :---: | :---: |
| Annual Statement Source | Statement |  | RBC <br>  |
| Value | Factor | $\underline{\text { Requiremen }}$ |  |

Requirement

Medical Insurance Premiums - Individual Morbidity
(1) Usual and Customary Major Medical and Hospital
(2) Medicare Supplement
(3) Dental and Vision
(4) Stand-Alone Medicare Part D Coverage
(5) Supplemental benefits within Stand-Alone Part D Coverage (Claims Incurred)
(6) Medicaid Pass-Through Payments Reported as Premium
(6) Medicaid Pass-Through Payments Reported
(7) Hospital Indemnity and Specified Disease
(7) Hospital Indemnity and Specified Disease
(8) AD\&D (Maximum Retained Risk Per Life
(9) Other Accident

Medical Insurance Premiums - Group and Credit Morbidity
(10) Usual and Customary Major Medical, Hospital
(11) Dental and Vision
(12) Stop Loss and Minimum Premium
(13) Medicare Supplement
(14) Stand-Alone Medicare Part D Coverage (see instructions for limits)
(15) Supplemental benefits within Stand-Alone Part D Coverage (Claims Incurred)
(16) Medicaid Pass-Through Payments Reported as Premium
(17) Hospital Indemnity and Specified Disease
(18) $\mathrm{AD} \mathrm{\& D}$ (Maximum Retained Risk Per Life)
(19) Other Accident
(20) Federal Employee Health Benefit Plan Disability Income Premium
(21) Noncancellable Disability Income - Individual Morbidity
(22) Other Disability Income - Individual Morbidity
(23) Disability Income - Credit Monthly Balance Plans
(24) Disability Income - Group Long-Term
(25) Disability Income-Credit Single Premium with Additional Reserves
(26) Disability Income-Credit Single Premium without Additional Reserves
(27) Disability Income - Group Short-Term Long-Term Care
(28) Noncancellable Long-Term Care Premium - Rate Risk**
29) Other Long-Term Care Premium $\#$ Health Premium With Limited Underwriting Risk
(30) ASC Business Reported as Revenue Premium Other Health
(31) Workers Compensation Carve-Out
(32) Other Health
(32) Other Health
33) Total Earned Premiums
(Column (1) should equal Schedule H Part 1 Column
(34) Additional Reserves for Credit Disability Plans
(35) Additional Reserves for Credit Disability Plans, prior year

Annual Statement Source
Earned Premium (Schedule H Part 1 Line 2 in part) Earned Premium (Schedule H Part 1 Line 2 in part) Earned Premium (Schedule H Part 1 Line 2 in part) Earned Premium (Schedule H Part 1 Line 2 in part) Company Records
Company Records
Earned Premium (Schedule H Part 1 Line 2 in part) Earned Premium (Schedule H Part 1 Line 2 in part) Earned Premium (Schedule H Part 1 Line 2 in part

Earned Premium (Schedule H Part 1 Line 2 in part) Earned Premium (Schedule H Part 1 Line 2 in part) Earned Premium (Schedule H Part 1 Line 2 in part) Earned Premium (Schedule H Part 1 Line 2 in part) Earned Premium (Schedule H Part 1 Line 2 in part) Company Records
Company Records
Earned Premium (Schedule H Part 1 Line 2 in part)
Earned Premium (Schedule H Part Lines in part) Earned Premium (Schedule H Part 1 Line 2 in part) Earned Premium (Schedule H Part1 Line 2 in part) Earned Premium (Schedule H Part 1 Line 2 in part) Earned Premiun (Schedưfe H Part 1 Line 2 in part) Earned Premium (Schedule H Part 1 Line 2 in part) Earned Premium (Schedule H Part 1 Line 2 in part) Earned Premium (Schedule H Part 1 Line 2 in part) Earned Premium (Schedule H Part 1 Line 2 in part) Earned Premium (Schedule H Part 1 Line 2 in part)

Earned Premium (Schedule H Part 1 Line 2 in part) Earned Premium (Schedule H Part 1 Line 2 in part)

Earned Premium (Schedule H Part 1 Line 2 in part)
Earned Premium (Schedule H Part 1 Line 2 in part) Earned Premium (Schedule H Part 1 Line 2 in part) Sum of Lines (1) through (32)

Exhibit 6, Column 10, Line 2
Exhibit 6, Column 3, Line 2, prior yea


$$
\begin{aligned}
& \text { XXX } \\
& \text { XXX }
\end{aligned}
$$

$\qquad$
XXX
$\dagger$ The premium amounts in these lines are transferred to LR020 Underwriting Risk - Experience Fluctuation Risk Lines (1.1) and (1.2) for the calculation of risk-based capital. The premium amount are included here to assist in the balancing of total health premium. If managed care arrangements have been entered into, the company may also complete LR022 Underwriting Risk - Managed Care Credit. In which case, the company will also need to complete LR028 Health Credit Risk in the (C-3) portion of the formula. If there are amounts in any of lines (1), (2), (3), (10), (11) or (13) on page LR019 Health Premiums, the company will also be directed to complete the Health Administrative Expense portion of LR029 Business Risk in the (C-4) portion of the formula

- The two tiered calculation is illustrated in the risk-based capital instructions for LR019 Health Premiums.
. The balance of the RBC requirement for Long Term Care - Morbidity Risk is calculated on page LR023. The premium is shown to allow totals to check to Schedule H
* If there is premium included on either or both of these lines, the RBC requirement in Column (2) will include 3.5 percent of such premium and $\$ 50,000$ (included in the line with the larger premium).
** The factor applies to all Noncancellable premium.
§ These amounts are used to adjust the premium base for single premium credit disability plans that carry additional tabular reserves.
$¥$ A factor of .350 will be applied to the first $\$ 25,000,000$ in Column (1), Line (12) and a factor of .250 will be applied to the remaining premium in excess of $\$ 25,000,000$.
Denotes items that must be manually entered on the filing software.

UNDERWRITING RISK

| Experience Fluctuation Risk |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Line of Business | (1) <br> Comprehensive <br> Medical | (2) <br> Medicare Supplement | (3) <br> Dental \& Vision | (4) <br> Stand-Alone Medicare Part D Coverage | (5) <br> Total |
| (1.1) | Premium - Individual |  |  |  |  |  |
| (1.2) | Premium - Group |  |  |  |  |  |
| (1.3) | Premium - Total = Line (1.1) + Line (1.2) |  |  |  |  |  |
| (2) | Title XVIII-Medicare $\dagger$ |  | XXX |  |  |  |
| (3) | Title XIX-Medicaid $\dagger$ |  | XXX |  |  |  |
| (4) | Other Health Risk Revenue $\dagger$ |  | XXX |  |  |  |
| (5) | Underwriting Risk Revenue $=$ Lines (1.3) + (2) + (3) + (4) |  |  | - |  |  |
| (6) | Net Incurred Claims |  |  |  |  |  |
| (7) | Fee-for-Service Offset $\dagger$ |  | XXX |  |  |  |
| (8) | Underwriting Risk Incurred Claims = Line (6) - Line (7) |  | - |  |  |  |
| (9) | Underwriting Risk Claims Ratio = Line (8) / Line (5) |  |  |  |  | XXX |
| (10.1) | Underwriting Risk Factor for Initial Amounts Of Premium $\ddagger$ | 0.1493 | 0.1043 | 0.1195 | 0.251 | XXX |
| (10.2) | Underwriting Risk Factor for Excess of Initial Amount $\dagger$ | 0.0893 | 0.0663 | 0.0755 | 0.151 | XXX |
| (10.3) | Composite Underwriting Risk Factor | $\square$ |  |  |  | XXX |
| (11) | Base Underwriting Risk RBC = Line (5) x Line (9) x Line (10.3) | - |  |  |  |  |
| (12) | Managed Care Discount Factor = LR022 Line (17) |  |  |  |  | XXX |
| (13) | Base RBC After Managed Care Discount = Line (11) x Line (12) |  |  |  |  |  |
| (14) | RBC Adjustment For Individual = [\{Line(1.1) x $1.2+\operatorname{Line}(1.2)\} / \operatorname{Line}(1.3)] \times \operatorname{Line}(13) \S$ | , |  |  |  |  |
| (15) | Maximum Per-Individual Risk After Reinsurance $\dagger$ |  |  |  |  | XXX |
| (16) | Alternate Risk Charge* |  |  |  |  |  |
| (17) | Net Alternate Risk Charge£ |  |  |  |  |  |
| (18) | Net Underwriting Risk RBC (Maximum of Line (14) or Line (17) ) |  |  |  |  |  |

$\dagger$ Source is company records unless already included in premiums.
\# For Comprehensive Medical, the Initial Premium Amount is $\$ 25,000,000$ or the amount in Line (1.3) if smaller. For Medicare Supplement and Dental \& Vision, the Initial Premium Amount is $\$ 3,000,000$ or the amount in Line (1.3) if smaller. For Stand-Alone Medicare Part D, the Initial Premium Amount is $\$ 25,000,000$ or the amount in Line (1.3) if smaller.
§ Formula applies only to Column (1), for all other columns Line (14) should equal Line (13).

* The Line (16) Alternate Risk Charge is calculated as follows:

| LESSER OF: | $\begin{gathered} \hline \$ 1,500,000 \\ \text { or } \\ 2 \times \text { Maximum } \\ \text { Individual Risk } \end{gathered}$ | \$50,000 <br> or <br> 2 x Maximum <br> Individual Risk | $\$ 50,000$ <br> or 2 x Maximum Individual Risk | $\$ 150,000$ <br> or <br> 6 x Maximum <br> Individual Risk | Maximum of Columns (1), (2), (3) and (4) |
| :---: | :---: | :---: | :---: | :---: | :---: |

£ Applicable only if Line (16) for a column equals Line (16) for Column (5), otherwise zero.Denotes items that must be manually entered on the filing software.

## UNDERWRITING RISK - OTHER



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

(17) Weighted Average Managed Care Risk Adjustment Factor

Calculation of Category 2 Managed Care Factor (Comprehensive Medical and Dental only)
(1) Category 0 - Arrangements not Included in Other Categories
(2) Category 1 - Payments Made According to Contractual Arrangements
(3) Category 2a - Subject to Withholds or Bonuses/Incentives - Otherwise Category 0
(4) Category 2b - Subject to Withholds or Bonuses/Incentives - Otherwise Category 1
(5) Category 3a-Capitated Payments Directly to Providers
(6) Category 3b-Capitated Payments to Regulated Intermediaries
(7) Category 3c-Capitated Payments to Non-Regulated Intermediaries
(8) Category 4 - Medical \& Hospital Expense Paid as Salary to Providers
(9) Subtotal Paid Claims

Stand-Alone Medicare Part D Coverage Claim Payments
(10) Category 0 - No Federal Reinsurance or Risk Corridor Protection
(11) Category 1 - Federal Reinsurance but no Risk Corridor Protection
(12) Category 2a-No Federal Reinsurance but Risk Corridor Protection
(13) Category 3a - Federal Reinsurance and Risk Corridor Protection apply
(14) Subtotal Stand-Alone Medicare Part D Paid Claims
(15) Total Paid Claims
(16) Weighted Average Managed Care Discount

Withhold \& bonus/incentive payments, prior year
(18) Withhold \& bonus/incentive payments, prior year
(19) Withhold \& bonuses/incentives available, prior year
(19) Withhold \& bonuses/incentives available, prior year
(20) Managed Care Credit Multiplier - average withhold returned
(21) Withholds \& bonuses/incentives available, prior year
(22) Claims payments subject to withhold, prior year
(23) Average withhold rate, prior year
(24) Managed Care Credit Discount Factor, Category 2

Company Records
Company Records
Company Records
Company Records
Line (18) / Line (19)
Line (19)
Company Records
Line (21) / Line (22)
Minimum of 0.25 or
$\dagger$ Category 2 Managed Care Factor calculated on Line (24).
$\ddagger$ Category 2 Managed Care Factor calculated on Line (24) with a minimum factor of 15 percent

* This column is for a single result for the Comprehensive Medical \& Hospital, Medicare Supplement and Dental managed care discount factor
** This column is for the Stand-Alone Medicare Part D managed care discount factorDenotes items that must be manually entered on the filing software.
Line (20) x Line (23)

$\qquad$


## LONG-TERM CARE

Long-Term Care (LTC) Insurance Premium
(1) All LTC Premium - Morbidity Risk (to $\$ 50$ million)
(2) LTC Premium (over $\$ 50$ million) - Morbidity Risk
(3) Premium-based RBC

## Annual Statement Source

Line (4.1) Column (1) up to 50 million
Remainder of Line (4.1) Column (1) over 50 million
Column (2), Line (1) + Line (2)
(1)

| (1) <br> Amount | Factor | (2) <br> RBC Requirement |
| :---: | :---: | :---: |
|  | 0.1267 |  |
|  | 0.0378 |  |
|  |  |  |

(3)
(4)

Annual Statement Source
(4.1) Current Year
(4.2) Immediate Prior Year
(4.3) Average Loss Ratio
(5) Adjusted LTC Claims for RBC
(5.1) Claims (to $\$ 35$ million) - Morbidity Risk
(5.2) Claims (over $\$ 35$ million) - Morbidity Risk
(6) Claims-based RBC
(7) LTC Morbidity Risk

$$
\qquad \text { Annual Statement Source }
$$

Line (4.1) Column (1) up to 50 million
Remainder of Line (4.1) Column (1) over 50 million
Column (2), Line (1) + Line (2)
(1)
(2)

Col. (2)/(1) §
Loss Ratio
RBC Requirement

Company Records
Company Records
If loss ratios are used, [Column (3) Line (4.1)

+ Line (4.2)]/2, otherwise zero
If Column (3) Line (4.3) $<>0$, then [Column (1) Line (1)
+ Line (2)] X Column (3) Line (4.3), else Column (2)
Line (4.1)
Lower of Column (2) Line (5) and $\$ 35$ million
Excess of Column (2) Line (5) over \$35 million
Line (5.1) $+(5.2)$
Column (2) Line (3) + Column (4) Line (6)

$0.3168 \dagger$
$0.1012 \ddagger$ $\qquad$
$\dagger \quad$ If Column (1), Line (4.1) is positive, then a factor of 0.3168 is used. Otherwise, a higher factor of 0.4682 is used.
$\ddagger \quad$ If Column (1), Line (4.1) is positive, then a factor of 0.1012 is used. Otherwise, a higher factor of 0.1522 is used.
$\S \quad$ If Column (1), Line (4.1) or (4.2) are less than or equal to zero or if Column (2), Line (4.1) or (4.2) are less than zero, the loss ratios are not used and Column (3), Line (4.3) is set to zero.
Denotes items that must be manually entered on the filing software.

Individual \& Industrial Life Net Amount at Ris
(1) Ordinary Life In Force
(2) Plus Industrial Life In Force
(4) Less Ordinary Life Reserve
(5) Less Plus Industrial Life Reserves
(6) Less Plus Ordinary Life Separate Accounts
(8) Pus Less Ordinaty \& Instrial Life Modified Coinsurance Assumed Reserves
(9) Total Individual \& Industrial Life Reserves
(10) Total Individual and \& Industrial Life Net Amount at Risk
(11) Life Policies with Pricing Flexibility In Forc
(12) Less Life Policies with Pricing Flexibility in Force Reserve
(12) Less Life Poicies with Pricing Flexibility in Force Reserves
(13) Total Life Policies with Pricing Flexibility Net Amount at Risk
(14) Term Life Policies without Pricing Flexibility In Force
(15) Less Term Life Policies without Pricing Flexibility Reserves
(16) Total Term Life Policies without Pricing Flexibility Net Amount at Risl
(17) Permanent Life Policies without Pricing Flexibility In Forc
(18) Less Permanent Life Policies without Pricing Flexibility Reserves
(19) Total Permanent Life Policies without Pricing Flexibility Net Amount at Risk
(20) Total Individual \& Industrial Life

Group and \& Credit Life Net Amount at Risk
(21) Group Life In Force
(22) Plus Credit Life In Force
(23) Less Group FEGLI In Forc
(24) Less Group SGLI In Force
(25) Less Credit FEGL In Force
(26) Less Credit SGLI In Force
(27) Total Group \& Credit Life In Force Excluding FEGLI/SGL
(28) Less Group Life Reserves
(29) Less Plus Credit Life Reserves
(30) Less. Plus Group Life Separate Accounts
(31) Less Plus Group \& Credit Life Modified Coinsurance Assumed Reserve
(32) Plus-Less Group \& Credit Life Mo
(33) Total Group and \& Credit Life Ne
(34) Oi Group and Credir Life Net Amount at Risk Excluding FEGLI/S
(35) Group \& Credit Life In Force with Remaining Rate Terms 36 Mônths and Under
(36) Less Group \& Credit Life Reserves with Remaining Rate Terms 36 .
(36) Less Group \& Credit Life Reserves with Remaining Rate Terms 36 Months and Under
(37) Group \& Credit Life Net
(37) Group \& Credit Life Net Amount at Risk with Remaining Rate Terms 36 Months and Under
(38) Group \& Credit Life In Force with Remaining Rate Terms Over 36 Months
(39) Less Group \& Credit Life Reserves with Remaining Rate Terms Over 36 Months
(40) Group \& Credit Life Net Amount at Risk with Remaining Rate Terms Over 36 Months
(41) FEGLI/SGLI Life In Force
(42) Total Group \& Credit Life
(43) Total Life

Annual Statement Source
Exhibit of Life Insurance Column 4 Line $23 \times 1000$ Exhibit of Life Insurance Column 2 Line $23 \times 1000$ Lines (1) + (2)

Exhibit 5 Column 4 Line 0199ge Exhibit 5 Column 3 Line 019999 Separate Accounts Exhibit 3 Column 3 Line 019999 Schedule S Part3 Section 1 Column 12, in part Lines (4) $+(5)+(6)+(7)-(8)$ Lines (1) $+(3)+(7)-(2)-(4)-(5)-(6)(3)-(9)$

Company Records *
Company Records

Company Records *
Company Records *
Lines (14) - (15)
Lines (3) - (11) - (14)
Lines (9) - (12) - (1)
Lines (17) - (18)
Lines (13) + (16) + (19)


Exhibit of Life Insurancee Column 6 Line $23 \times 100$
Exhibit ofLife Insurance Column 4 Line $44 \times 1000$
Exhibit of Life frsurance Column 2 Line $43 \times 1000$
Lines (21) + (22) - (23) - (24) - (25) - (26)
Exhbit 5 Column 6 Line 0199999
Exhibit 5 Column 5 Line 0199999
Separate Accounts Exhibit 3 Column 4 Line 0199999
Schedule S Part 1 Section 1 Column 12 , in part
Lines (28) + (29) + (30) + (31) - (32)
Lines $(9)+(13)+(19)-(10)-(11)-(12)-(14)-(15)(27)-(33)$
Company Records *
Company Records
(27)-(35)

Lines ( 27 ) ( $(35$ )
Lines
$(33)-(30)$
Lines (38) - (39)
Exhibit of Life Insurance Sum of Column 2 and 4 Line 43 and $44 \times 100$
Lines $(37)+(40)+(41)$
Lines (8) $+(20)+(21)(20)+(42)$


* The definitions are specified in the Life Insurance section of the risk-based capital instructions

The tiered calculation is illustrated in the Life Insurance section of the risk-based capital instructions
Include only the portion which relates to policy reserves that, if written on a direct basis, would be included on Exhibit 5 .
Denotes items that must be manually entered on the filing software.

## LONGEVITY RISK

Life Contingent Annuity Reserves
(1) General Account Life Contingent Annuity Reserves
(2) General Account Life Contingent Supplemental Contract Reserves
(3) General Account Life Contingent Miscellaneous Reserves
(4) Separate Account (SA) Life Contingent Annuity Reserves
(5) Total Life Contingent Annuity Reserves

| Annual Statement Source | (1) Statement Value | Factor | (2) <br> RBC <br> Requirement |
| :---: | :---: | :---: | :---: |
| Exhibit 5 Column 2 Line 0299999, in part: |  |  |  |
| Exhibit 5 Column 2 Line 0399999, in part* |  |  |  |
| Exhibit 5 Column 2 Line 0799999, in part |  |  |  |
| S/A Exhibit 3 Column 2 Line 0299999, in part ${ }^{\text {a }}$ |  |  |  |
| Lines (1) + (2) + (3) + (4) |  | $\dagger$ |  |

Exhibit 5 Column 2 Line 0299999, in part? Exhibit 5 Column 2 Line 0399999, in part Exhibit 5 Column 2 Line 0799999, in part $\ddagger$ S/A Exhibit 3 Column 2 Line 0299999, in part Lines (1) $+(2)+(3)+(4)$
(1)


The tiered calculation is illustrated in the Longevity Risk section of the risk-based capital instructions.
$\ddagger$ Include only the portion of reserves for products in scope per the instructions
Denotes items that must be manually entered on the filing software

## PREMIUM STABILIZATION RESERVES

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

## INTEREST RATE RISK AND MARKET RISK

(1.1) Did the Company Submit an Unqualified Actuarial Opinion Based on Asset Adequacy Testing or One Qualified Due Solely to the Direction Provided in Actuarial Guideline XLVIII?
(1.2) C-3 RBC Cash Flow Testing on Certain Products? (See the instructions for specific details)
(1.3) If Line (1.2) is "Yes", is the Appointed Actuary C-3 Assumption Statement Attached?
1.4) If applicable, have the appropriate certifications been attached?

## RESERVES THAT WERE CASH FLOW TESTED FOR ASSET ADEQUACY

 (See Appendix 1 of the instructions for more details.)
## Low Risk Category

(2) Annuity Reserve with Fair Value Adjustment (excluding unitized separate accounts)*
(3) Annuity Reserve not Withdrawable (excluding structured settlements)*
(4) Guaranteed Investment Contract (GIC) Reserve within 1 Year of Maturity£
5.1) Single Premium Life Insurance Reserves Net of Reinsuranc
(5.2) Less Single Premium Life Insurance Reserves Policy Loans
5.3) Plus Modified Coinsurance Assumed Single Premium Life Reserves net of Modified Coinsurance Assumed Policy Loans
5.4) Less Modified Coinsurance Ceded Single Premium Life Reserves net of Modified Coinsurance Ceded Policy Loans
5.5) Single Premium Life Insurance Reserves
(6) Total Low Risk

Medium Risk Category
(7) Annuity Reserve at Book Value Less Surrender Charge of 5 Percent or More*
(8) Exhibit 7 Reserve not Included Elsewhere §
(9) Structured Settlements
["Yes" or "No" in Column (1)]
"Yes" or "No" in Column (1)]
["Yes" or "No" in Column (1)]
["Yes" or "No" or "N/A" in Column (1)]

(10) Additional Actuarial Reserves for Annuities and Single Premium Life - Asset/Liability Analysis
(11) Total Medium Risk

## Annual Statement Source

Notes to Financial Statements Item 32 Line A1,
in part $\ddagger$
Notes to Financial Statements Item 32 Line B,
in part $\ddagger$
Notes to Financial Statements Item 32 Various Lines, in part
Exhibit 5 Column 2 Line 0199999, in part
Page 2 Line 6, in part
Schedule S Part 1 Section 1 Column 12,
in part
Schedule S Part 3 Section) Column 14
in part:
ine (5.1) $-(5.2)+(5.3)-(5.4)$
ines $(2)+(3)+(4)+(5.5)$
Lines $(2)+(3)+(4)+(5.5)$
Notes to Financial Statements Item 32 Line A2,
in part $\ddagger$
Exhibit 7 Line 14 amounts not included
elsewhere in Interest Rate Risk (C-3)
Notes to Financial Statements Item 32 Line B,
Exhibit 5 Column 2 Line 0799997, in part
um of Lines (7) through (10)
$\dagger$ The factors are decreased by one-third if the company submits an unqualified actuarial opinion based on asset adequacy testing or one qualified due solely to the direction provided in Actuarial Guideline XLVIII. The RBC software automatically recalculates the factor, depending on the answer to Line (1.1).
$\ddagger$ Net of reinsurance, less policy loans, plus modified coinsurance assumed reserves, less modified coinsurance ceded reserves.
§ Excluding any non-policyholder reserves (e.g., reserves that are not related to specific policies).

* Excluding GICs within 1 year of maturity.
£ Includes GICs within 1 year of maturity subtracted elsewhere.Denotes items that must be manually entered on the filing software.


## INTEREST RATE RISK AND MARKET RISK (CONTINUED)

## High Risk Category

(12) Annuity Reserve at Book Value Without Adjustment (minimal or no charge or adjustment)*
13) Debt with GIC-like Characteristics (see Appendix $1 \& 1 \mathrm{~b}$ instructions)
14) Total High Risk Synthetic GIC's
15) Synthetic GIC's C-3 Requirement

Callable/Pre-Payable Assets
(16) Callable/Pre-Payable Assets Assigned to Products Categorized Above
(17) Subtotal of Factor Based RBC For Products Categorized Above

LL OTHER RESERVES (exclude statement amounts included in Lines (2) to (17) above) Low Risk Category
18) Annuity Reserve with Fair Value Adjustment (excluding unitized separate accounts and eligible experience rated pension and separate accounts with guarantees)*
19) Annuity Reserve not Withdrawable (excluding structured settlements and eligible experience rated pension and separate accounts with guarantees)*
(20) Guaranteed Investment Contract (GIC) Reserve within 1 Year of Maturityf
(21.1) Life Insurance Reserves Net of Reinsuranc
(21.2) Less Life Insurance Reserves Policy Loans
(21.3) Plus Modified Coinsurance Assumed Reserves net of Modified Coinsurance Assumed Policy Loans
(21.4) Less Modified Coinsurance Ceded Reserves net of Modified Coinsurance Ceded Policy Loans
(21.5) Life Insurance Reserves
(22) Total Low Risk

## Annual Statement Source

(2) Statemen
Value
$\qquad$
Factor

$$
\begin{gathered}
\text { (3) } \\
\text { RBC }
\end{gathered}
$$

Requirement
Notes to Financial Statements Item 32 Line A5
in part!
Company records (enter a pre-tax amount)
Line (12) + (13)
Company records (enter a pre-tax amount)
Company records (enter a pre-tax amount)
Lines $(6)+(11)+(14)+(15)$

$\dagger$ The factors are decreased by one-third if the company submits an unqualified actuarial opinion based on asset adequacy testing or one qualified due solely to the direction provided in Actuarial Guideline XLVII. The RBC software automatically recalculates the factor, depending on the answer to Line (1.1).

- Net of reinsurance, less policy loans, plus modified coinsurance assumed reserves, less modified coinsurance ceded reserves.
§ Excluding any non-policyholder reserves (e.g., reserves that are not related to specific policies).
Excluding GICs within 1 year of maturity
£ Includes GICs within 1 year of maturity subtracted elsewhere.
Denotes items that must be manually entered on the filing software.


## INTEREST RATE RISK AND MARKET RISK (CONTINUED)

## Medium Risk Category

(23) Annuity Reserve at Book Value Less Surrender Charge of 5 Percent or More*
(24) Exhibit 7 Reserve not Included Elsewhere §
(25) Structured Settlements
(26) Additional Actuarial Reserves - Asset/Liability Analysis
(27) Total Medium Risk

High Risk Category
(28) Annuity Reserve at Book Value Without Adjustment (minimal or no charge or adjustment)*
(29) Total High Risk Synthetic GIC's
(30) Synthetic GIC's C-3 Requirement

## Callable/Pre-Payable Assets

(31) Callable/Pre-Payable Assets Not Allocated to Line (16). Include Callable/Pre-Payable Assets Allocated to Surplus

## Annual Statement Source

Notes to Financial Statements Item 32 Line A2, in part
Exhibit 7 Line 14 amounts not included
elsewhere in Interest Rate Risk (C-3)
Notes to Financial Statements Item 32 Line B,
in part*
xhibit 5 Column 2 Line 0799997, in part
Sum of Lines (23) through (26)
Notes to Financial Statements Item 32 Line A5, in part $\ddagger$
Line (28)
Company records (enter a pre-tax amount)

## (3)

 Statement$\qquad$ Factor
Requirement

X 0.0190 or $0.0127 \dagger=$ $\qquad$
X 0.0190 or $0.0127 \dagger=$ $\qquad$
X 0.0190 or $0.0127 \dagger=$ $\qquad$X 0.0190 or $0.0127 \dagger=$ $\qquad$ X 0.0380 or $0.0253 \dagger=$ $\qquad$
RBC $\times 1.000$ (less "haircut")

If Line $(33)=0$, then Line (34) $=$ Line (32).
Otherwise, Line ( 34 ) $=$ Line (32) $+(33)-(16)-(17)$,
a dine (32)
(35) Interest Rate Risk Component (See the instructions for specific detail.)
(36) Total Interest Rate Risk

Company Records (enter the pre-tax amount)
(37) Total Market Risk
nes $(34)+(35)$
Company Records (enter a pre-tax amount)
$\dagger$ The factors are decreased by one-third if the company submits an unqualified actuarial opinion based on asset adequacy testing or one qualified due solely to the direction provided in Actuarial Guideline XLVIII. The RBC software automatically recalculates the factor, depending on the answer to Line (1.1).
$\dagger$ Net of reinsurance, less policy loans, plus modified coinsurance assumed reserves, less modified coinsurance ceded reserves.
$\begin{array}{ll}\ddagger & \text { Net of reinsurance, less policy loans, plus modified coinsurance assumed reserves, less modified } \\ \S & \text { Excluding any non-policyholder reserves (e.g., reserves that are not related to specific policies). }\end{array}$

* Excluding GICs within 1 year of maturity.
$£$ Includes GICs within 1 year of maturity subtracted elsewhere.
Denotes items that must be manually entered on the filing software.

INTEREST RATE RISK AND MARKET RISK (Alternative)
C-3 RBC Cash Flow Testing Alternative Calculations
(For Informational Purposes Only)
Source
LR027 Interest Rate Risk and Market Risk Column (3) Line (33)

The Line (1) Equivalent Calculated Using Version 7.1.201406 of the American Academy of Actuaries Scenario Generator $\dagger \dagger$ §§

The Line (1) Equivalent Calculated Using a Proprietary Generator $\ddagger$

RBC Requirement
$\qquad$
$\qquad$
(3) C-3 RBC Cash Flow Testing Interest Rate Risk


## HEALTH CREDIT RISK

| Annual Statement Source | (1) <br> Amount$\quad \underline{\text { Factor }}$ | (2) |
| :--- | :--- | :--- |
|  | $\underline{\text { RBC Requirement }}$ |  |

LR022 Underwriting Risk Managed Care Credit Column (2) Line (5) Company Records $\dagger$
Line (1) - Line (2)
LR022 Column (2) Lines (6) + (7)
Company Records $\dagger$
Line(4) - Line (5)
(5) Less Secured Capitations to Intermediaries
(7) Capitation Credit Risk RBC

Line (3) + Line (6)

Amount


X $0.020=$ $\qquad$
$\qquad$
$\qquad$
$\qquad$
$\dagger$ Amounts entered on capitations worksheets.Denotes items that must be manually entered on the filing software.

Life Insurance Premiums
(1) Total Life Premiums
(2) Less American Samoa Life Premiums
(3) Less Guam Life Premium
(4) Less Puerto Rico Life Premiums
(5) Less U.S. Virgin Islands Life Premiums
(6) Less Northern Mariana Islands Life Premiums
(7) Less Canada Life Premiums
(8) Less Other Alien Life Premiums
(9) Subtotal Net Life Premiums
(10) Plus Foreign Variable and Other Life Premiums
(11) Less Total Variable and Other Life Premiums
(12) Net Life Premiums

## Annuity Consideration

(13) Total Annuity Considerations
(14) Less American Samoa Annuity Considerations
(15) Less Guam Annuity Considerations
(16) Less Puerto Rico Annuity Considerations
(17) Less U.S. Virgin Islands Annuity Considerations
(18) Less Northern Mariana Islands Annuity Considerations
(19) Less Canada Annuity Considerations
(20) Less Other Alien Annuity Considerations
(21) Subtotal Net Annuity Considerations
(22) Plus Foreign Variable and Other Annuity Considerations
(23) Less Total Variable and Other Annuity Considerations
(24) Net Annuity Considerations

## Accident and Health Premiums

(25) Total Accident and Health Premiums
(26) Less American Samoa Accident and Health Premiums
(27) Less Guam Accident and Health Premiums
(28) Less Puerto Rico Accident and Health Premium
(29) Less U.S. Virgin Islands Accident and Health Premiums
(30) Less Northern Mariana Islands Accident and Health Premiums
(31) Less Canada Accident and Health Premiums
(32) Less Other Alien Accident and Health Premiums
(33) Subtotal Net Accident and Health Premiums
(34) Plus Foreign Variable and Other A\&H Premiums
(35) Less Total Variable and Other A\&H Premiums
(36) Net Accident and Health Premiums
(1)

## Annual Statement Source

Schedule T Column 2 Line 59
Schedule T Column 2 Line 52 Schedule T Column 2 Line 53
Schedule T Column 2 Line 54
Schedule T Column 2 Line 55
Schedule T Column 2 Line 56
Schedule T Column 2 Line 57
Schedule T Column 2 Line 58
Line (1) less the Sum of Lines (2) through (8)
See Instructions $\dagger$
See Instructions $\dagger$
Line (9) plus Line (10) less Line (11)


Statement Value
Factor

Schedule T Column 3 Line 59
Schedule T Column 3 Line 52
Schedule T Column 3 Line 53
Schedule T Column 3 Line 5
Schedule T Column 3 Line
Schedule T Column 3 Line 56
Schedule T Column 3 Line 57
Schedule T Column 3 Line 58
Line (13) less the Sum of Lines (14) through (20) See Instructions $\dagger$
See Instructions $\dagger$

Schedule T Column 4 Line 59
Schedule T Column 4 Line 52
Schedule T Column 4 Line 53
Schedule T Column 4 Line 54 Schedule T Column 4 Line 55 Schedule T Column 4 Line 56 Schedule T Column 4 Line 57 Schedule T Column 4 Line 58 Line (25) less the Sum of Lines (26) through (32) See Instructions $\dagger$
See Instructions $\dagger$
Line (33) plus Line (34) less Line (35)

X $0.0253=$ $\qquad$

$\qquad$


X $0.0063=$ $\qquad$
$\dagger$ Enter amounts only if included in Schedule T Column 2 (life), Column 3 (annuity) or Column 4 (accident and health). Denotes items that must be manually entered on the filing software.

## BUSINESS RISK (CONTINUED)

(1)

Annual Statement Source
Statement Value
Factor

Separate Account Liabilities
(37) Total Liabilities from Separate Accounts Statemen
(38) Transfers to Separate Accounts Due or Accrued
(39) Total Separate Account Liabilities
(40) Business Risk (C-4a)

Administrative Expenses for Certain A\&H Coverages
(41) Total Accident and Health Premiums
(42) Accident and Health Premiums from Underwriting Risk (43) Accident and Health Premiums Factor
(44) Exhibit 2 Administrative Expenses for Health Insurance
(45) Exhibit 3 Administrative Expenses for Health Insurance
(46) Less Administrative Expenses for Administrative Service Contracts (ASC)
(47) Less Administrative Expenses for Administrative Services Only (ASO) Business
(48) Less Administrative Expenses for Commissions and Premium Taxes
(49) Net Administrative Expense
(50) Composite Health Administrative Expense Risk Facto
(51) Administrative Expense Component for Health

Health ASO/ASC
(52) Administrative Expenses for ASC Business
(53) Administrative Expenses for ASO Busines
(54) ASC Claims Reported as Incurred Claims
(55) Other Medical Costs Paid through ASC Arrangements
(56) Fee-for-Service Received from Health Entities
(57) Business Risk (C-4b)

Page 3 Column 1 Line 27
Page 3 Column 1 Line 13
Page 3 Column 1 Line 13
Line (37) plus Line (38)
Lines $(12)+(24)+(36)+(39)$

LR019 Health Premiums Column (1) Line (33)
LR020 Underwriting Risk Column (5) Line (1.3)
Line (42) / Line (41)
Exhibit 2 Column $2+$ Column 3 Line 10
Exhibit 3 Column 2 Line 7
Included in Exhibit 2 Col. $2+$ Col. 3 and Exhibit 3 Col. 2
Included in Exhibit 2 Col. $2+$ Col. 3 and Exhibit 3 Col. 2
Included in Exhibit 2 Col. $2+$ Col. 3 and Exhibit 3 Col. 2
Lines (44) + (45) - (46) - (47) - (48)
$7 \%$ of Line (42) up to $\$ 25$ million $+4 \%$ of excess/Line (42)
Line (49) x factor Line (43) $x$ factor Line (50)
$\qquad$
X $0.0006=$

Company Records§
Company Records§
Company Records
Company Records
Company Records
Column (2) Lines $(51)+(52)+(53)+(54)+(55)+(56)$


X $0.0200=$ $\qquad$

Line (52) should be greater than or equal to Line (46). Line (53) should be greater than or equal to Line (47).Denotes items that must be manually entered on the filing software.

## CALCULATION OF TAX EFFECT FOR LIFE AND FRATERNAL RISK-BASED CAPITAL



## CALCULATION OF TAX EFFECT FOR LIFE AND FRATERNAL RISK-BASED CAPITAL (CONTINUED)



## CALCULATION OF TAX EFFECT FOR LIFE AND FRATERNAL RISK-BASED CAPITAL (CONTINUED)



## CALCULATION OF TAX EFFECT FOR LIFE AND FRATERNAL RISK-BASED CAPITAL (CONTINUED)

|  |  | Source |
| :---: | :---: | :---: |
| (102) | Replications | LR013 Replication (Synthetic Asset) Transactions and Mandatory Convertible Securities Column (7) Line (9999999) |
| (103) | Reinsurance | LR016 Reinsurance Column (4) Line (17) |
| (104) | Investment Affiliates | LR042 Summary for Affiliated Investments Column (4) Line (6) |
| (105) | Investment in Parent | LR042 Summary for Affiliated Investments Column (4) Line (10) |
| (106) | Other Affiliate: Property and Casualty Insurers not Subject to Risk-Based Capital | LR042 Summary for Affiliated Investments Column (4) Line (11) |
| (107) | Other Affiliate: Life Insurers not Subject to Risk-Based Capital | LR042 Summary for Affiliated Investments Column (4) Line (12) |
| (108) | Publicly Traded Insurance Affiliates | LR042 Summary for Affiliated Investments Column (4) Line (14) Sum of Lines (001) through (108), Recognizing the Deduction of Lines (013), (014), (015), (036), (044), (049), (056), (061), (069), (077), (084), (089) and (100) |
| (109) | Subtotal for C-1o Assets |  |
|  | C-0 Affiliated Common Stock |  |
| (110) | Off-Balance Sheet and Other Items | LR017 Off-Balance Sheet and Other Items Column (5) Line (27) |
| (111) | Off-Balance Sheet Items Reduction - Reinsurance | LR017 Off-Balance Sheet and Other Items Column (5) Line (28) |
| (112) | Off-Balance Sheet Items Increase - Reinsurance | LR017 Off-Balance Sheet and Other Items Column (5) Line (29) |
| (113) | Affiliated US Property - Casualty Insurers Directly Owned | LR042 Summary for Affiliated Investments Column (4) Line (1) |
| (114) | Affiliated US Life Insurers Directly Owned | LR042 Summary for Affiliated Investments Column (4) Line (2) |
| (115) | Affiliated US Health Insurers Directly and Indirectly Owned | LR042 Summary for Affiliated Investments Column (4) Line (3) |
| (116) | Affiliated US Property - Casualty Insurers Indirectly Owned | LR042 Summary for Affiliated Investments Column (4) Line (4) |
| (117) | Affiliated US Life Insurers Indirectly Owned | LR042 Summary for Affiliated Investments Column (4) Line (5) |
| (118) | Affiliated Alien Life Insurers - Canadian | LR042 Summary for Affiliated Investments Column (4) Line (8) |
| (119) | Affiliated Alien Life Insurers - All Others | LR042 Summary for Affiliated Investments Column (4) Line (9) |
| (120) | Subtotal for C-0 Affiliated Common Stock | Lines (110)-(111)+(112)+(113)+(114)+(115)+(116)+(117)+(118)+(119) |
|  | Common Stock |  |
| (121) | Unaffiliated Common Stock | LR005 Unaffiliated Preferred and Common Stock Column (5) Line (17) * LR018 Off-Balance Sheet Collateral Column (3) Line (16) |
| (122) | Credit for Hedging - Common Stock | LR015 Hedged Asset Common Stock Schedule Column (10) Line (0299999) |
| (123) | Stock Reduction - Reinsurance | LR005 Unaffiliated Preferred and Common Stock Column (5) Line (19) |
| (124) | Stock Increase - Reinsurance | LR005 Unaffiliated Preferred and Common Stock Column (5) Ling (20) |
| (125) | BA Common Stock Unaffiliated | LR008 Other Long-Term Assets Column (5) Line (47) |
| (126) | BA Common Stock Affiliated - C-1cs | LR008 Other Long-Term Assets Column (5) Line (49.2) |
| (127) | Common Stock Concentration Factor | LR011 Common Stock Concentration Factor Column (6)Line (6) |
| (128) | NAIC 01 Working Capital Finance Notes | LR008 Other Long-Term Assets Column (5) Line (51.1) |
| (129) | NAIC 02 Working Capital Finance Notes | LR008 Other Long-Term Assets Column'(5) Line (51.2) |
| (130) | Affiliated Preferred Stock and Common Stock Holding Company in Excess of Indirect Subs | LR042 Summary for Affiliated Investments Column (4) Line (7) |
| (131) | Affiliated Preferred Stock and Common Stock All Other | LR042 Summary for Affiliated Investments Column (4) Line (13) |
| (132) | Total for C-1cs Assets | Lines (121)-(122)-(123)+(124)+(125)+(126)+(127)+(128)+(129)+(130)+(131) |
|  | Insurance Risk |  |
| (133) | Disability Income Premium | LR019 Health Premiums Column (2) Lines (21) through (27) |



## CALCULATION OF TAX EFFECT FOR LIFE AND FRATERNAL RISK-BASED CAPITAL (CONTINUED)

| (134) | Long-Term Care |
| :---: | :---: |
| (135) | Individual \& Industrial Life Insurance C-2 Risk |
| (136) | Group \& Credit Life Insurance C-2 Risk |
| (136b) | Longevity C-2 Risk |
| (137) | Disability and Long-Term Care Health Claim Reserves |
| (138) | Premium Stabilization Credit |
| (139) | Total C-2 Risk |
| (140) | Interest Rate Risk |
| (141) | Health Credit Risk |
| (142) | Market Risk |
| (143) | Business Risk |
| (144) | Health Administrative Expenses |
| (145) | Total Tax Effect |

LR019 Health Premiums Column (2) Line (28) + LR023 Long-Term Care
Column (4) Line (7)
LR025 Life Insurance Column (2) Line (20)
LR025 Life Insurance Column (2) Line (42)
LR025-A Longevity Risk Column (2) Line (5)
LR024 Health Claim Reserves Column (4) Line (9) + Line (15)
LR026 Premium Stabilization Reserves Column (2) Line (10)
$\mathrm{L}(133)+\mathrm{L}(134)+\mathrm{L}(137)+\mathrm{L}(138)+$ Greatest of [Guardrail Factor * $(\mathrm{L}(135)+\mathrm{L}(136))$, Guardrail Factor *
$\mathrm{L}(136 \mathrm{~b})$, Square Root of $[(\mathrm{L}(135)+\mathrm{L}(136)) 2+\mathrm{L}(136 \mathrm{~b}) 2+2 *($ Correlation Factor) $) *(\mathrm{~L}(135)+\mathrm{L}(136))$ * L(136b) ] ]

R027 Interest Rate Risk Column (3) Line (36)
R0028 Health Credit Risk Column (2) Line (7)
LR027 Interest Rate Risk Column (3) Line (3)
LR029 Business Risk Column (2) Line (57)
Lines $(109)+(120)+(132)+(139)+(140)+(141)+(142)+(143)+(144)$

$\ldots$ Denotes lines that are deducted from the total rather than added.
Denotes items that must be manually entered on the filing software

Company Name

[^7]
$\qquad$
$\qquad$
$\qquad$
$\qquad$

$\qquad$
$\qquad$
(30) Synthetic GIC's (C-10)
(31) Surplus in Non-Guaranteed Separate Accounts
(32) Real Estate (gross of encumbrances)
(33) Schedule BA Real Estate (gross of encumbrances)
(34) Other Long-Term Assets
(35) Schedule BA Mortgages
(36) Concentration Factor
(37) Miscellaneous

Replication Transactions and Mandatory Convertible Securities
(39) Reinsurance
(40) Total (C-1o) - Pre-Tax
(41) (C-10) Tax Effect
(42) Net (C-1o) - Post-Tax

Insurance Risk (C-2)
(43) Individual and \& Industrial Life Insurance
(44) Group and \& Credit Life Insurance-md FEGI/SGL
(44b) Longevity Risk
(45) Total Health Insurance
(46) Premium Stabilization Reserve Cred
(47) Total (C-2) - Pre-Tax
(48) (C-2) Tax Effect
(49) $\operatorname{Net}(\mathrm{C}-2)$ - Post-Tax

Interest Rate Risk (C-3a)
(50) Total Interest Rate Risk - Pre-Tax
(51) (C-3a) Tax Effect
(52) $\operatorname{Net}($ C-3a) - Post-Tax

Health Credit Risk (C-3b)
(53) Total Health Credit Risk - Pre-Tax
(54) (C-3b) Tax Effect
(55) Net (C-3b) - Post-Tax

Market Risk (C-3c)
(56) Total Market Risk - Pre-Tax
(57) (C-3c) Tax Effect
(58) Net (C-3c) - Post-Tax

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

LR006 Separate Accounts Column (3) Line (8)
LR006 Separate Accounts Column (3) Line (13)
LR007 Real Estate Column (3) Line (13)
LR007 Real Estate Column (3) Line (25)
LR008 Other Long-Term Assets Column (5) Line (56) + LR018 Off-Balance Sheet
Collateral Column (3) Line (17) + Line (18)
LR009 Schedule BA Mortgages Column (6) Line (23)
LR010 Asset Concentration Factor Column (6) Line (62) Grand Total Page
LR012 Miscellaneous Assets Column (2) Line (21)
CROI Replation (Sy Cor
Convorie Sedis Colin (4) Lie (17)
LR016 Reinsurance Column (4) Line (17)
SR30
Iation of Tax Effect for Life and Fraternal Risk-Based Capital Column (2) Line (109) Line (40) - Line (41)

LR025 Life Insurance Column (2) Line (20
LR025 Life Insurance Column (2)
LR025 Life Insurance Column (2) Line (42)
LR024 Health Claim Reserves Column (4) Line (18)
LR026 Premium Stabilization Reserves Column (2) Line (10)
$\mathrm{L}(45)+\mathrm{L}(46)+$ Greâtest of [Guardrail Factor * (L(43)+L(44)), Guardrail Factor * L(44b), Square Root of $[(\mathrm{L}(43)+\mathrm{L}(44)) 2+\mathrm{L}(44 \mathrm{~b}) 2+2 *($ Correlation Factor) $*(\mathrm{~L}(43)+\mathrm{L}(44)) * \mathrm{~L}(44 \mathrm{~b})]]$ LR030 Calculation of Tax Effect for Life and Fraternal Risk-Based Capital Column (2) Line (139) Line (47) - Line (48)


LR030 Calculation of Tax Effect for Life and Fraternal Risk-Based Capital Column (2) Line (140)
Line (50) - Line (51)

- Line (51)

LR028 Health Credit Risk Column (2) Line (7)
LR030 Calculation of Tax Effect for Life and Fraternal Risk-Based Capital Column (2) Line (141) Line (53) - Line (54)

LR027 Interest Rate Risk Column (3) Line (37)
LR030 Calculation of Tax Effect for Life and Fraternal Risk-Based Capital Column (2) Line (142) Line (56) - Line (57)

Requirement
$\qquad$

Business Risk (C-4a)
(59) Premium Component
(60) Liability Component
(61) Subtotal Business Risk (C-4a) - Pre-Tax
(62) (C-4a) Tax Effect
(63) Net (C-4a) - Post-Tax

Business Risk (C-4b)
(64) Health Administrative Expense Component of Business Risk (C-4b) - Pre-Tax
(65) (C-4b) Tax Effect
(66) Net (C-4b) - Post-Tax

Total Risk-Based Capital After Covariance Before Basic Operational Risk
(67) $\frac{\text { Total Risk-Based Capital After Covariance Before Basic Operational Risk }}{\mathrm{C}-0+\mathrm{C}-4 \mathrm{a}+\text { Square Root of }\left[(\mathrm{C}-1 \mathrm{o}+\mathrm{C}-3 \mathrm{a})^{2}+(\mathrm{C}-1 \mathrm{cs}+\mathrm{C}-3 \mathrm{c})^{2}+(\mathrm{C}-2)^{2}\right.}+(\mathrm{C}-3 \mathrm{~b})^{2}$
$\left.+(\mathrm{C}-4 \mathrm{~b})^{2}\right]$
(68) Gross Basic Operational Risk
(69) C-4a of U.S. Life Insurance Subsidiaries
(70) Net Basic Operational Risk
(71) Primary Security Shortfall Calculated in Accordance With Actuarial Guideline XLVIII Multiplied by 2
(72) Total Risk-Based Capital After Covariance (Including Basic Operational Risk and Primary Security Shortfall multiplied by 2)

Authorized Control Level Risk-Based Capital (After Covariance Adjustment and Shortfall)
(73) Total Risk-Based Capital After Covariance Times Fifty Percent

Tax Sensitivity Test
(74) Tax Sensitivity Test: Total Risk-Based Capital After Covariance
(75) Tax Sensitivity Test: Authorized Control Level Risk-Based Capital

LR029 Business Risk Column (2) Lines (12) + (24) + (36)
LR029 Business Risk Column (2) Line (39)
Lines (59) $+(60)$
LR030 Calculation of Tax Effect for Life and Fraternal Risk-Based Capital Column (2) Line (143) Line (61) - Line (62)

LR029 Business Risk Column (2) Line (57)
LR030 Calculation of Tax Effect for Life and Fraternal Risk-Based Capital Column (2) Line (144)
Line (64) - Line (65)

$\square$

REPORT AMOUNT ON PARENT COMPANY'S RBC IF APPLICABLE
$\mathrm{L}(11)+\mathrm{L}(63)+$ Square Root of $\left[(\mathrm{L}(42)+\mathrm{L}(52))^{2}+(\mathrm{L}(20)+\mathrm{L}(58))^{2}+\mathrm{L}(49)^{2}+\mathrm{L}(55)^{2}\right.$
$\left.+\mathrm{L}(66)^{2}\right]$
$0.03 \times \mathrm{L}(67)$
Company Records
Line (68) - (Line (63) + Line (69)) (Not less than zero)
LR036 XXX/AXXX Reinsurance Primary Security Shortfall by Cession Column (7) Line (9999999) Multiplied by 2

(9) $\mathrm{L}(61)+$ Square Root of $\left[(\mathrm{L}(40)+\mathrm{L}(50))^{2}+(\mathrm{L}(18)+\mathrm{L}(56))^{2}+\mathrm{L}(47)^{2}+\mathrm{L}(53)^{2}\right.$
$\left.+L(64)^{2}\right]$
Line (74) 0.50

## CAPITAL NOTES BEFORE LIMITATION

Years to Maturity at the Time of the Statement
Capital Notes Maturing 15 Years or less from the Year of Issue
(1) Greater than 0 and less than or equal to 1
(2) Greater than 1 and less than or equal to 2
(3) Greater than 2 and less than or equal to 3
(4) Greater than 3 and less than or equal to 4
(5) Greater than 4 and less than or equal to 5
(6) Greater than 5

Capital Notes Maturing more than 15 Years from the Year of Issue
(7) Greater than 0 and less than or equal to 1
(8) Greater than 1 and less than or equal to 2
(9) Greater than 2 and less than or equal to 3
(10) Greater than 3 and less than or equal to 4
(11) Greater than 4 and less than or equal to 5
(12) Greater than 5 and less than or equal to 6
(13) Greater than 6 and less than or equal to 7
(14) Greater than 7 and less than or equal to 8
(15) Greater than 8 and less than or equal to 9
(16) Greater than 9 and less than or equal to 10
(17) Greater than 10
(18) Credit for Capital Notes Before Limitation (sum of lines (1) through (17))

## (1)

Original Principal
Amount

(2)

Limitation on Principal Amount
(3)

Current Principal
Amount
(4)

Credit to Total Adjusted Capital $\dagger$
$\dagger$ Column (4) is calculated as the lesser of Column (2) or Column (3).
Denotes items that must be manually entered on the filing software.

## CALCULATION OF TOTAL ADJUSTED CAPITAL

(Including Total Adjusted Capital Tax Sensitivity Test)

Company Amounts
(1) Capital and Surplus
(2) Asset Valuation Reserve
(3) Dividends Apportioned for Payment
(4) Dividends Not Yet Apportioned
(5) Hedging Fair Value Adjustment

Life Subsidiary Company Amounts
(6) Asset Valuation Reserve
(7) Dividend Liability

Property and Casualty and Other Non-U.S. Affiliated Amounts
(8) Non-Tabular discount and/or Alien Insurance Subsidiaries: Othe
(9) Total Adjusted Capital Before Capital Notes

Credit for Capital Notes
(10.1) Surplus Notes
(10.2) Limitation on Capital Notes
(10.3) Capital Notes Before Limitation
(10.4) Credit for Capital Notes
(11) XXX/AXXX Reinsurance RBC Shortfall
(12) Total Adjusted Capital

## Tax Sensitivity Test

Company Amounts
(13) Deferred Tax Asset (DTA) Value
(14) Deferred Tax Liability (DTL) Value

## Subsidiary Amount

(15) Deferred Tax Asset (DTA) Value
(16) Deferred Tax Liability (DTL) Value
(17) Tax Sensitivity Test: Total Adjusted Capital

## Ex DTA ACL RBC Ratio Sensitivity Test

(18) Deferred Tax Asset-Company Amounts
(19) Total Adjusted Capital Less Deferred Tax Asset Amounts
(20) Authorized Control Level RBC
(21) Ex DTA ACL RBC Ratio

Annual Statement Source
Page 3 Column 1 Line 38
Page 3 Column 1 Line 24.01 §
Page 3 Column 1 Line 6.1, in part
3 Column 1 ine 62, in pa
Line 6.2, in part
Company Records

Subsidiaries' Annual Statement Page 3 Column 1 Line $24.01 \ddagger$ §
Subsidiaries' Annual Statement Page 3 Column 1 Line $6.1+$ Line $6.2 \neq$

Included in Subsidiaries' Annual Statement Page 3 Column 1 Line $1+3 \ddagger$ and/or Schedule D Part 6, Section 1 Column 8 Line 0599999 and Line 1499999 , in part

Sum of Lines (1) through (7) less Line (8)

Page 3 Column 1 Line 32
$0.5 \times[$ Line (9) - Line (10.1)] - Line (10.1), but not less than 0
LR032 Capital Notes Before Limitation Column (4) Line (18)
Lesser of Column (1) Line (10.2) or Line (10.3)


Page 2 Column 3 Line 18.2
Line (12) less Line (18)
LR034 Risk-Based Capital Level of Action Line (4)
Line (19) / Line (20)

[^8]Denotes items that must be manually entered on the filing software.

Statement Value Factor Adjusted Capital
X $1.000=$ $\qquad$
$\qquad$
$\qquad$

$\qquad$
$\qquad$
$\qquad$ X -1.000 $\qquad$


X -1.000 $\qquad$


X $\quad 1.000$ $\qquad$
$\qquad$ X $\quad 1.000$ $\qquad$

## RISK-BASED CAPITAL LEVEL OF ACTION

(Including Tax Sensitivity Test)
(1) Total Adjusted Capital - REPORT AMOUNT IN FIVE-YEAR HISTORICAL DATA PAGE 22 COLUMN 1 LINE 30

Trigger Points for Level of Regulatory Action:
(2) Company Action Level $=200 \%$ of Authorized Control Level Risk-Based Capital
(3) Regulatory Action Level $=150 \%$ of Authorized Control Level Risk-Based Capital
(4) Authorized Control Level Risk-Based Capital - REPORT AMOUNT IN FIVE-YEAR HISTORICAL DATA PAGE 22 COLUMN 1 LINE 31
(5) Mandatory Control Level $=70 \%$ of Authorized Control Level Risk-Based Capital
(6) Level of Action $\dagger$ :
(7) Authorized Control Level RBC Ratio

Tax Sensitivity Test
(8) Tax Sensitivity Test: Total Adjusted Capital
(9) Tax Sensitivity Test: Company Action Level $=200 \%$ of Authorized Control Level Risk-Based Capital
(10) Tax Sensitivity Test: Regulatory Action Level $=150 \%$ of Authorized Control Level Risk-Based Capital
(11) Tax Sensitivity Test:Authorized Control Level Risk-Based Capital
(12) Tax Sensitivity Test: Mandatory Control Level $=70 \%$ of Authorized Control Level Risk-Based Capital
(13) Tax Sensitivity Test: Level of Action:

LR033 Calculation of Total Adjusted Capital Column (2) Line (12)
2.0 times LR031 Calculation of Total Authorized Control Level Risk-
Based Capital Column (1) Line (73) Based Capital Column (1) Line (73)
1.5 times LR031 Calculation of Total Authorized Control Level RiskBased Capital Column (1) Line (73)
1.0 times LR031 Calculation of Total Authorized Control Level RiskBased Capital Column (1) Line (73)
0.7 times LR031 Calculation of Total Authorized Control Level RiskBased Capital Column (1) Line (73)

Line (1) / Line (4)
$0.000 \%$

LR033 Calculation of Total Adjusted Capital Column (2) Line (17) 2.0 times LR031 Calculation of Total Authorized Control Level RiskBased Capital Column (1) Line (75)
1.5 times LR031 Calculation of Total Authorized Control Level RiskBased Capital Column (1) Line (75)
1.0 times LR031 Calculation of Total Authorized Control Level RiskBased Capital Column (1) Line (75)
0.7 times LR031 Calculation of Total Authorized Control Level RiskBased Capital Column (1) Line (75)
$\dagger \quad$ If Total Adjusted Capital Line (1) exceeds Company Action Level Risk-Based Capital Line (2), None will be indicated (unless the Trend Test triggers Company Action Level). Otherwise, the appropriate level of action will be indicated.
If the trend test is applicable for the company, the level that the trend test applies to for the state of domicile as reported on LR035 Trend Test Line (18) is indicated as being:
(0000001) If 3.0 had been selected for LR035 Trend Test Line (18) as the state of domicile level, the Line (6) level of action above would have been:
(0000002) If 2.5 had been selected for LR035 Trend Test Line (18) as the state of domicile level, the Line (6) level of action above would have been:

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

## TREND TEST

Source
LR031 Calculation of Authorized Control Level
Risk-Based Capital Column (1) Line (73)
3.0 Amount
(2)
3.0 Result
(3)
2.5 Amount
(2) Trend Test Safe Harbor

Criteria for Applying Trend Test
(1) Authorized Control Level Risk-Based Capital
(3) Total Adjusted Capita

Trend Test Data
(4) First Prior Year Total Adjusted Capital
(5) First Prior Year Authorized Control Level Risk-Based Capital
(6) Third Prior Year Total Adjusted Capital
(7) Third Prior Year Authorized Control Level Risk-Based Capital

Trend Test Calculation (only if applicable $\dagger$ )
(8) Current Year Margin
(9) First Prior Year Margin
(10) Third Prior Year Margin
(11) Decrease in Margin from First Prior Year
(12) Decrease in Margin from Third Prior Year
(13) Average decrease in Last Three Years
(14) Marginal Difference
(15) Total Adjusted Capital Less Margin Difference
(16) Level of Risk-Based Capital*
(17) Negative Trend? $\ddagger$
(18) For companies where one of the above trend tests applies, does the state of domicile require action at 2.5 or 3.0 times Authorized Control Level RBC?

Column (1) $=3.0 \times$ Line (1), Column (3) $=2.5 \times$ Line (1)

LR033 Calculation of Total Adjusted Capital Line (12)

Five-Year Historical Data Page 22 Column 2 Line 30 Five-Year Historical Data Page 22 Column 2 Line 31 Five-Year Historical Data Page 22 Column 4 Line 30 Five-Year Historical Data Page 22 Column 4 Line 31

Line (3) - Line (1) Line (4) - Line (5) Line (6) - Line (7) Line (9) - Line (8) (use zero if negative) Line (10) - Line (8) (use zero if negative)
$1 / 3$ of Line (12)
Greater of Line (11) and Line (13) Line (3) - Line (14)
1.9 x Line (1)

$\dagger$ The Trend Test applies only if Total Adjusted Capital Line (3) iş less than the Trend Test Safe Harbor Line (2) and the LR034 Risk-Based Capital Level of Action Line (6) is "None".
$\ddagger$ If Line (15) is less than Line (16), the company triggers regulatory attention at the Company Action Level based on the trend test. The NAIC is in the process of changing the upper level where the trend test can be triggered from 2.5 times the Authorized Control Level RBC to 3.0 times the Authorized Control Level RBC. Until all states have transitioned to the 3.0 standard, there may be differences between states as to whether columns (1) and (2) or columns (3) and (4) of the LR035 Trend Test page apply to a particular company, so information is provided to alert users to potential alternative trend test results during the transition period.Denotes items that must be manually entered on the filing software.

## XXX/AXXX REINSURANCE PRIMARY SECURITY SHORTFALL BY CESSION

|  | (1) | (2) | (3) | (4) | (5) | (6) | (7) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Cession <br> ID | $\frac{\frac{\text { NAIC }}{\text { Company }}}{\underline{\text { Code }}}$ | ID Number | Name of Company | Required Level <br> of Primary <br> Security | Primary Security and Remediation Adjustments | Primary <br> Security <br> Shortfall |
| (0000001) |  |  |  |  |  |  |  |
| (0000002) |  |  |  |  | - |  |  |
| (0000003) |  |  |  |  | - |  |  |
| (0000004) |  |  |  |  |  |  |  |
| (0000005) |  |  |  |  |  |  |  |
| (0000006) |  |  |  |  | - |  |  |
| (0000007) |  |  |  |  |  |  |  |
| (0000008) |  |  |  |  |  |  |  |
| (0000009) |  |  |  |  |  |  |  |
| (0000010) |  |  |  |  |  |  |  |
| (0000011) |  |  |  |  |  |  |  |
| (0000012) |  |  |  |  |  |  |  |
| (0000013) |  |  |  |  |  |  |  |
| (0000014) |  |  |  | - |  |  |  |
| (0000015) |  |  |  |  |  |  |  |
| (0000016) |  |  |  |  |  |  |  |
| (0000017) |  |  |  |  |  |  |  |
| (0000018) |  |  |  |  |  |  |  |
| (0000019) |  |  |  |  |  |  |  |
| (0000020) |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
| (9999999) |  |  |  |  |  |  |  |

Denotes items that must be manually entered on the filing software.
xxx/axxx captive reinsurance consolidated exhibit
(1) $\mathrm{C}-0$
(2) $\mathrm{C}-1 \mathrm{o}$
(2)
(2) $\mathrm{C}-10$
(2.1) C -10 Concentration Factor
(2.2) C-lo Concentratrition Factor Adjustment
(23) Net C-10
(2.3) $\mathrm{Net} \mathrm{C}-1 \mathrm{l}$
(3) $\mathrm{C}-\mathrm{cs}$
(3.1) $\mathrm{C}-\mathrm{css} \mathrm{C}$
(3.1) C-clcs Concentration Factor
(3.2) C-lcs Concentration Factor Adjustment
(3.3) Net C-lcs
(4) $\mathrm{C}-2$
(5.1.) $\mathrm{C}-3 \mathrm{a}$
(5.2) $\mathrm{C}-3 \mathrm{~b}$
(5.3) $\mathrm{C}-3 \mathrm{c}$
(6.1) C-4a
(6.2) C-4b
8) Authorized Control Level \#
(9) Benchmark RBC
(10) RBC Shortalal
(10) RBC Shortfall
(11) Final Total Adjusted Capital Reflecting RBC Cushion

* If there are more than 7 captives subject to consolidation, provide the totals for the captives not reported in columns (2) through (8).
\# The amount on this line is to be the result of the normal calculation of Authorized Control Level RBC with possible adjustment to the concentratio
factor as described in the instructions for this exhibit.
(12) Would the reporting entity be in a risk-based capital company action level or lower if all of the reinsurance transactions required to be reported in Part 2A And Part 2B of the Supplemental XXX/AXXX Reinsurance Exhibit to the current Annual Satement had not occurred (i.e, if the reporting entity did not receive the reserve credit taken required to be reported in Part 2 A and Part 2 B , Column 12 and held the security required to be reported in Part 2 A, Columns 14 and 17 , and Part 2 B, Columns 14,15 , and 18 of the Supplemental XXX/AXXX Reinsurance require to be reported in Part 2A, Columns 14 and 17, and Part 2B, Columns 14, 15, and 18 of the Supplemental Exhibit to the current Annual Statement)?
(13) If the response to line (12) is yes, please explain

|  | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Pro Rata | Pro Rata | Pro Rata | Pro Rata | Pro Rata | Pro Rata | Pro Rata | Other |  |
|  | Ceding | Captive | Captive | Captive | Captive | Captive | Captive | Captive | Captives |  |
|  | Company | \#1 | \#2 | \#3 | $\pm 4$ | \#5 | $\pm 6$ | \#7 | As necessary* | Total |
|  |  |  |  |  |  |  |  |  |  | xxx |
|  |  |  |  |  |  |  |  |  |  | xxx |
|  |  |  |  |  |  |  |  |  |  | xxx |
| Line (2) minus Line (2.1) plus Line (2.2) |  |  |  |  |  |  |  |  |  | xxx xxx |
|  |  |  |  |  |  |  |  |  |  | xxx |
|  |  |  |  |  |  |  |  |  |  | xxx |
|  |  |  |  |  |  |  |  |  |  | xxx |
| Line (3) minus Line (3.1) plus Line (3.2) |  |  |  |  |  |  |  |  |  | xxx |
|  |  |  |  |  |  |  |  |  |  | xxx |
|  |  |  |  |  |  |  |  |  |  | xxx xxx |
|  |  |  |  |  |  |  |  |  |  | xxx |
|  |  |  |  |  |  |  |  |  |  | xxx |
|  |  |  |  |  |  |  |  |  |  | xxx |
|  |  |  |  |  |  |  |  |  |  | xxx |
|  | xxx |  |  |  |  |  |  |  |  | xxx |
|  | xxx |  |  |  |  |  |  |  |  |  |
|  |  | xxx | xxx |  |  | xxx | xxx | xxx | xxx | xxx |

(1.2) Other Affiliates: Subsidiaries
(2.2) Noncontrolled Assets: Subsidiaries
(3.2) Guarantees for Affiliates: Subsidiaries
(4.2) Contingent Liabilities: Subsidiaries
(5.2) Long Term Leases: Subsidiaries
(7.11) Total Affiliated Investments: Company
(7.12) Less Affiliated Common Stock: Company
(7.13) Less Affiliated Preferred Stock: Company
(7.14) Net Affiliated Investments: Company
(7.2) Affiliated Investments: Subsidiaries
(9.1) Surplus Notes: Company
(9.2) Surplus Notes: Subsidiaries
(10.11) Capital Paid In: Company
(10.12) Surplus Paid In: Company
(10.13) Total Current Year's Capital Contributions: Company
(10.2) Current Year's Capital Contributions: Subsidiaries

## Source

Subsidiaries' Life and Fraternal Risk-Based Capital LR042 Summary for Affiliated Investments Column (1) Line (13); Property and Casualty Risk-Based Capital PR005 Summary For Subsidiary, Controlled and Affiliated Investments for Cross-Checking Statement Values Column (1) Line (8) and Line (17)
Subsidiaries' Life and Fraternal Risk-Based Capital LR017 Off-Balance Sheet and Other Items Column (1) Line (15); Property and Casualty PR014 Miscellaneous Off-Balance Sheet Items Column (1) Line (15)
Subsidiaries' Life Notes to Financial Statements \#14A3c1; Property and Casualty Notes to Financial Statements \#14A3c1
Subsidiaries' Life Notes to Financial Statements \#14A1; Property and Casualty Notes to Financial Statements \#14A1
Subsidiaries' Life Notes to Financial Statements \#15A2a1; Property and Casualty Notes to Financial Statements \#15A2a1
Company's Annual Statement Five-Year Historical Data Column 1 Line 50
Company's Annual Statement Five-Year Historical Data Column 1 Line 46

Company's Annual Statement Five-Year Historical Data Column 1 Line 45

Lines (7.11) - (7.12) - (7.13)
Subsidiaries' Life Annual Statement Five-Year Historical Data Column 1 Line 50 Less Lines 45 and 46; Property and Casualty Annual Statement Five-Year Historical Data Column 1 Line 48 Less Lines 43 and 44
Company's Annual Statement Page 3 Column 1 Line 32
Subsidiaries' Life Annual Statement Page 3 Column 1 Line 32; Property and Casualty Annual Statement Page 3 Column 1 Line 33
Company's Annual Statement Page 4 Column 1 Line 50.1
Company's Annual Statement Page 4 Column 1 Line 51.1
Line (10.11) + Line (10.12)
Subsidiaries' Life Annual Statement Page 4 Column 1 Lines $50.1+51.1$; Property and Casualty Annual Statement Page 4 Column 1 Lines $32.1+33.1$

Statement Value
$\square$
$\qquad$
$\square$
$\qquad$
$\qquad$

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

## SENSITIVITY TESTS - AUTHORIZED CONTROL LEVEL


$\dagger$ Excluding affiliated preferred and common stock
Denotes items that must be manually entered on the filing software.

SENSITIVITY TESTS - TOTAL ADJUSTED CAPITAL


Denotes items that must be manually entered on the filing software

## FEDERAL ACA RISK ADJUSTMENT SENSITIVITY TEST

Overestimation of $25 \%$
(1) Premium Adjustments Receivable Due to ACA Risk Adjustment
(2) Premium Adjustments Payable Due to ACA Risk Adjustment
(3) Total ACA Risk Adjustments Payable less Receivable
(4) Total Risk Adjustment
(5) Total Adjusted Capital
(6) Total Adjusted Capital Stressed for Risk Adjustments
(7) Authorized Control Level RBC
(8) ACA Risk Adjusted ACL RBC Ratio

Underestimation of $25 \%$
(9) Underestimation of $25 \%$
(10) Premium Adjustments Receivable Due to ACA Risk Adjustments
(11) Total ACA Risk Adjustments Payable less Receivable
(12) Total Risk Adjustment
(13) Total Adjusted Capital
(14) Total Adjusted Capital Stressed for Risk Adjustment
(15) Authorized Control Level RBC
(16) ACA Risk Adjusted ACL RBC Ratio
(1)

Annual Statement Source
Notes to Financial Statement 24E2al
Notes to Financial Statement 24E2a3
ine (2) - Line (1)
Absolute Value of (Line (3))
LR033 Calculation of Total Adjusted Capital Col. (2), Line (12)
Line (5) - Line (4)
LR034 Risk-Based Capital Level of Action Col. (1), Line (4)
Line (6) / Line (7)

Col. (1), Line (1)
Col. (1), Line (2)
Line (10) - Line (9)
Absolute Value of (Line (11))
LR033 Calculation of Total Adjusted Capital Col. (2), Line (12)
Line (13) - Line (12)
LR034 Risk-Based Capital Level of Action Col. (1), Line (4)
Line (14) / Line (15)

Footnote: If it is the belief of the company that the factors are not appropriate, please provide an explanation as to why.

## SUMMARY FOR AFFILIATED INVESTMENTS



If different than book / adjusted carrying valueDenotes items that must be manually entered on the filing software.

## CROSSCHECKING FOR AFFILIATED INVESTMENTS

Affiliated Preferred Stock

|  |  |  | (1) | (2) | (3) |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Schedule D Part 6 Section 1 Type | Annual Statement Line Number | Annual Statement <br> Total Preferred Stock $\dagger$ | Total from Life and Fraternal Risk-Based Capital Report $\ddagger$ | Difference |
| (1) | Parent | 0199999 |  |  |  |
| (2) | U.S. Property and Casualty Insurer | 0299999 |  | - |  |
| (3) | U.S. Life Insurer | 0399999 |  |  |  |
| (4) | U.S. Health Entity | 0499999 |  | $\square$ |  |
| (5) | Alien Insurer | 0599999 |  | , |  |
| (6) | Non-Insurer Which Controls Insurer | 0699999 |  |  |  |
| (7) | Investment Subsidiary | 0799999 |  | $\cdots$ |  |
| (8) | Other Affiliates | 0899999 |  |  |  |
| (9) | Total (Sum of Lines (1) through (8)) |  | A |  |  |

Affiliated Common Stock
(3)

|  | Schedule D Part 6 Section 1 Type | Annual Statement Line Number | Annual Statement Total Common Stock $\dagger$ | Total from <br> Life and Fraternal Risk-Based Capital Report§ | Difference |
| :---: | :---: | :---: | :---: | :---: | :---: |
| (10) | Parent | 1099999 | $\cdots$ |  |  |
| (11) | U.S. Property and Casualty Insurer | 1199999 | $\checkmark$ |  |  |
| (12) | U.S. Life Insurer | 1299999 |  |  |  |
| (13) | U.S. Health Entity | 1399999 |  |  |  |
| (14) | Alien Insurer | 1499999 |  |  |  |
| (15) | Non-Insurer Which Controls Insurer | 1599999 |  |  |  |
| (16) | Investment Subsidiary | 1699999 |  |  |  |
| (17) | Other Affiliates | - 1799999 |  |  |  |
| (18) | Total (Sum of Lines (10) through (17)) |  |  |  |  |

$\mid \dagger$ Column (1) Lines (1) through (8) and (10) through (17) come from Schedule D Part 6 Section 1 Column 7 of the annual statement.
$\ddagger$ Column (2) Lines (1) through (8) come from LR044 Details for Affiliated Investments Column (7).
$\S$ Column (2) Lines (10) through (17) come from LR044 Details for Affiliated Investments Column (5).
Denotes items that must be manually entered on the filing software.

## DETAILS FOR AFFILIATED INVESTMENTS

|  | Affiliate Code for |  |
| :---: | :---: | :---: |
| Affiliate Type | Column (2) | $\underline{\text { RBC Basis }}$ |
| Property and Casualty Subsidiaries | 1 | Subs' RBC After Covariance / 0.79 |
| Life Subsidiaries | 2 | Subs' RBC After Covariance / 0.79 |
| direct U.S. Health Subsidiaries | 3 | Subs' RBC After Covariance / 0.79 |
| Property and Casualty Subsidiaries | 4 | Subs' RBC After Covariance / 0.79 |
| Life Subsidiaries | 5 | Subs' RBC After Covariance / 0.79 |
| Subsidiaries | 6 | Subs' RBC After Covariance / 0.79 |
| mpany in Excess of Indirect Subsidiaries | 7 | $0.300 \times$ Book/Adj. Carrying Value |


| $\underline{\text { Affiliate Type }}$ |
| :--- |
| Alien Insurance Subsidiaries - Canadian Life |
| Alien Insurance Subsidiaries - Other |
| Investment in Parents |
| Other Affiliate - P\&C Insurers not subject to RBC |
| Other Affiliate - Life Insurers not subject to RBC |
| Other Affiliate - All Other |

Affiliate
Code for

## Column (2) RBC Basis

8 Subsidiaries' MCCSR / 0.79
$9 \quad 1.000 \times$ Book/Adj. Carrying Value
$0.300 \times$ Book/Adj. Carrying Value $0.300 \times$ Book/Adj. Carrying Value $0.300 \times$ Book/Adj. Carrying Value $0.300 \times$ Book/Adj. Carrying Value

Indirect U.S. Life Subsidiarie
Investment Subsidiarie
Holding Company in Excess of Indirect Subsidiaries
$0.300 \times$ Book/Adj. Carrying Value

## MODCO OR FUNDS WITHHELD REINSURANCE AGREEMENTS

Reinsurance Ceded - Bonds C-10

|  | (1) <br> NAIC <br> Company Code | (2) <br> Federal or Alien ID Number | (3) <br> Reinsurer | (4) <br> Ceded C-1o RBC <br> Requirement |
| :---: | :---: | :---: | :---: | :---: |
| (0000001) |  |  | - |  |
| (0000002) |  |  | $\square$ |  |
| (0000003) |  |  | $\square \sim$ |  |
| (0000004) |  |  | $\checkmark$ - |  |
| (0000005) |  |  | , |  |
| (0000006) |  |  | $\cdots$ |  |
| (0000007) |  |  | $\cdots$ |  |
| (0000008) |  |  | - |  |
| (0000009) |  |  | - |  |
| (0000010) |  |  | $\checkmark-$ |  |
| (0000011) |  |  | $\square$ |  |
| (0000012) |  |  | $\triangle>$ |  |
| (0000013) |  |  | - |  |
| (0000014) |  |  | $\square$ |  |
| (0000015) |  |  | $\checkmark-3$ |  |
| (0000016) |  |  | $\square$ |  |
| (0000017) |  |  | $\square-\mathrm{r}$ |  |
| (0000018) |  |  | $\bigcirc$ |  |
| (0000019) |  |  | - |  |
| (0000020) |  |  |  |  |
| (0000021) |  |  | $\square$ |  |
| (0000022) |  |  | - |  |
| (0000023) |  |  | $\cdots$ |  |
| (0000024) |  |  | $\square$ |  |
| (0000025) |  |  |  |  |
| (0000026) |  |  | $\bigcirc$ |  |
| (0000027) |  |  |  |  |
| (0000028) |  |  |  |  |
| (0000029) |  |  |  |  |
| (0000030) |  | - |  |  |
| (9999999) | XXX | XXX | Total |  |

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

MODCO OR FUNDS WITHHELD REINSURANCE AGREEMENTS
Reinsurance Assumed - Bonds C-10


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

MODCO OR FUNDS WITHHELD REINSURANCE AGREEMENTS
Reinsurance Ceded - All Other Assets C-0, C-1o And C-1cs


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

## MODCO OR FUNDS WITHHELD REINSURANCE AGREEMENTS

## Reinsurance Assumed - All Other Assets C-0, C-1o And C-1cs

|  | (1) <br> NAIC <br> Company Code | (2) <br> Federal or <br> Alien ID <br> Number | (3) <br> Reinsurer | (4) <br> Assumed C-0, C-1o <br> And C-1cs RBC <br> Requirement |
| :---: | :---: | :---: | :---: | :---: |
| (0000001) |  |  | - |  |
| (0000002) |  |  | - |  |
| (0000003) |  |  | $\square-$ |  |
| (0000004) |  |  | $\checkmark-$ |  |
| (0000005) |  |  | $\rightarrow-$ |  |
| (0000006) |  |  | $\checkmark-$ |  |
| (0000007) |  |  | - |  |
| (0000008) |  |  | ) |  |
| (0000009) |  |  |  |  |
| (0000010) |  |  | - |  |
| (0000011) |  |  |  |  |
| (0000012) |  |  | $\triangle \gg$ |  |
| (0000013) |  |  |  |  |
| (0000014) |  |  | $\square-$ |  |
| (0000015) |  |  | - |  |
| (0000016) |  |  | - |  |
| (0000017) |  |  | $\square \sim$ |  |
| (0000018) |  |  | ) |  |
| (0000019) |  |  | - |  |
| (0000020) |  |  |  |  |
| (0000021) |  |  | $\square$ |  |
| (0000022) |  |  |  |  |
| (0000023) |  |  | - |  |
| (0000024) |  |  | - |  |
| (0000025) |  |  |  |  |
| (0000026) |  |  | $\bigcirc$ |  |
| (0000027) |  |  |  |  |
| (0000028) |  | $\square$ |  |  |
| (0000029) |  |  |  |  |
| (0000030) |  | , |  |  |
|  |  |  |  |  |
| (9999999) | XXX | XXX | Total |  |

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

## EXEMPTION TEST: CASH FLOW TESTING FOR C-3 RBC

C-3 Significance Test
(1) C-0 Asset Risk - Affiliated Amount
(2) C-1cs Asset Risk - Unaffiliated Common Stock
(3) C-1o Asset Risk - All Other
(4) C-2 Insurance Risk
(5) C-3a Factor-Based Interest Rate Risk Single Premium and Annuity Reserves (Excluding Equity Indexed Annuities)
(6) C-3a Interest Rate Risk All Other Reserves
(7) C-3b Health Credit Risk
(9) C-4a Business Risk: Premium and Liability Components
(10) C-4b Business Risk: Health Administrative Risk
(11) Total
(12) C-3a Interest Rate Risk
(13) C-3a Percentage
(14) Is Line (13) greater than 40 percent?
(Complete cash flow testing for C-3 RBC on Page LR027 Interest Rate Risk Column (3) Line (33) if "Yes.") C-3 Stress Test
(15) Total Adjusted Capital
(16) C-3a Factor-Based Interest Rate Risk Single Premium and

Annuity Reserves (Excluding Equity Indexed Annuities)
(17) 6.5 Times C-3a Factor-Based Interest Rate Risk Single Premium and Annuity Reserves
(18) C-3a Interest Rate Risk All Other Reserves
(19) Adjusted C-3a Interest Rate Risk
(20) RBC After Covariance with Line (19) in C-3a Formula
(21) Total
(22) Is Line (21) less than 100 percent and not equal to zero?
(Complete cash flow testing for C-3 RBC on Page LR027 Interest Rate Risk Column (3) Line (33) if "Yes.")


LR027 Interest Rate Risk [Column (3) Line (22) + (27) + (29) + (30) + (31) + (35)] x (1-enacted maximum federal corporate income tax rate)
Line (16) + Line $(17)+$ Lime $(18)+$ Line 9$)+$ Square Ropt of $\left[(L i n e ~(3)+\operatorname{Line}(19))^{2}+(\operatorname{Line}(2)+\operatorname{Line}(8))^{2}+\operatorname{Line}(4)^{2}\right.$ + Line $(7)^{2}+$ Line $(10)$

LR031 Calculation of Total Authorized Control Level Capital Column (1) Line (11)
LR031 Calculation of Total Authorized Control Level Capital Column (1) Line (20)
LR031 Calculation of Total Authorized Control Level Capital Column (1) Line (42)
LR031 Calculation of Total Authorized Control Level Risk-Based Capital Column (1) Line (49)
LRO2 In Ins .
LR027 Interest Rate Risk [Column (3) Line (22) $+(27)+(29)+(30)+(31)+(35)]$ x (1-enacted maximum federal
corporate income tax rate)
LR031 Calculation of Total Authorized Control Level Risk-Based Capital Column (1) Line (55) LR031 Calculation of Total Authorized Control Level Risk-Based Capital Column (1) Line (58) R1031 Calculation of Total Authorized Control Level Risk-Based Capital Column (1) Line (63) LR031 Calculation of Total Authorized Control Level Risk-Based Capital Column (1) Line (66)
Sum of Lines (1) through (10)
Line (5) + Line (6)
Line (12) divided by Line (11)
Yes" or "No" in Column (2)

LR033 Calculation of Total Adjusted Capital Column (2) Line (12)
LR027 Interest Rate Risk Column (3) Line (17) 0.79 + LR027 Int
Line (16) x ( 1 -enacted maximum federal corporate income tax rate)
Line ( 16 ) $\times$ ( 1 -enacted maximum federal corporate income tax rate)
LR027 Interest Rate Risk Column (3) tine (17) $6.5 \times$ ( 1 -enacted maximum federal corporate income tax rate)
$\square$
(23) Has the company elected to quantify RBC for Certain Annuities and Single Premium Life Insurance using Cash Flow Testing?
"Yês" or "No" in Column (2)

The National Association of Insurance Commissioners (NAIC) is the U.S. standard-setting and regulatory support organization created and governed by the chief insurance regulators from the 50 states, the District of Columbia and five U.S. territories. Through the NAIC, state insurance regulators establish standards and best practices, conduct peer review, and coordinate their regulatory oversight. NAIC staff supports these efforts and represents the collective views of state regulators domestically and internationally. NAIC members,together with the central resources of the NAIC, form the national system of state-based insurance regulation in the U.S.

For more information, visit www.naic.org.



[^0]:    ${ }^{1}$ Report of the Industry Advisory Committee to the Life Risk-Based Capital (E) Working Group, p. 6; Nov. 17, 1991.

[^1]:    ${ }^{2}$ Net deposits are required only for certain policy forms (e.g., when the guaranteed benefit is capped as a multiple of net policy contributions).

[^2]:    ${ }^{3}$ A $5^{\text {th }}$ percentile return is consistent with the CTE90 risk measure adopted in the C3 Phase II RBC methodology.

[^3]:    ${ }^{7}$ Present value of net cost $=\mathrm{PV}$ [ guaranteed benefit claims in excess of account value ] - PV[ margin offset ]. The discounting includes cashflows in all future years (i.e., to the earlier of contract maturity and the end of the horizon).

[^4]:    Denotes items that must be manually entered on the filing soffware.

[^5]:    Denotes items that must be manually entered on the filing software.

[^6]:    Denotes items that must be manually entered on the filing software.

[^7]:    Insurance Affiliates and Misc. Other Amounts (C-0)
    (1) Affiliated US Property-Casualty Insurers Directly Owned
    (2) Affiliated US Life Insurers Directly Owned
    (3) Affiliated US Health Insurers Directly and Indirectly Owned
    (4) Affiliated US Property-Casualty Insurers Indirectly Owned
    (5) Affiliated US Life Insurers Indirectly Owned
    (6) Affiliated Alien Life Insurers - Canadian
    (7) Affiliated Alien Life Insurers - All Others
    (8) Off-Balance Sheet and Other Items
    (9) Total (C-0) - Pre-Tax
    (10) (C-0) Tax Effect
    (11) $\operatorname{Net}(\mathrm{C}-0)$ - Post-Tax

    Asset Risk - Unaffiliated Common Stock and Affiliated Non-Insurance Stock (C-1cs)
    (12) Schedule D Unaffiliated Common Stock
    (13) Schedule BA Unaffiliated Common Stock
    (14) Schedule BA Affiliated Common Stock - C-1cs
    (15) Common Stock Concentration Factor
    (16) Affiliated Preferred Stock and Common Stock - Holding Company in Excess of Indirect Subsidiaries
    (17) Affiliated Preferred Stock and Common Stock - All Other
    (18) Total (C-1cs) - Pre-Tax
    (19) (C-lcs) Tax Effect
    (20) Net (C-1cs) - Post-Tax

    Asset Risk - All Other (C-1o)
    (21) Bonds after Size Factor
    (22) Mortgages (including past due and unpaid taxes)
    (23) Unaffiliated Preferred Stock
    (24) Affiliated Preferred Stock and Common Stock - Investment Subsidiaries
    (25) Affiliated Preferred Stock and Common Stock - Parent
    (26) Affiliated Preferred Stock and Common Stock - Property and Casualty Insurers not Subject to Risk-Based Capital
    (27) Affiliated Preferred Stock and Common Stock - Life Insurers not Subject to Risk-Based Capital
    (28) Affiliated Preferred Stock and Common Stock - Publicly Traded Insurers Held at Fair Value (excess of statement value over book value)
    (29) Separate Accounts with Guarantees

[^8]:    Including subsidiaries owned by holding companies
    Including subsidiaries owned by holding companies.
    Multiply statement value by percent of ownership.
    The portion of the AVR that can be counted as capital is limited to the amount not utilized in asset adequacy testing in support of the Actuarial Opinion for reserves.

