

Draft date: 2/12/24

2024 Spring National Meeting  
Phoenix, Arizona

**CAPITAL ADEQUACY (E) TASK FORCE**

Sunday, March 17, 2024

1:30 – 2:30 p.m.

301 B-D West—Phoenix Convention Center—Level 2

**ROLL CALL**

Judith L. French, Chair	Ohio	Kathleen A. Birrane	Maryland
Doug Ommen, Vice Chair	Iowa	Grace Arnold	Minnesota
Mark Fowler	Alabama	Chlora Lindley-Myers	Missouri
Lori K. Wing-Heier	Alaska	Troy Downing	Montana
Peni Itula Sapini Teo	American Samoa	Eric Dunning	Nebraska
Ricardo Lara	California	D.J. Bettencourt	New Hampshire
Michael Conway	Colorado	Justin Zimmerman	New Jersey
Andrew N. Mais	Connecticut	Mike Causey	North Carolina
Karima M. Woods	District of Columbia	Jon Godfread	North Dakota
Michael Yaworsky	Florida	Glen Mulready	Oklahoma
Dana Popish Severinghaus	Illinois	Michael Wise	South Carolina
Amy L. Beard	Indiana	Cassie Brown	Texas
Vicki Schmidt	Kansas	Mike Kreidler	Washington
Sharon P. Clark	Kentucky	Nathan Houdek	Wisconsin

NAIC Support Staff: Eva Yeung

**AGENDA**

1. Consider Adoption of its Jan. 31, 2024, and 2023 Fall National Meeting Minutes  
—*Tom Botsko (OH)*  
Attachment One  
Attachment Two
2. Consider Adoption of its Working Group Reports
  - A. Health Risk-Based Capital (E) Working Group—*Steve Drutz (WA)*  
Attachment Three
  - B. Risk-Based Capital Investment Risk and Evaluation (E) Working Group  
—*Philip Barlow (DC)*  
Attachment Four
  - C. Life Risk-Based Capital (E) Working Group—*Philip Barlow (DC)*  
Attachment Five
  - D. Property and Casualty Risk-Based Capital (E) Working Group  
—*Tom Botsko (OH)*  
Attachment Six
3. Receive Updates from its Risk Evaluation Ad Hoc Subgroups



- |  |                     |
|--|---------------------|
| A. Risk-Based Capital (RBC) Purposes & Guidelines Ad Hoc Subgroup<br>— <i>Rachel Hemphill (TX)</i>                               | Attachment Seven    |
| B. Asset Concentration Ad Hoc Subgroup— <i>Kevin Clark (IA)</i>  |                     |
| C. Geographic Concentration Ad Hoc Subgroup— <i>Wanchin Chou (CT)</i>  |                     |
| 4. Consider Adoption of Proposal 2023-13-CR (Cat Risk Insurance Program Interrogatory)— <i>Wanchin Chou (CT)</i>                 | Attachment Eight    |
| 5. Consider Adoption of Proposal 2023-14-P (Pet Insurance)<br>— <i>Tom Botsko (OH)</i>   | Attachment Nine     |
| 6. Consider Adoption of Proposal 2023-15-CR (Convective Storm for Information Purposes Only Structure)— <i>Wanchin Chou (CT)</i> | Attachment Ten      |
| 7. Consider Adoption of Proposal 2024-01-P (Schedule P Short Tails)<br>— <i>Tom Botsko (OH)</i>                                  | Attachment Eleven   |
| 8. Consider Adoption of its Working Agenda— <i>Tom Botsko (OH)</i>   | Attachment Twelve   |
| 9. Consider Exposure of Proposal 2024-08-CA (Col 12 Affiliated Investments)— <i>Tom Botsko (OH)</i>                              | Attachment Thirteen |
| 10. Receive an Update from the Health Risk-Based Capital (E) Working Group on the H2 Component Project— <i>Steve Drutz (WA)</i>  |                     |
| 11. Discuss the Collateral Loan Memorandum from the Statutory Accounting Principles (E) Working Group— <i>Tom Botsko (OH)</i>    | Attachment Fourteen |
| 12. Discuss Proposal 2024-02-CA (Residual Structure PC & Health)<br>— <i>Tom Botsko (OH)</i>                                     | Attachment Fifteen  |
| 13. Discuss Proposal 2024-06-CA (Repurchase Agreement PC & Health)<br>— <i>Tom Botsko (OH)</i>                                   | Attachment Sixteen  |
| 14. Discuss Any Other Matters Brought Before the Task Force<br>— <i>Tom Botsko (OH)</i>  |                     |
| 15. Adjournment  |                     |

Draft: 2/19/24

Capital Adequacy (E) Task Force  
Virtual Meeting  
January 31, 2024

The Capital Adequacy (E) Task Force met Jan. 31, 2024. The following Task Force members participated: Judith L. French, Chair, represented by Tom Botsko, Peter Weber, and Dale Bruggeman (OH); Doug Ommen, Vice Chair, represented by Mike Yanacheak, Kevin Clark, and Kim Cross (IA); Lori K. Wing-Heier represented by David Phifer and Kevin Richard (AK); Mark Fowler represented by Charles Hale and Blase Abreo (AL); Ricardo Lara represented by Thomas Reedy, , and Kim Hudson (CA); Michael Conway represented by Mitchell Bronson and Rolf Kaumann (CO); Andrew N. Mais represented by Lindsay VanBuren, Jack Broccoli, Wanchin Chou, Philip Barrett, and Sarah Mu (CT); Karima M. Woods represented by Philip Barlow, Stephen Flick, and Howard Liebers (DC); Michael Yaworsky represented by Carolyn Morgan, Jane Nelson and Ainsley Hurley (FL); Dana Popish Severinghaus (IL); Vicki Schmidt represented by Tish Becker (KS); Sharon P. Clark represented by Russell Coy and Vicki Lloyd (KY); Grace Arnold represented by Ben Slutsker (MN); Chlora Lindley-Myers represented by William Leung, John Rehagen, Laurie Pleus, and Danielle K. Smith (MO); Mike Causey represented by Jackie Obusek and Teresa Browning (NC); Jon Godfread represented by Matt Fischer (ND); Eric Dunning represented by Margaret Garrison, Michael Muldoon, and Lindsay Crawford (NE); D.J. Bettencourt represented by Jennifer Li and Sandra Barlow (NH); Justin Zimmerman represented by David Wolf (NJ); Glen Mulready represented by Diane Carter and Andrew Schallhorn (OK); Michael Wise represented by Ryan Basnett (SC); Cassie Brown represented by Rachel Hemphill, Miriam Fisk, Eddy Silva, Shawn Frederick, and Amy Garcia (TX); Mike Kreidler represented by Steve Drutz (WA); and Nathan Houdek represented by Amy Malm and Michael Erdman (WI).

1. Adopted Proposal 2023-16-CR (2023 Cat Event List)

Botsko said proposal 2023-16-CR provides routine catastrophe events and has been updated twice. The first update was adopted during the 2023 Fall National Meeting, which added Jan. 1 through Oct. 31, 2023, U.S. and non-U.S. catastrophe risk events to the catastrophe event list. Botsko stated that this update also added Nov. 1 through Dec. 31, 2023, events to the list and was adopted by the Property and Casualty Risk-Based Capital (E) Working Group and Catastrophe Risk (E) Subgroup with no comments received during the exposure period.

Chou made a motion, seconded by Yanacheak, to adopt Proposal 2023-16-CR (Attachment A). The motion passed unanimously.

2. Exposed Proposal 2024-02-CA (Residual Structure PC & Health)

Botsko said this proposal follows the Risk-Based Capital Investment Risk and Evaluation (E) Working Group changes of the residual tranches in the life risk-based capital (RBC) formula. He also stated that because this item is still in the reviewing process by the Working Group, there are a couple of options that the Task Force can consider: 1) following the life RBC structure and keeping the current 20% charge; 2) following both life RBC structure and charge, which is 45% for 2024 reporting; or 3) waiting until the Working Group completes its analysis and studies before proposing any changes to the property and casualty (P/C) and health RBC formulas. Barlow and Botsko encouraged all interested parties to submit comments, recommendations, or exhibits to the Working Group and the Task Force if they think different factors should be used. Chou said he would prefer to wait until the Working Group completes the process before considering the changes in the P/C and health RBC formulas. Drutz commented that the exposure today will likely receive comments to assist the Task Force in making the decision. Hemphill and Chou agreed with Drutz's comment. Botsko also said the exhibit attached to the proposal provided some references to 2022 residual tranche information for P/C and health lines of business. This exhibit

will be updated to include 2023 data by the end of March. Chou suggested adding the life data in this exhibit to provide a better picture of the entire industry.

Without further comments, the Task Force agreed to expose proposal 2024-02-CA for a 30-day public comment period ending March 2.

3. Exposed Proposal 2024-06-CA (Repurchase Agreements PC & Health)

Botsko said this proposal mirrors the life proposal 2024-03-L for repurchase agreements (repos) to reduce the repo charge to 0.2% for programs that meet “conforming program criteria” through the General Interrogatories. However, the annual statement reference column in the P/C and health formulas were marked as “TBD” for pending adoption of the change in the annual statement, General Interrogatories. Botsko also stated that this issue will be revisited at the Spring National Meeting.

Without further discussion, the Task Force agreed to expose proposal 2024-06-CA for a 30-day public comment period ending March 2.

4. Discussed Any Other Matters Brought Before the Working Group

Botsko said the Property and Casualty Risk-Based Capital (E) Working Group is currently exposing proposal 2024-01-P (Schedule P Short Tails) for a 30-day public comment period ending Feb. 24. He stated that the Blanks (E) Working Group is currently exposing a proposal to expand the annual statement, Schedule P short-tail lines to show 10 years of data and a “prior” row beginning in 2024 reporting year. This modified requirement provided detailed information to calculate the RBC underwriting risk factors; therefore, the same information is no longer needed in the RBC formula. Botsko encouraged all interested parties to review the proposal and said the Working Group appreciates comments during the exposure period.

Botsko also said a memorandum from the Statutory Accounting Principles (E) Working Group regarding the collateral loan reporting changes was received Jan. 23. He encouraged all the interested parties to review it. The Task Force will discuss it at the Spring National Meeting.

Having no further business, the Capital Adequacy (E) Task Force adjourned.

SharePoint/NAIC Support Staff Hub/Member Meetings/E CMTE/CADTF/2024-1-Fall/Jan 31 CADTF minutes.docx

## Draft Pending Adoption

Draft: 12/11/23

Capital Adequacy (E) Task Force  
Orlando, Florida  
December 2, 2023

The Capital Adequacy (E) Task Force met Dec. 2, 2023, in Orlando, FL. The following Task Force members participated: Judith L. French, Chair, represented by Tom Botsko and Dale Bruggeman (OH); Grace Arnold, Vice Chair, represented by Fred Andersen (MN); Lori K. Wing-Heier represented by David Phifer (AK); Mark Fowler represented by Sheila Travis and Blase Abreo (AL); Ricardo Lara represented by Thomas Reedy (CA); Michael Conway represented by Rolf Kaumann (CO); Andrew N. Mais represented by Wanchin Chou (CT); Karima M. Woods represented by Philip Barlow (DC); Michael Yaworsky represented by Jane Nelson and Carolyn Morgan (FL); Doug Ommen represented by Mike Yanacheak (IA); Dana Popish Severinghaus represented by Vincent Tsang (IL); Amy L. Beard represented by Roy Eft (IN); Vicki Schmidt represented by Tish Becker (KS); Sharon P. Clark represented by Vicki Lloyd (KY); Kathleen A. Birrane represented by Lynn Beckner (MD); Chlora Lindley-Myers represented by Shannon Schmoeger and Debbie Doggett (MO); Troy Downing represented by Kari Leonard (MT); Mike Causey represented by Jackie Obusek (NC); Jon Godfread represented by Matt Fischer (ND); Eric Dunning represented by Andrea Johnson and Lindsay Crawford (NE); D.J. Bettencourt represented by Jennifer Li (NH); Justin Zimmerman represented by David Wolf (NJ); Glen Mulready represented by Diane Carter and Eli Snowbarger (OK); Michael Wise represented by Ryan Basnett (SC); Cassie Brown represented by Jamie Walker and Rachel Hemphill (TX); Mike Kreidler represented by Steve Drutz (WA); and Nathan Houdek represented by Amy Malm (WI).

### 1. Adopted its Oct. 11 and Sept. 18 Minutes

Botsko said the Task Force met Oct. 1 and Sept 18. During its Oct. 11 meeting, the Task Force took the following action: 1) adopted its 2024 proposed charges, which the Task Force exposed for a 30-day public comment period that ended Sept. 13; 2) adopted its revised procedures document, which the Task Force exposed for a 30-day public comment period that ended Sept. 13; 3) received a status update from its Risk Evaluation Ad Hoc Subgroups; 4) discussed a referral from the Statutory Accounting Principles (E) Working Group regarding Schedule BA proposal for non-bond debt securities; 5) exposed proposal 2023-12-CA for a 33-day public comment period that ended Nov. 13; and 6) discussed the risk-based capital (RBC) charge for companies reported as blank affiliate types in the details for affiliated stock page.

During its Sept. 18 meeting, the Task Force took the following action: 1) adopted its Summer National Meeting minutes; 2) discussed editorial changes in the affiliated investments; and 3) adopted 2023 newsletters.

Chou made a motion, seconded by Andersen, to adopt the Task Force's Oct. 11 and Sept. 18 minutes (Attachments One and Two). The motion passed unanimously.

### 2. Adopted the Reports of its Working Groups

#### A. Health Risk-Based Capital (E) Working Group

Drutz said the Health Risk-Based Capital (E) Working Group met Nov. 8 and took the following action: 1) adopted its July 25 minutes and noted the Working Group met Oct. 2 in regulator-to-regulator session, pursuant to paragraph 3 (specific companies, entities, or individuals) of the NAIC Policy Statement on Open Meetings, which included the following action: a) adopted its May 17 and April 17 minutes; b) adopted its 2023 health RBC newsletter; c) adopted its 2022 health RBC statistics; d) exposed proposal 2023-11-H; e) referred the health test proposal to the Blanks (E) Working Group; f) heard an update from the American Academy of Actuaries (Academy) on the health care receivables and H2-underwriting risk review projects; g) adopted its updated working agenda;

## Draft Pending Adoption

h) received an update on the Excessive Growth Charge Ad Hoc Group; and i) discussed pandemic risk; 2) adopted proposal 2023-11-H for page XR014 Fee for Service and Other Risk Revenue for Medicare and Medicaid; 3) heard an update from the Academy on the health care receivables and H2-underwriting risk review projects, and the Working Group agreed to expose the Academy's Health Care Receivable presentation for a 61-day public comment period ending Jan. 8, 2024; 4) discussed pandemic risk and heard a presentation from the Texas Department of Insurance (TDI); 5) received an overview of the Risk Evaluation Ad Hoc Group; and 6) discussed questions on the 2022 health RBC statistics.

### B. Risk-Based Capital Investment Risk and Evaluation (E) Working Group

Barlow said the Risk-Based Capital Investment Risk and Evaluation (E) Working Group met Dec. 2 and took the following action: 1) adopted its Summer National Meeting minutes; 2) adopted its Oct. 17 minutes, which included the following action: a) continued discussion of the Academy candidate principles for structured securities risk-based capital; 3) received updates from the Valuation of Securities (E) Task Force and the Statutory Accounting Principles (E) Working Group; 4) heard a presentation from the Academy on updates to its candidate principles for structured securities RBC, and the Working Group agreed with the Academy to use these principles for developing the RBC methodology for collateralized loan obligation (CLO); and 5) discussed the process for revisions to the residual tranche factors.

### C. Life Risk-Based Capital (E) Working Group

Barlow said the Life Risk-Based Capital (E) Working Group met Dec. 2 and took the following action: 1) adopted its Summer National Meeting minutes; 2) adopted its Oct. 4 minutes, which included the following action: a) discussed C-2 mortality risk; 3) discussed repurchase agreements; 4) exposed a C-2 mortality risk memorandum for a 10-day public comment period ending Dec. 15; and 5) discussed its subgroups, working agenda, and 2024 priorities.

### D. Property and Casualty Risk-Based Capital (E) Working Group

Botsko said the Property and Casualty Risk-Based Capital (E) Working Group and the Catastrophe Risk (E) Subgroup met Dec. 2 and took the following action: 1) adopted their Nov. 16 minutes, which included the following action: a) exposed proposal 2023-16-CR for a seven-day public comment period that ended Nov. 23 and b) heard a presentation from the Academy on the report *Update to Property and Casualty Risk-Based Capital Underwriting Factors and Investment Income Adjustment Factors*; 2) adopted the Property and Casualty Risk-Based Capital (E) Working Group's July 27 minutes, which took the following action: a) adopted its June 26 and April 24 minutes, which included the following action: i) adopted its Spring National Meeting minutes; ii) adopted proposal 2023-02-P, which provided a routine annual update to the line 1 premium and reserve industry underwriting factors in the property/casualty (P/C) RBC formula; and iii) adopted proposal 2023-02-P-MOD, which updated the homeowners/farmowners multiple perils (H/F), workers' compensation, and commercial multiple peril (CMP) reserve factors due to an incorrect calculation; b) adopted the report of the Catastrophe Risk (E) Subgroup; c) adopted the 2023 P/C RBC newsletter; d) discussed 2022 RBC statistics; e) discussed its working agenda; f) discussed the possibility of reviewing and analyzing the P/C RBC charge that has not been reviewed since developed; g) heard updates on current P/C RBC projects from the Academy; 3) adopted the Catastrophe Risk (E) Subgroup's July 18 minutes, which included the following action: a) adopted Spring National Meeting minutes; b) discussed its working agenda; c) received an update from its Catastrophe Model Technical Review Ad Hoc Group; d) discussed wildfire peril impact analysis; e) heard a presentation from Verisk on a severe convective storms model update and technical review; and f) discussed the flood insurance market; 4) adopted proposal 2023-16-CR; 5) adopted the Property and Casualty Risk-Based Capital (E) Working Group and Catastrophe Risk (E) Subgroup's working agenda; 6) exposed proposal 2023-14-P for a 60-day public comment period ending Jan. 30; 7) exposed proposal 2023-15-CR for a 60-day public comment period ending Jan. 30; 8) discussed the wildfire peril

## Draft Pending Adoption

impact analysis; 9) exposed proposal 2023-13-CR for a 60-day public comment period ending Jan. 30 ; 10) received updates from the Convective Storm Model Review Ad hoc Group on the convective storm technical review; 11) discussed the Academy's report *Update to Property and Casualty Risk-Based Capital Underwriting Factors and Investment Income Adjustment Factors*; and 12) discussed the Florida Commission on Hurricane Loss Projection Methodology.

Kaumann made a motion, seconded by Doggett, to adopt the reports of the Health Risk-Based Capital (E) Working Group (Attachment Three), the Life Risk-Based Capital (E) Working Group (Attachment Four), the Property and Casualty Risk-Based Capital (E) Working Group (Attachment Five), and the Risk-Based Capital Investment Risk and Evaluation (E) Working Group (Attachment Six). The motion passed unanimously.

### 3. Received Updates from its Subgroups

#### A. Risk-Based Capital Purposes and Guidelines Ad Hoc Subgroup

Hemphill said this subgroup has met a few times and has added several paragraphs to the Risk-Based Capital Preamble. These paragraphs, as well as some other edits, have clarified the intent of RBC as a tool to identify weakly capitalized companies and not as a rating system. In upcoming meetings, the plan is to finalize the wording and then share the document with the Task Force.

#### B. Asset Concentration Ad Hoc Subgroup

Clark said the subgroup has met three times and is working on developing a flow chart to help identify assets that are unique and may need additional research to assess their risk and, potentially, a separate RBC charge. This flowchart may also help to identify how these new risks may be separated into existing categories. In upcoming meetings, the plan is to continue work on the flow charts, as well as other ideas on new investment types. He also said the Ad Hoc Subgroup plans to schedule one more meeting in December.

#### C. Geographic Concentration Ad Hoc Subgroup

Chou said a conference call with Florida and Louisiana regulators was set up last month to gain a better understanding of how they monitor and manage the potential geographic concentration risk in their states. He stated that further discussion with these state regulators is necessary to collect more in-depth technical information on how to enhance the RBC charge to provide a proper early warning signal to the state regulators. Chou also said the Ad Hoc Subgroup will meet again on Dec. 13 to continue discussing this issue. In addition, the Ad Hoc Subgroup plans to talk with rating agency representatives to gain a better understanding of how they handle geographic concentration risk exposure.

### 4. Adopted Proposal 2023-11-H (Line 4 and 10 XR015 Medicare and Medicaid)

Drutz said this proposal was developed to include Medicare and Medicaid fee-for-service and other risk revenue amounts in column 1, lines 4 and 10 on pages XR013 and XR014. This change creates consistency across column 1, lines 2, 3, 4, 7, and 10 since Medicare and Medicaid premiums and claims are already included in column 1, lines 2, 3, and 7. He also stated that the proposal only impacts the health formula and was adopted at the Health Risk-Based Capital (E) Working Group's Nov. 7 meeting.

Drutz made a motion, seconded by Doggett, to adopt Proposal 2023-11-H (Attachment Seven). The motion passed unanimously.

## Draft Pending Adoption

### 5. Adopted Proposal 2023-12-CA (Market Value Excess Affiliated Stock)

Botsko said the purpose of this proposal is to clarify that both common and preferred stock amounts should be included in column 13 of the “Calculation of Market Value in Excess of Stocks for the Affiliated Investments” detail page in both health and P/C RBC formulas. He said this proposal was exposed for a 33-day public comment period that ended Nov. 13, and there were no comments received during the exposure period.

Lloyd made a motion, seconded by Chou, to adopt Proposal 2023-12-CA (Attachment Eight). The motion passed unanimously.

### 6. Adopted Proposal 2023-16-CR (2023 Cat Event List)

Chou said proposal 2023-16-CR provides routine catastrophe events updates twice. This update adds Jan. 1 through Oct. 31, 2023, U.S. and non-U.S. catastrophe risk events to the catastrophe event list. He also stated that this proposal was exposed for a seven-day public comment period that ended Nov. 23, and no comments were received during the exposure period. He also indicated that the Working Group and Subgroup will re-expose this proposal in January 2024 for the events that will happen between Nov. 1 and Dec. 31, 2023. Chou also indicated that one of the members noted a typo in the date range of the Hurricane Lee item at the joint Working Group and Subgroup meeting. Also, Doggett pointed out the misspelling of “hurricane” in the Hurricane Hilary item.

Chou made a motion, seconded by Reedy, to adopt Proposal 2023-16-CR with both edits (Attachment Nine). The motion passed unanimously.

### 7. Adopted its Working Agenda

Botsko summarized the changes to the 2023 working agenda. He said there are no changes for Health Risk-Based Capital (E) Working Group, Life Risk-Based Capital (E) Working Group, and Risk-Based Capital Investment Risk and Evaluation (E) Working Group sections. Regarding the Property and Casualty Risk-Based Capital (E) Working Group section, he said the working agenda included the following substantial changes: 1) changing the expected completion date to the items P1 through P4 and P6 and 2) updating the comment column to the items P1, P4, and P8. Lastly, Botsko stated that the Task Force working agenda was updated as follows: 1) the comment for CA3 was updated and 2) items CA5 and CA6 were added to the “new items” section. Chou noted that the exposure period for P1 and P8 should be 60 days.

Chou made a motion, seconded by Andersen, to adopt the Task Force’s revised 2024 working agenda with the update of the exposure period (Attachment Ten). The motion passed unanimously.

### 8. Discussed a Referral from the Statutory Accounting Principles (E) Working Group Regarding Schedule BA Proposal for Non-Bond Debt Securities of Life Insurers

Botsko said at the Oct. 11 meeting, the Task Force exposed the referral for a 33-day public comment period that ended Nov. 13. He stated that the Task Force received one comment letter from the American Council of Life Insurers (ACLI) (Attachment Eleven) during the exposure period. He also indicated that the ACLI is supportive of the proposed categorizations but is concerned that without addressing RBC concurrently, there may be RBC impacts for insurance companies. Mike Reus (Northwestern Mutual) also said that as the ACLI recognizes the challenges of developing RBC factors, utilizing ratings and/or NAIC designations are worth considering. Botsko suggested referring this item to the Risk-Based Capital Investment Risk and Evaluation (E) Working Group to determine the appropriate RBC charges for these security categories.



## Draft Pending Adoption

The Task Force agreed to forward the referral from the Statutory Accounting Principles (E) Working Group along with the ACLI comment to the Risk-Based Capital Investment Risk and Evaluation (E) Working Group.

### 9. Discussed the Possible Structure Changes in the Bond Page to Reflect the Split of the Annual Statement Schedule D, Part 1 into Two Sections

Botsko said proposal 2023-05BWG MOD was adopted at the Oct. 11 Blanks (E) Working Group meeting. The purpose of this proposal is to update the bond categories per the Statutory Accounting Principles (E) Working Group's bond project by splitting Schedule D, Part 1 into two sections—one for issuer credit obligations and the other for asset-backed securities (ABS). He also asked NAIC staff to update the RBC bond page structure for discussion in the next meeting. Bruggeman believes that the Risk-Based Capital Investment Risk and Evaluation (E) Working Group is currently working on the factors and structure for this project. Botsko recommended sending a referral to the Risk-Based Capital Investment Risk and Evaluation (E) Working Group to continue reviewing this project.

The Task Force agreed to send a referral to the Risk-Based Capital Investment Risk and Evaluation (E) Working Group.

### 10. Discussed the RBC Charge for Blank Affiliates Reported in the Details for Affiliated Stock Page

Botsko said that as discussed in the last meeting, the blank affiliate type should not be allowed if companies reported amounts in any of the numeric columns. He said one of the alternatives to address this issue is to consider asking NAIC staff to develop a crosscheck to ensure companies report affiliate type code in the affiliate type column. Botsko also encouraged RBC software vendors to spend time brainstorming on the appropriate feature in their software to prohibit the blank affiliates reported in the Details for Affiliated Stock page.

### 11. Discussed the "Framework for Regulation of Insurer Investments—A Holistic Review" Document

Botsko said that the Task Force is supportive of the document (Attachment Twelve) conceptually. He stated that the Task Force already works in the way that the document describes, meaning the Task Force works with other related Working Groups and Task Forces as it develops and exposes proposals that may impact other aspects of the annual statement reporting process. He encouraged members and interested parties to provide comments.

### 12. Discussed a Referral from the Statutory Accounting Principles (E) Working Group Regarding Negative Interest Maintenance Reserve

Botsko said that the Task Force discussed the issue of the negative interest maintenance reserve (IMR) at the Summer National Meeting. Bruggeman said the Statutory Accounting Principles (E) Working Group adopted the short-term interpretation project during its meeting at the Summer National Meeting. He stated that this project is good through year-end 2025 to give the industry, regulators, and other interested parties time to hash out a long-term approach. Botsko thought that this referral should be forwarded to the Life Risk-Based Capital (E) Working Group for further discussion since this issue will only impact the Life Risk-Based Capital formula.

The Task Force agreed to forward the referral from the Statutory Accounting Principles (E) Working Group to the Life Risk-Based (E) Working Group.

Having no further business, the Capital Adequacy (E) Task Force adjourned.

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*Virtual Meeting***HEALTH RISK-BASED CAPITAL (E) WORKING GROUP**

February 22, 2024

**Summary Report**

The Health Risk-Based Capital (E) Working Group met Feb. 22, 2024. During this meeting, the Working Group:

1. Adopted its Nov. 8, 2023, minutes, which included the following action:
  - A. Adopted its July 25, 2023, minutes.
  - B. Adopted proposal 2023-11-H (Fee-For-Service and Other Risk Revenue-Medicare & Medicaid), which the Working Group exposed for a 30-day public comment period ending Aug. 24, 2023.
  - C. Exposed the American Academy of Actuaries (Academy) presentation on health care receivables for a 61-day public comment period ending Jan. 8, 2024.
  - D. Received an update from the Academy on the H2 – Underwriting Review project.
  - E. Discussed pandemic risk and received the report, “Pandemic Risk and Insurer Solvency – A Review of Personal Consumption Expenditures on Healthcare Before, During and After the COVID-19 Pandemic.”
  - F. Discussed the Risk Evaluation Ad Hoc Group.
  - G. Discussed questions on the 2022 health risk-b capital (RBC) statistics.
2. Exposed proposal 2024-09-CA for the Underwriting Risk Factors—Investment Income Adjustment for a 32-day public comment period ending March 25, 2024. The proposal adjusts the underwriting risk factors for comprehensive medical, Medicare supplement, and dental and vision to reflect the investment income adjustment. They were updated using a 5.5% adjustment.
3. Discussed comments received from the UnitedHealth Group on the Academy’s health care receivables presentation. The letter addressed four key areas: 1) degree of aggregation of non-pharmacy health care receivables (HCR); 2) inclusion of blue blank data; 3) entities with zero collections; and 4) weighting of data points.
4. Discussed pandemic risk and agreed to send a referral to the Financial Analysis Solvency Tools (E) Working Group and the Financial Examiners Handbook (E) Technical Group that pandemic risk may be best addressed in the analysis and exam process.
5. Adopted its 2024 working agenda.
6. Heard a presentation from the Academy on the H2 – Underwriting Review project. This is important because the Academy is performing a comprehensive review of the H2 component, which includes comprehensive medical, dental and vision, stand-alone Medicare Part D, and Medicare supplement.

*2024 Spring National Meeting*  
*Phoenix, Arizona*

**RISK-BASED CAPITAL INVESTMENT RISK AND EVALUATION (E) WORKING GROUP**

Sunday, March 17, 2024

8:00 – 9:00 a.m.

**Meeting Summary Report**

The Risk-Based Capital Investment Risk and Evaluation (E) Working Group met March 17, 2024. During this meeting, the Working Group:

1. Adopted its 2023 Fall National Meeting minutes.
2. Received updates from the Valuation of Securities (E) Task Force and the Statutory Accounting Principles (E) Working Group.
3. Heard an update from the American Academy of Actuaries (Academy) on their asset-backed securities RBC workstreams as well as their planned review of the Oliver Wyman residual tranche study.
4. Discussed residual tranches, receiving comments from the Alternative Credit Council representatives on the Oliver Wyman study and the ACLI on the 2024 45% RBC factor. The Working Group exposed the report from Oliver Wyman with a 21-day public comment period ending April 8, 2024.
5. Discussed next steps and requested feedback on a memo detailing the proposed next project to review registered and diversified funds and the way to move forward on this initiative.

*2024 Spring National Meeting*  
*Phoenix, Arizona*

**LIFE RISK-BASED CAPITAL (E) WORKING GROUP**

Sunday, March 17, 2024  
9:00 – 10:00 a.m.

**Meeting Summary Report**

The Life Risk-Based Capital (E) Working Group met March 17, 2024. During this meeting, the Working Group:

1. Adopted its 2023 Fall National Meeting minutes.
2. Adopted its Jan. 25, 2024, minutes. During this meeting, the Working Group took the following action:
  - A. Discussed the American Council of Life Insurers' (ACLI's) repurchase agreement proposal.
  - B. Discussed a proposal to add a line for total adjust capital (TAC) adjustment for non-admitted affiliates.
  - C. Discussed a proposal to add a line to schedule BA mortgages for omitted asset valuation reserve (AVR).
3. Received updates from its subgroups.
  - A. Generator of Economic Scenarios (GOES) (E/A) Subgroup
  - B. Longevity Risk (E/A) Subgroup
  - C. Variable Annuities Capital and Reserve (E/A) Subgroup
4. Heard a presentation by the American Academy of Actuaries (Academy) on C-3 risks.
5. Discussed repurchase agreements. Re-exposed proposal 2024-03-L RBC Repurchase Agreement proposal with 30-day public comment period ending April 15, 2024.
6. Heard a presentation by the Academy on covariance.

*2024 Spring National Meeting  
Phoenix, Arizona*

**JOINT MEETING OF THE PROPERTY AND CASUALTY RISK-BASED CAPITAL (E) WORKING GROUP  
AND CATASTROPHE RISK (E) SUBGROUP**

Sunday, March 17, 2024  
10:00 – 11:00 a.m.

**Meeting Summary Report**

The Property and Casualty Risk-Based Capital (E) Working Group and the Catastrophe Risk (E) Subgroup met March 17, 2024. During this meeting, the Working Group and Subgroup:

1. Adopted their Jan. 30 minutes. During their meeting, the groups took the following action:
  - A. Adopted proposal 2023-16-CR (2023 Cat Event List), which they had exposed for a 7-day public comment period that had ended Jan. 23.
2. Adopted the Catastrophe Risk (E) Subgroup’s Jan. 29 minutes. During this meeting, the Subgroup took the following action:
  - A. Exposed proposal 2023-17-CR (Climate Scenario Analysis) for a 30-day public comment period that ended Feb. 28.
  - B. Discussed severe convective storm peril impact analysis.
  - C. Discussed wildfire peril impact analysis.
  - D. Heard updates on the Geographic Concentration Ad Hoc Subgroup.
3. Adopted their 2023 Fall National Meeting minutes.
4. Adopted proposal 2023-13-CR (Cat Risk Insurance Program Interrogatory).
5. Adopted proposal 2024-01-P (Schedule P Short Tails).
6. Adopted proposal 2023-14-P (Pet Insurance).
7. Adopted proposal 2023-15-CR (Convective Storm for Information Purposes Only Structure).
8. Adopted the Property and Casualty Risk-Based Capital (E) Working Group and Catastrophe Risk (E) Subgroup’s working agenda.
9. Exposed proposal 2024-10-P (Other Health Line) for a 30-day public comment period ending April 17.
10. Re-exposed proposal 2023-17-CR (Climate Scenario Analysis) for a 22-day public comment period ending April 8.
11. Discussed wildfire and convective storm impact analysis.

12. Exposed underwriting risk factors and investment income adjustment factors for a 30-day public comment period ending April 16.

## RISK EVALUATION AD HOC GROUP SUMMARY

**May 22, 2023**

Tom Botsko (OH) said the purposes of the Ad Hoc Group are to: 1) evaluate the risk-based capital (RBC) factors; 2) potentially develop an evaluation process; and 3) prioritize those factors that require review.

Steve Drutz (WA) said the Health Risk-Based Capital (E) Working Group is currently reviewing: 1) the underwriting risk; and 2) excessive growth risk charges.

Philip Barlow (DC) said the Life Risk-Based Capital (E) Working Group is currently reviewing and analyzing the current formula holistically to determine: 1) what areas of the formula should be updated; 2) C2 mortality risk; and 3) the covariance formula.

Botsko said the asset risk review may defer back to the Risk-Based Capital Investment Risk (E) Working Group. All other risks will be discussed by the Ad Hoc Group to determine whether they can be addressed on a global basis.

**Suggested areas of focus:**

All Lines:

- 1) Phase 2 Bond Factors. Wanchin Chou (CT) said to think about the action plan to implement phase 2 of the bond project.
- 2) Asset Concentration Factors. Kevin Clark (IA) said the Ad Hoc Subgroup should determine whether: 1) structured securities should be included in the asset concentration; and 2) clear guidance is treated consistently across companies on a global basis. Edward Toy (Risk & Regulatory Consulting) said there are no good concentration risk measures within the regulatory framework and that the Ad Hoc Group should determine what should be subject to the concentration risk charge.
- 3) The purpose of RBC. Ali Zaker-Shahrak (CA) said the Ad Hoc Group should focus on: 1) the relationship between the capital that companies are required to hold and the actual capital that companies hold; and 2) what the purpose of RBC should be in addition to the reserves. Brian Bayerle (American Council of Life Insurers—ACLI) added that the Ad Hoc Subgroup should focus on: 1) an overall assessment of the effectiveness of the RBC formula by line of business; and 2) developing a guideline for when and how long the factors get reviewed. Allan Kaufman (Academy) said: 1) the RBC purpose should be written down; and 2) there will be a difference between the RBC capital and the actual capital by type of insurance due to how the formulas are calibrated.
- 4) Matthew Richard (TX) said that having more clarity on the objectives and what we want the RBC to accomplish would be helpful.
- 5) Jim Braue (UnitedHealth Group—UHG) said that companies tend to hold more capital due to marketing standpoints and different state capital requirements. He asked: 1) whether those additional state capital requirement rules are needed if RBC is sufficient; 2) how many companies are liquidated; and 3) what regulatory intervention should be taken, and the effectiveness when companies fall into the action levels.

## RISK EVALUATION AD HOC GROUP SUMMARY

- 6) Botsko suggested that developing a statement or definition of what RBC represents and the purpose of the RBC will be a good starting point.

## Property/Casualty (P/C):

- 1) Smith said that RBC's inflationary environment and adjustment should be warranted.
- 2) Kaufman said that a 2021 American Academy of Actuaries (Academy) Underwriting Risk report had a list of issues related to the P/C Underwriting risk, and the Casualty Actuarial Society (CAS) research identified some issues, such as company size and reinsurance. Small companies are riskier, but there are no risk factors to address this issue. Kaufman said the CAS suggests that companies buy more reinsurance if the insurance companies are riskier.
- 3) Steve Broadie (American Property Casualty Insurance Association—APCIA) shared the Sholom Feldblum paper with the Ad Hoc Group.

## Life:

- 1) Nancy Bennett (Academy): 1) review of the regulatory trigger points enshrined in the RBC Model Law; 2) interaction of RBC with other elements on the balance sheet; 3) AVR, is AVR still a useful concept in the Solvency Framework? and 4) review the overlap between reserves and capital.
- 2) Bill Carmello (NY): review the 95% probability of adequacy over a five-year period, and the overall formula is in the 99% range.

The Ad Hoc Group thanks the following members and interested parties for providing comments: Botsko, Chou, Drutz, Barlow, Richard, Zaker-Shahrak, Carmello, Clark, Broadie, Toy, Bayerle, Braue, Jeremy Smith (Academy), Bennett (Academy), and Kaufman.

**June 14, 2023**

Botsko said that based on the conversation in the last meeting, the Ad Hoc Group agreed to focus on: 1) providing updates to the RBC working groups; 2) clarifying that RBC should not be used as a rating tool; and 3) reviewing factors, different risks, the size of companies, and state requirements.

Areas of focus:

- 1) Company Size. Botsko said the 2021 Academy Underwriting Risk Report had a list of issues. David Traugott (Academy) said to consider the relationship with the volatility results in the size.
- 2) Geographic Concentration. Botsko: Companies only write business in five states or less and concentrate on certain lines of business or certain parts of the country.
- 3) Reinsurance. Botsko asked whether the Ad Hoc Group should consider extra charges for those companies with a high volume of reinsurance. He added that operational risk factors should also be reviewed. Toy said the Ad Hoc Group should review providers of reinsurance capital, where companies manage the assets in the trust of funds withheld accounts. Joseph Sieverling



## RISK EVALUATION AD HOC GROUP SUMMARY

(Reinsurance Association of America—RAA) said a study would need to be done to determine whether it is causation or just a correlation.

- 4) Covariance. Botsko said the covariance formula will be re-evaluated.
- 5) Group Capital Calculation. Traugott said the Ad Hoc Group should evaluate the possibility of reviewing the group capital calculation (GCC) on a group-level basis.
- 6) Purpose of RBC. Bennett said the Ad Hoc Group should determine whether using RBC to control future risk is one of the purposes of RBC.
- 7) Deferred Tax Asset. Braue said the Ad Hoc Group should determine whether the deferred tax asset is still appropriate.
- 8) Benchmark. Braue said most states embedded action levels in the law because it is in the *Risk-Based Capital (RBC) for Insurers Model Act* (#312). Botsko said we do not change the model law unless we determine that it is warranted. Bennett said the benchmark that was established in the early 1990s was based on the trouble companies. She suggested using a more statistical way to determine the trigger points. Zaker-Shaharak said the purpose of RBC is to create a line of defense. If the proposed changes require a change to the model law, then the model law will have to change.

Developing the process and guidelines:

Botsko asked the Ad Hoc Group to consider the following process: 1) discuss where and what the Ad Hoc Group will need to focus on; 2) break into smaller groups to review the specific topics; and 3) report back to the Ad Hoc Group. He also stated that the Ad Hoc Group should keep notes and write down those guidelines or processes, and then come up with an overall outline in the end.

Braue suggested developing a process for monitoring and identifying changes in products and investments that are implicated in the RBC formulas. He is also interested to see whether there is a way to drill down and see which companies are experiencing financial difficulties. Traugott asked whether developing a stress test for investments within the entire investment portfolio of the company within RBC would address the issue. Toy said that he is concerned about how granular the stress testing is. Braue replied that it would be a cost-benefit issue. Wilkins added that the Own Risk and Solvency Assessment (ORSA) report provides flexibility in designing the stress tests that are suitable to that company's risk profile. Botsko said ORSA only applies to large companies, but what can be seen in stress testing can be utilized and something all the RBC filers can come up with. Zaker-Shaharak commented that ORSA allows companies to evaluate their own risk.

Broadie asked the Ad Hoc Group to consider the idea of not putting unnecessary burdens on the companies while evaluating the possibility of making changes.

The Ad Hoc Group thanks the following members and interested parties for providing comments: Botsko, Zaker-Shaharak, Broadie, Toy, Braue, Traugott, Bennett, Ron Wilkins (Academy), and Sieverling.

## RISK EVALUATION AD HOC GROUP SUMMARY

**July 26, 2023**

Purposes/Guidelines of the RBC:

- 1) RBC is for regulatory purposes, and it is not intended and designed for other purposes.
 

Zaker-Shahrak: He said state insurance regulators should not just focus on the benchmarks but also the trend of RBC. For example, state insurance regulators should flag a company with 500% RBC in a previous year and going down to 300% RBC this year.

Botsko: He emphasized that RBC is just one of many tools for the state insurance regulators to determine companies' insolvency; it is not a rating tool.

Bayerle: He said as the work progresses, the Ad Hoc Group should look at the factors and covariances. The change to the framework makes sense, but it needs to make sure that those rating agencies that are using RBC as part of their inputs understand what changes were made. He also said regarding the process of changing factors, the Ad Hoc Group should determine: a) the frequency of changing factors; and b) whether the situation on the ground has changed enough to warrant new factors.

Braue: He said RBC seems to be deviating from the principle by introducing RBC thresholds other than actual action levels, such as accounting guidance for deferred tax assets and the admission of negative interest maintenance reserve (IMR).

Toy: He said rating agencies do not use RBC for assigning their ratings. They have their own metrics, but they recognize the thresholds that the NAIC has. For example, if there is a risk that state insurance regulators could take action because the RBC ratio is below 300 and is dropping below 200, the rating agencies will include it in their rating process.

Botsko: The American Academy of Actuaries (Academy) P/C Underwriting Risk report will be released in a few weeks, which will be a great resource for the Ad Hoc Group to decide how it wants to proceed with different items.
- 2) Phase 2 Bond Factors
 

Botsko: He said the purpose of the Ad Hoc Group is to review the non-investment risks. Any risks that are associated with the investments will be deferred to the RBC Investment Risk and Evaluation (E) Working Group. However, the Ad Hoc Group will monitor this project closely and provide constant updates to the members.

Risk Evaluation Ad Hoc Subgroup:

Three ad hoc subgroups were established to focus on specific items:

<b>Subgroup</b>	<b>Lead</b>	<b>NAIC Staff Support</b>
Asset Concentration	Ed Toy	Maggie Chang
Geographic Concentration	Wanchin Chou	Eva Yeung
RBC Purposes and Guidelines	Rachel Hemphill	Crystal Brown

Thank you to the following members and interested parties for providing comments: Botsko, Chou, Zaker-Shahrak, Toy, Braue, Bayerle, and Kaufman.

**Sept. 26, 2023**

There was no discussion on the July 26, 2023, summary, as it will be circulated after the call. No roll call is needed.

## RISK EVALUATION AD HOC GROUP SUMMARY

Hemphill gave a report on behalf of the RBC P&G Ad Hoc Subgroup, which conducted its first meeting a week prior to this call. The group discussed potential edits to the RBC preamble—mainly edits to clarify and emphasize the purposes and intended use of RBC. The Ad Hoc Subgroup also discussed potential changes to the handbooks and the development of a one-page statement to be posted on the RBC web pages to reiterate the purpose of RBC. As a next step, the Ad Hoc Subgroup also would like to perform some analysis to decide if there is a better use of RBC.

Toy gave a report on behalf of the Asset Concentration Ad Hoc Subgroup, which conducted two meetings prior to this call. The first call focused primarily on concepts and brainstorming of issues related to asset concentrations. The second call went down the path of reviewing an inventory of potential asset concentration considerations. The inventory is by no means exhaustive but is sourced from investment-related disclosures currently found in statutory filings. The Ad Hoc Subgroup members are to review the inventory further and provide feedback (e.g., additions, refinement, and prioritization ideas). The Ad Hoc Subgroup also discussed developing a framework proposed by Clark in the form of a flowchart to help deliberate whether RBC is the right solution for any asset concentration risk identified. The flowchart is currently in the works and is anticipated to be provided to the Ad Hoc Subgroup prior to its next call Oct. 9, 2023.

Botsko cautioned the Ad Hoc Subgroup that RBC is one of the many regulatory tools to identify companies that are not properly capitalized. RBC is a high-level test by design. While the group is deliberating whether the RBC solution is right for the asset concentration risk observed, the appropriate balance should be struck between transparency and robustness versus the effectiveness of the tool.

Chou gave a report on behalf of the Geographical Concentration Ad Hoc Subgroup, which met Sept. 13. The group discussed the issues of southeast Louisiana companies going under due to hurricanes. Chou and Botsko are going to discuss this with Florida state insurance regulators after this meeting and report back to the group. The Ad Hoc Subgroup also discussed the fact that, while geographical concentration is a relevant topic for P/C insurers, it would like to brainstorm how applicable geographical concentration is to health and life insurers. Lastly, the Ad Hoc Subgroup agreed to meet on the second Wednesday of each month. The next meeting is scheduled for Oct. 11.

Regarding the second agenda item, Botsko reminded the groups that any discussions in any of the ad hoc subgroups could potentially impact more than one line of businesses (i.e., health, life, and P/C). He said that group members should be cognizant of how topics discussed impact different lines and to what degree. In addition, the monthly meeting of the RBC Risk Evaluation Ad Hoc Group (the parent group) is to provide reports of activities within subgroups. This will help ensure no overlap of work. Botsko said he appreciated Bennett's participation in this call and believed her input from the life RBC project will make sure the Asset Concentration Ad Hoc Subgroup is not contradicting the life RBC workstream or duplicating work. Bennett expressed interest in attending the Asset Concentration Ad Hoc Subgroup call. She recalled that during the C-1 bond factor project, a little bit of time was spent on asset concentration discussion, mainly through the portfolio adjustment factor. In addition to that, the basic factors also have asset concentration considerations in mind. The basic factors are developed from the modeling of a representative portfolio (e.g., a ~800 investment securities portfolio that is representative of a life insurer's holding) to the statistical safety level of the 96th percentile over 10 years. As such, Bennett agreed that it makes sense to revisit the asset concentration topic through the lens of C-1 factors development.

## RISK EVALUATION AD HOC GROUP SUMMARY

Clark brought up the topic of how to determine materiality at the industry level as well as an individual insurer level. He suspects other ad hoc subgroups will ultimately run into this topic and thought it would make sense to address it at the parent group level. Botsko welcomed the topic and would like members of the meeting to come up with ideas for discussion during the next meeting. Chou said there were materiality-related discussions in P/C and catastrophe risk subgroups, and he would be happy to share the information. Botsko extended the discussion to a potential need for an adjustment factor in the current RBC formula to adjust for the size of the companies. Bennett commented that we tend to measure materiality as a point-in-time concept (static) and may lose sight of the volatility aspect of certain risks. These volatilities are especially meaningful to relatively smaller companies despite not being material for the industry as a whole. Bennett wondered if the RBC formula should address risk that has a lot of volatility. She recalled that the causation of variance/coefficient of variance was being contemplated in portfolio adjustment factor development. While it was theoretically appealing, it was complicated and impractical to implement, so that path was not explored. Botsko agreed that the intent was not to overcomplicate the formula.

Toy echoed the materiality discussion so far and the fact that while the risk is not material to the industry as a whole, it could be very material to individual insurers. This concern is the main reason he spearheaded the Asset Concentration Ad Hoc Subgroup. Through discussion, Toy came to terms with the fact that adequate disclosure may be the solution. Botsko agreed and said the topic of runoff insurers arrived at a similar conclusion: a separate RBC formula is not a better approach. He also would not preclude alternatives like the exam and analysis handbook.

The next meeting is scheduled for Oct 31, 2023.

Thank you to the following members and interested parties for providing comments: Botsko, Hemphill, Toy, Clark, Chou, and Bennett.

**Oct. 31, 2023****Asset Concentration Ad Hoc Subgroup:**

Clark gave a report on behalf of the Asset Concentration Ad Hoc Subgroup. The Ad Hoc Subgroup met two times since the last report was given. During those two meetings, the Ad Hoc Subgroup discussed a decision tree/flowchart that hopefully would be used to guide future conversations on what asset concentration elements warrant an RBC solution. While the decision tree/flowchart discussion is theoretical, the Ad Hoc Subgroup is getting ready to launch into the inventory of asset concentration elements. The Ad Hoc Subgroup would need to prioritize the asset concentration elements and discuss them in light of the decision tree/flowchart. Further refinement of the decision tree/flowchart is anticipated. In addition, the Ad Hoc Subgroup would like to invite the Academy to give a presentation on portfolio adjustment factors (PAFs) and how they relate to the Top 5 or Top 10 concentration factors and the C-1 bond factors.

Toy added to the report. He said a question was raised by one of the Ad Hoc Subgroup members as to whether the discussion is limited to bonds or intended for broader asset classes. Toy's reaction was that since there is potential asset concentration in all kinds of investments other than bonds (equities, Schedule BA assets, mortgage loans, etc.), and there could be potential regulatory concerns in interest rate risk and

## RISK EVALUATION AD HOC GROUP SUMMARY

currency risk, Toy said we should keep open minds and not limit the conversation to bonds. Botsko agreed and envisioned the possibility of developing additional flowcharts for risks that Toy mentioned.

**Geographic Concentration Ad Hoc Subgroup:**

Chou, Botsko, and NAIC staff had a meeting with Florida regulators Oct. 10 to gain a better understanding of how they monitor and manage the potential geographic concentration risk in Florida. Chou said this will be further discussed with Florida and Louisiana regulators to collect the technical information on this issue, such as how to enhance the RBC charge to provide a proper early warning signal to the state insurance regulators. An Ad Hoc Subgroup call will be scheduled for later this month to provide findings to the members and discuss the follow-up action plan during the upcoming meeting.

**RBC Purposes & Guidelines Ad Hoc Subgroup:**

Hemphill gave a report on behalf of the Ad Hoc Subgroup. The Ad Hoc Subgroup met in October. It continued working on the draft revisions to the RBC preamble to reiterate the purpose of RBC and the ratios and factors. The initial discussion is based on where changes can be incorporated into the preamble, and then the group will look at where else that information can be broadly disseminated, such as a one-sheet summary on the webpage or in other places of the intended scope of RBC. The Ad Hoc Subgroup members were asked at the end of the October meeting to provide some input on further revisions and the drafted changes. Hemphill noted that the Ad Hoc Subgroup will likely be able to wrap up the edits at its next meeting. She said the group also discussed the current use of the authorized control level (ACL) and TAC in the five-year history page of the annual statement and whether it is necessary and useful or may lead to an unintended reliance on RBC outside of its intended scope. The Ad Hoc Subgroup will continue to discuss this topic as well.

Botsko noted that if the Ad Hoc Subgroup moved forward with recommending that TAC and ACL be removed, it would be helpful to keep that five-year information available for state insurance regulators. Hemphill agreed and said the Ad Hoc Subgroup has discussed putting that in the RBC filing, and it is also available in the Profile Report on I-SITE, which is also confidential.

Botsko encouraged all parties to think about other types of risks that we should be considering either across the board or specifically for a type of insurance. He also said someone brought up liquidity risk and asked how that is handled currently. Bennett said the liquidity risk is considered to be managed outside of RBC, requiring the company to hold more assets that could be illiquid and would not help mitigate the liquidity risk.

Thank you to the following members and interested parties for providing comments: Botsko, Hemphill, Toy, Clark, Chou, and Bennett.

**Jan. 30, 2024****Asset Concentration Ad Hoc Subgroup:**

The Asset Concentration Ad Hoc Subgroup met two more times since it last reported its status in October 2023.

During the Nov. 2023 call, Bennett and Jerry Holman (Academy) were invited to walk through the history of the C-1 base factor and portfolio adjustment factor (PAF) derivation process.

## RISK EVALUATION AD HOC GROUP SUMMARY

The members learned that PAF only reflects diversification in terms of a number of issuers but would not adjust the charges for other diversification/concentration considerations such as sector, asset type concentration, etc.

The Ad Hoc Subgroup also met Dec. 19, 2023, and had a more in-depth discussion of the asset concentration elements identified in the inventory/compilation document. Members contributed ideas, expanded the inventory, and made additions to Toy's initial commentary.

The Subgroup is scheduled to meet again Jan. 31, 2024, to further walk through the Asset Concentration Flowchart with a specific concentration element in mind: sector concentration. If the flowchart is substantially completed, the plan is to recommend it to the parent ad hoc group for further review/discussion.

**Geographic Concentration Ad Hoc Subgroup:**

Chou said during its Jan. 10 meeting that the Ad Hoc Subgroup invited AM Best to provide a brief presentation on its rating process. Chou said the process involved different assessment categories. Regarding the geographic concentration prospective, it affects all the categories but prominently the business profile and enterprise risk management categories. He also stated that S&P Global Ratings would provide the last rating agency presentation to the Ad Hoc Subgroup Jan. 31, 2024. Chou said another meeting would be scheduled to discuss the Ad Hoc Subgroup's next step after that meeting. He also said findings will be reported to the upstream ad hoc group in the future. During its Dec. 13, 2023, meeting, Virginia Christy (FL) shared information regarding how Florida: 1) handles the geographic concentration issues; and 2) monitors and evaluates the CAT risks. In addition, Chou said the Ad Hoc Subgroup invited a representative from Demotech to provide a brief presentation on how it evaluates companies in Florida and Louisiana. That information helped the members better understand how to appropriately address the geographic concentration risk in the RBC formula.

**RBC P&G Ad Hoc Subgroup:**

Hemphill said that the RBC Purposes and Guidelines (P&G) Ad Hoc Subgroup had two key items to bring forward: 1) the RBC preamble; and 2) the discussion on removing TAC and ACL from the Five-Year Historical page of the Annual Statement. Hemphill summarized the recommended revisions (highlighted in yellow) to the RBC preamble ([see RBC Preamble in the Jan. 30, 2024 call folder](#)). She said the intent of the revisions was to reiterate what was already in the preamble but to provide greater clarity. She said a new section, "Limited use of Risk-Based Capital," was added to the preamble to address issues that have been brought forward about the inconsistent use of the RBC formula. This section was created to reiterate the limited use of RBC, which is to identify potentially weakly capitalized companies. It is a regulatory oversight tool and was not intended for any other use. It is not a financial strength rating and would not work well as a financial strength rating because it is not meant to rank insurers. An RBC ratio above an action level does not mean one company is stronger than another (e.g., one company has an RBC ratio 25 points higher than another company). Hemphill said state insurance regulators do not use RBC as a stand-alone tool; instead, it is used in conjunction with other tools and comprehensive information. She said that there may be other references to RBC in such instances as determining the admissibility of certain types of assets; however, that goes back to that regulatory oversight and identifying potentially weakly capitalized companies, which is not inconsistent with its purpose. She said the reflections of risk in the RBC factors and formulas were developed based on a long history and, in some instances, based on projections over

## RISK EVALUATION AD HOC GROUP SUMMARY

many years, which is not a snapshot of risk. RBC is a broad tool. Hemphill reiterated that the information was already in the preamble but further emphasized that RBC has one purpose, and it would not be appropriate to use it outside of that purpose.

Zaker-Shahrak said that the first sentence in item 10 states the RBC instructions are confidential and asked why they are confidential. Crystal Brown (NAIC) said that the instructions themselves are not confidential—they are sold as an NAIC publication. Zaker-Shahrak requested that the reference to the instructions be removed from the preamble. Zaker-Shahrak said there that regarding confidentiality, the data that goes into calculating the formula may give insight into a company's various risks. Zaker-Shahrak then asked why the overall RBC number or summary report of the RBC should be confidential. He said we know that rating agencies provide something similar, which is not at all confidential, and asked why we are keeping it confidential from policyholders. He said the policyholders should be aware of the overall level of the company's RBC. Zaker-Shahrak asked why, to the extent that the RBC ratio provides the weakly capitalized versus non-weakly capitalized, this information should be held confidential. Zaker-Shahrak said that it has been emphasized that the RBC is not a ranking of companies; however, at a minimum, you are ranking weakly capitalized and non-weakly capitalized, at least in the form of a pass/fail. He referenced the sentence, "For example, a company with an RBC ratio of 600% is not necessarily financially stronger than a company with an RBC ratio of 400%," and asked if we are sure that the only critical numbers are anything below 200%.

Zaker-Shahrak said that, in his opinion, RBC is probably an imprecise way of ranking financial strength and asked for an explanation as to why it was not, given that the number calculates the risk and considers the covariance and correlation. Hemphill said that the questions and points raised the question of why RBC was intended to be confidential and why it should be confidential. She said any other arguments for any other use treat RBC like a financial strength rating. Hemphill said that is not what we do, and that is not what RBC is. She said the preamble provides examples, such as voluntary reserve strengthening, that would have a negative impact on RBC but would not mean that the company, all other things equal, is financially weaker if the company chooses to do that.

Hemphill said RBC is a very broad tool, and for it to be the most useful for state insurance regulators, it has to have those accurate trigger levels and needs to be calibrated differently than if you were trying to get a complete ranking. She said 800% RBC is no different than 825% RBC. Hemphill said these are different numbers, but it does not mean that you can say anything different about those companies because that is not how the formula is calibrated. She reiterated that the purpose of RBC is to identify potentially weakly capitalized companies, and it is tailored and should be tailored around those levels and thresholds. That is what needs to be corrected. Not every individual RBC ratio is perfect. If that were the case, it would be a different model and a different optimization exercise, and it would get less accurate cut-offs than if you were trying to identify potentially weakly capitalized companies. She said that RBC is about the thresholds and not about a complete ranking. Brown said that when RBC was developed, it was to determine the minimum capital requirements and to give state insurance regulators the authority to take action when an action level was triggered and the RBC ratio fell below 200%. Therefore, anything above 200% really does not mean anything in terms of RBC. She said that RBC was developed to address the concerns with fixed minimum capital standards, especially for established companies that may be writing multiple lines of business. RBC was a way to establish a minimum capital standard based on the risk of the company and

## RISK EVALUATION AD HOC GROUP SUMMARY

then give regulatory authority to the regulators. Carmello agreed and said that RBC replaced a dollar amount minimum surplus requirement and was a step above that, adding that it is very crude.

Birnbaum asked if an example of inappropriate use of RBC is when a rating agency gives a financial strength rating of an A- based in part on the company's RBC ratio. Hemphill said it is not an exact example, but essentially, this is the type of discussion state insurance regulators have seen. Birnbaum said that this is really a financial weakness, not a financial strength rating, which is used to identify a potentially weakly capitalized company that might require some type of regulatory intervention. He asked why that would not be useful information for consumers. A very simple disclosure that could be made is that at any amount above X, there is no distinguishing between companies based on their RBC. He said that in other jurisdictions, companies can publish their regulatory capital ratios.

Hemphill said the concern is that this would be interpreted as a financial strength rating, and that could essentially be disinformation to consumers if it were to be mistaken as a financial strength rating or if it was used by an investor, rating agency, or anyone else in that context. She said the Ad Hoc Subgroup also discussed removing TAC and ACL from the public statement because companies cannot share their RBC levels, and with TAC and ACL being public, people can compute what is supposed to be confidential, which is somewhat contradictory to what we publish; therefore, there is a recommendation to discuss removing TAC and ACL from the five-year historical page. If so, the question is whether there should be some kind of identifier in its place.

Kaufman said that the Academy has some difficulty in calibrating RBC parameters because some data is confidential, which limits the type of help that could be provided. He asked who would do these calibrations if someone such as a member of the Academy or a consultant did not have access to the instructions. Hemphill said this would need to be discussed by the Ad Hoc Subgroup in more detail because this was already included in the preamble and is outside of the suggested changes.

Sarper asked if RBC would effectively become confidential and if it would not be allowed to be published in any public capacity, such as press release earnings. Sarper also asked if this would also translate into any financial disclosures that we would have to make, such as 10-K or 10-Q. Hemphill said that RBC is currently confidential, and this is where there is some cognitive dissonance in that TAC and ACL are currently public, but the RBC ratio is confidential, and companies are not allowed to publicize those.

Zaker-Shahrak asked if the RBC ratio of 800% should be looked at in the same manner as a company with an RBC ratio of 250%. Hemphill said we are not saying that it is saying the exact same thing and that the companies are in the same exact position; we are saying it is not a definitive ranking, and this is why state insurance regulators look at many different tools. RBC is for identifying potentially weakly capitalized companies, and there is a lot of complexity to financial reporting. There may be some requirements to follow if a company has a high RBC, and there are things that could lower the RBC that do not mean that a company is financially weaker; that is the nuance of the formula. Hemphill said you could probably construct a theoretical example, and part of what we are talking about is when RBC is public; you create a little bit of a perverse incentive because a company may choose then not to take certain actions that are benign but are not favorable from an RBC perspective because RBC has to be tailored around the trigger levels to be useful for its intended purpose for state regulators to identify weakly capitalized companies. Brown said that RBC is only one tool available to state regulators, but it is the tool that allows regulators



## RISK EVALUATION AD HOC GROUP SUMMARY

to take action. She said state insurance regulators are reviewing companies all the time, and if a company has had a significant change from year to year, it will look at that to understand what caused it.

Braue said that in terms of confidentiality, it might not be as contradictory as it seems that the NAIC was prohibiting these statements by the company, but at the same time, mandating disclosure of the actual numbers in the annual statement. He said there is some risk, and we have seen examples of misuse of those numbers because they are public; however, the real concern was that companies not use these to either explicitly or implicitly state that they are a better company than another company because they have a higher RBC ratio. The main concern was that companies did not use RBC as a means to market their products. Braue said that there may need to be more restrictions today because of these other misuses, or there needs to be some other way to try to prevent those misuses. He said that maybe stating the action level would be sufficient.

Braue said that one point we keep coming back to about RBC as a potential means of ranking companies is from a technical standpoint, RBC is calibrated to a specific level of confidence or a safety level, and it does not say anything about the dispersion of the risks above that level. For example, you could have two companies that have a company action level of \$1 million dollars, and this gets them to a certain confidence level of 95%. For the type of risks that Company A has to get to a 98% confidence level, it may need to go from \$1 million to \$2 million. For Company B and the type of risks it has to go from a 95% to a 98% confidence level, it may need to only go from \$1 million to \$1.5 million. So, one of the companies now has an RBC ratio of 400% ACL, and the other one has an RBC ratio of 300% ACL. Yet, they are covering basically the same degree of risk. That is why, as a practical matter, you could probably say that an RBC ratio of 10,000 is more solidly capitalized than a company that has an RBC ratio of 250%, but you cannot make these comparisons company-to-company in between that range without knowing a lot about the types of risks that they are taking on and the relative size of those risks. You cannot say that a 500% RBC ratio is better than a 300% RBC ratio for a different company. Braue said he did have concerns with what was said in item 18 about other regulatory uses. He agrees that it is legitimate to use RBC for accounting purposes or to determine whether a company is weakly capitalized and, therefore, should maybe give less leeway on non-admitting certain assets. However, there are at least some of those uses from an accounting standpoint that do use levels above a company action level to make a distinction, and that may not be consistent with everything else said about RBC.

Carmello asked if there was a reason for including the numbers in the annual statement. Hemphill said that in looking back at the history, these numbers were initially not going to be included in the annual statement, but they ended up putting TAC and ACL in because we were going from a fixed capital standard to a formula standard, and there was concern about the faith in the industry. The idea was that you put it there in a disclosure to those that the capitalization of the companies was not going to be significantly degraded by that change and to promote assurance when we moved away from the fixed capital standard. Hemphill said that this same assurance that industry is not being drained of its capitalization levels can also be provided through aggregate disclosures.

Barlow said the RBC ratio is not a concept in the law. The law compares the company's TAC to the company action level amount. There is no discussion of the RBC ratio anywhere in the RBC law. He said RBC is a company-specific measure, and there are companies that manage the capital levels in subsidiaries. For example, a company with an RBC ratio of 250% might have a parent company that is more than capable

## RISK EVALUATION AD HOC GROUP SUMMARY

of putting in additional money if the company has financial issues. The parent company might choose to manage the capital at a higher level, which is why it is inappropriate to compare RBC levels: it does not take into consideration the ability to insert capital if needed.

The Ad Hoc Subgroup thanks the following members and interested parties for providing comments: Botsko, Hemphill, Toy, Kevin Clark, Chou, Zaker-Shahrak, Brown, Bill Carmello, Birnbaum, Kaufman, Sarper, and Braue.

**Feb. 22, 2024****Asset Concentration Ad Hoc Subgroup:**

Toy gave a report on work done by the Asset Concentration Ad Hoc Subgroup. He reported that the subgroup met once in February 2024 to resume and complete a walkthrough of the Asset Concentration Flowchart using sector/industry concentration as an example. Toy described the discussions among the members as “very good” and said that they had produced a few refinements to the flowchart “to make it clearer.” The consensus was made that sector concentration, if any, does not warrant a change in the RBC formula to address the risk. The Ad Hoc Subgroup had discussed the possible strengthening of financial statement disclosures, handbook guidance, etc. Toy announced that the next Ad Hoc Subgroup meeting is scheduled for March 8 and is intended to have yet another walkthrough of the flowchart. Even though the element of concentration has not been selected, Toy was hoping this future walkthrough could make it further down the flowchart, maybe even to the point that results in the need for an RBC solution. The Ad Hoc Subgroup’s end goal is to finalize the flowchart and solicit feedback from the parent ad hoc group.

**Geographic Concentration Ad Hoc Subgroup:**

Chou said the Ad Hoc Subgroup met Feb. 14 to discuss feedback from the members regarding the presentations from the rating agencies and state representatives that have geographic concentration concerns. He said the discussion includes: 1) learning from the Florida and Louisiana data review and reinsurance monitoring tool about how to address this issue properly; 2) performing data analysis, with possible assistance from the Academy, to determine whether this issue goes beyond the catastrophe component in RBC; and 3) contact the rating agencies for further assistance if necessary. Chou also stated that he received some reinsurance monitoring information from Louisiana shortly after the Ad Hoc Subgroup’s meeting. He said he would go over it with the chief actuary in Louisiana to gain a better understanding of the issue. Findings will be discussed in the next Ad Hoc Subgroup meeting before moving up to the parent group.

**RBC P&G Ad Hoc Subgroup:**

Botsko recapped the work of the RBC P&G Ad Hoc Subgroup. The Ad Hoc Subgroup: 1) recommended edits and additions to the preamble, which were presented by Hemphill Jan. 30 and are ready to be discussed at the upcoming Capital Adequacy (E) Task Force; and 2) recommended removal of TAC and ACL data in Annual Statement 5-Year Historical page. Various members had a discussion about paragraph 10 of the preamble, and a consensus was made: since RBC instructions are not confidential (they are publicly

## RISK EVALUATION AD HOC GROUP SUMMARY

available for subscription on the NAIC's website), the wording "RBC instructions" is to be removed from paragraph 10.

Broadie (ACPIA) mentioned an ancillary use of RBC ratios: in reinsurance contracts, there are clauses that require the cedant or the reinsurer to maintain a certain level of RBC. Broadie used this to make a point that, for this instance, while RBC ratios are not used for regulatory purposes, it is not a ranking exercise either. Botsko reacted to the prevailing reinsurance practice and said that removal of TAC and ACL from the five-year historical page would not preclude the cedant/reinsurer from sharing their RBC ratio with each other—not just publicly but privately to meet contractual obligations. Sieverling (RAA) said that, based on his personal experience with the reinsurance industry, he has never seen or heard of the use of RBC in reinsurance contracts. He was aware of the use of rating agency ratings.

Dupont (Guardian) sought clarification on whether insurers can share RBC ratios with rating agencies, and Botsko believed they can as long as they do so privately. Braue (UHC) sympathized with the state insurance regulators' desire to discourage ranking and encourage confidentiality of the RBC ratios. Without a thorough understanding of the two companies' risk profiles, a comparison of their RBC ratios might not give a true picture of strength and risk. Toy seconded Braue and offered several examples of how RBC ratios on their own could be "deceptive" (e.g., run-off companies). Zaker-Sharak challenged the argument that RBC calculations should be kept confidential because they are very complicated. In his opinion, it is problematic that RBC is so complicated that it cannot be interpreted. Zaker-Sharak also challenged the removal of TAC and ACL from the five-year historical page, shutting down layman's access to this information but at the same time allowing insurers to share RBC with "sophisticated" parties such as rating agencies and reinsurers. He argued this caused favoritism and disparity.

Braue (UHC) disagreed with the notion that RBC is too complex to be meaningful. He said the function of RBC is to identify potentially weakly capitalized companies (pass/fail). Once you understand the pass/fail aspect, there are a lot of complexities in trying to interpret relative risks among companies just by using RBC ratios. Braue proposed replacing the TAC and ACL information on the five-year historical page with a pass/fail indicator to disclose whether the reporting insurer is at an action level. He believed that would serve the public better since no guesswork is required. Braue reiterated the example he gave Jan. 30. Again, he used the example to illustrate the danger of risk/strength ranking companies by merely comparing RBC ratios. Barlow reiterated his viewpoint expressed Jan. 30. He reminded the members that RBC is company-specific and does not portray the parent company's capital support.

Johnson (Global Atlantic) asked why the TAC and ACL are disclosed as they currently are in the first place. Botsko offered a historical background. Back in the time when the RBC framework was transitioned from fixed capital to RBC, part of the effort to help interested parties and state insurance regulators monitor the transition was to publish RBC. Since RBC is confidential per Model Law, the compromise was to publish TAC and ACL instead. After decades of this practice, it is time to revisit the need to publish ACL and TAC. Hemphill reminded members that the NAIC will continue to publish RBC statistics in an aggregated, anonymized fashion. Kaufman suggested the Ad Hoc Subgroup look into bank capital ratios and check if the banks made the capital ratios public. He personally thought more transparency was better and, therefore, it is not a good idea to remove public disclosures. Kaufman observed that the original design of RBC was a mechanical calculation of risk by using accounting data as input (objective), but there was a

## RISK EVALUATION AD HOC GROUP SUMMARY

trend in which the inputs and, therefore, the output were getting more subjective. Finally, he brought up the policyholder level perspective and said he believes that policyholders may be interested in knowing whether the insurers they are considering are well-capitalized. Braue believed the disclosure of a pass/fail action level would be sufficient to inform policyholders in that case.

Botsko and Hemphill agreed on the next step: the recommended edits to the preamble are ready to be reviewed by the Capital Adequacy (E) Task Force. The removal of TAC and ACL from the Annual Statement 5-Year Historical page warrants further discussion within the Ad Hoc Subgroup.

The Ad Hoc Subgroup thanks the following members and interested parties for providing comments: Botsko, Hemphill, Toy, Kevin Clark, Chou, Zaker-Shahrak, Crystal Brown, Bill Carmello, Birny Birnbaum, Allan Kaufman, Lauren Sarper, and Braue.

# Risk-Based Capital Preamble

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## 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.

## Preamble

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 **in order to** facilitate regulatory actions **designed to**, 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 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 or appropriate 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 *Risk-Based 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 **(including but not limited to press releases, earnings releases, webcast materials, or any other earnings presentations or webcasts)** 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**

12. 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. **Mandatory Control Level (MCL) requires the insurance commissioner to place the reporting entity under regulatory control.**

**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.<sup>1</sup> “No single formula or ratio can give a complete picture of a company's

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<sup>1</sup> Report of the Industry Advisory Committee to the Life Risk-Based Capital (E) Working Group, p. 6; Nov. 17, 1991.

## Preamble

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.”

14. Because the NAIC formula develops threshold levels of capitalization rather than a target level, it is **neither useful nor appropriate** 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 **reliable** assessment of their relative financial strength. **For example, a company with an RBC ratio of 600% is not necessarily financially stronger than a company with an RBC ratio of 400%.** 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.

#### **E. Limited use of Risk-Based Capital**

18. **Use of RBC is limited to identifying potentially weakly capitalized companies to facilitate regulatory action and oversight. Any other application of RBC would be inappropriate to the detriment of policyholders, companies, and investors. While RBC may be used in other components of the regulatory framework, such uses should be in the context of identifying potentially weakly capitalized companies. For example, statutory accounting may leverage RBC in determining the admissibility of certain types of assets, when the benefits of those assets may not be readily available to the policyholders of a troubled company.**
19. **RBC does not provide a complete, clear, or meaningful ranking of insurers. For example, an insurer voluntarily strengthening assumptions used for reserving would generally reduce an insurer’s RBC ratio but does not indicate a weaker position than a similarly situated insurer who did not elect to strengthen assumptions used for reserving. Regulators are able to consider a complete picture of the insurer’s financial situation to appropriately follow up on RBC action levels. Using RBC beyond its intended purpose could create perverse incentives for companies that are not at risk of triggering an action level.**
20. **RBC requirements for particular risk categories were developed based on specific regulatory guidelines and following agreed upon procedures and methodologies. The RBC requirements were developed with regulatory needs in mind. They were not developed or intended for any other use. As such, except where prescribed, RBC requirements would not be appropriate to rely on in other contexts such as reserve setting or risk management or evaluating the risk of investments. While the development of RBC requirements often rely on historical data points, the data used extends over a substantial period of years and the actuarial modeling extends out over a long time horizon. They do not reflect risk at any one point in time. Moreover, the granularity of an analysis for**

**Preamble**

RBC purposes likely differs from the granularity appropriate for other applications. Therefore, RBC requirements are not appropriate to evaluate the relative or absolute level of risk outside of the context of a regulatory framework for identifying potentially weakly capitalized companies.

21. Because RBC is a broad tool to facilitate regulatory oversight, an insurer's RBC can fluctuate without indicating a corresponding change in the insurer's financial strength.



RBC Purposes and Guidelines Ad Hoc  
Sept. 19, 2023

Participating in the call were: Tom Botsko (OH), Steve Broadie (American Property Casualty Insurance Association—APCIA), Crystal Brown (NAIC), Maggie Chang (NAIC), Kevin Clark (IA), Steve Drutz (WA), Rachel Hemphill (TX), Matthew Richard (TX), Todd Sells (NAIC), Ed Toy (Risk & Regulatory Consulting), Eva Yeung (NAIC), and Ali Zaker-Shahrak (CA).

Hemphill said that at a high level, the intent of the meeting is to look at the risk-based capital (RBC) preamble and reiterate the purpose of RBC. She said in previous RBC calls, it's been noted that there could be a conflict in maintaining RBC for regulatory use versus structuring it for non-regulatory purposes. Hemphill said there was an initial review of the preamble to see how it was drafted and where emphasis was placed. Section B reiterated that the purpose of RBC is to identify potentially weakly capitalized companies and facilitate regulatory actions that ensure insurers can meet their obligations.

Botsko asked if the first sentence in Section B could be all caps and bold. Hemphill said that this is an example of what the group is considering, as there are pieces of the preamble that are being ignored, and she wants to call them out. She suggested merging the first and second sentences in Section B.9 and bolding them to emphasize the purpose of RBC. Richard and Broadie suggested additional modifications to the first two sentences which further clarify the regulatory aspect of RBC.

Hemphill emphasized that repeating the purpose of RBC throughout the document should be a strong consideration, as well as reiterating in Section B.10 that RBC reports and adjusted reports are provided solely for commissioner use. She said that improving the language to make it stronger and clearer would be beneficial. Hemphill noted that the group may want to further clarify the language in Section B.11 and emphasize that RBC is not intended to rank insurers and mention the problems associated with ranking insurers by RBC. Hemphill said in Section D.13, where it said no single formula is right, that means that RBC is not perfect, and the group is not trying to make it perfect. She suggested trying to tie this sentiment to the purpose.

Hemphill summarized Section E—Limited Use of Risk-Based Capital (**Attachment**). The section reiterates how RBC should be used, which is to identify “potentially weakly capitalized companies to facilitate regulatory oversight,” and she said that another use of RBC would not be appropriate. RBC is not intended to rank insurers, as it would not give a clear or meaningful ranking of insurers. She said an example would be an RBC change that would not correspond to a meaningful interpretation of the RBC level and the financial strength. There could be two completely analogously situated insurers, where one voluntarily chose to strengthen assumptions for reserving, and the other did not. The RBC ratio would generally be reduced for the insurer that had taken the prudent action of strengthening their assumptions without it impacting their financial situation.

Hemphill said regulators are considering a more complete picture of what is going on for an insurer to appropriately follow up on RBC action levels. She said a concern with using RBC beyond its intended purpose would create perverse incentives for companies that are not actually at risk of triggering an action level but because of the perception that might get used as more of a ranking tool, the company manages their RBC level rather than their business. She said because RBC is a broad tool to facilitate regulatory oversight. RBC can fluctuate without a corresponding change in the insurer's financial strength. Therefore,

the group should not attempt to parse granular RBC differences and, instead, should consider RBC as having specific thresholds and action levels.

Toy said the changes being discussed are related to the RBC ratio and action levels and how they should be appropriately or not appropriately used. He said that the individual components, such as the RBC factors, are not meant to suggest that it is a measure of capital risk in the near term. Hemphill agreed and said that something should be added to the preamble on the components of RBC, as well. She said she has seen reviews of reserve setting where companies were relying on an RBC factor to develop an assumption and said that she is concerned about having too large of an approximation for a specific purpose.

Broadie thinks the group should not extensively include how RBC is a blunt tool instrument because the International Association of Insurance Supervisors (IAIS) is assessing whether the aggregation method is comparable with its insurance comparable standard, as the U.S. is largely based on RBC. He said the group strongly wants this assessment to be completed and, again, cautioned on referencing RBC as a blunt tool instrument. Hemphill said that RBC is not tailored to an individual company and its specific risks. Organizations will always need a company-specific review and assessment to understand their risk profile. RBC isn't designed for every situation, and it's not expected that any international standard would be either. Clark said that regulators assess RBC on where the company stands relative to trigger level, which is consistent with typical regulatory practice.

Zaker-Shahrak asked what the RBC ratio should convey once it's calculated. Hemphill reiterated that RBC is a tool used to identify potentially weakly capitalized companies, and companies must still evaluate their businesses on an individual basis, and they should not take the RBC level as the definitive stay on a company, as RBC could evolve over time. However, RBC is still a useful tool. Zaker-Shahrak asked how useful RBC is and if the group can identify what it covers. He asked specifically what one could conclude from a company whose RBC ratio is 300%. Brown said that prior to the implementation of RBC, there were fixed minimum capital and surplus requirements, and some states still have these requirements. However, states have different requirements, and these can vary among lines of business. She said that RBC was designed to give regulators and commissioners the authority to act through the *Risk-Based Capital (RBC) Model Act* (#312). If a company goes below 200%, the commissioner has the authority to act because the company has triggered an action level. Brown said that RBC was not designed to be used as a stand-alone tool. Brown said RBC is one tool in the regulatory toolbox and gives regulators the ability to act.

Clark said that if he saw a company with a 250% RBC ratio, without any other context, it wouldn't provide much information because RBC alone doesn't reveal much. Hemphill reiterated that RBC is useful, but it's not a complete picture. Brown said that if a regulator does see a 250% RBC ratio, they may look further at the individual components to identify the biggest driver of the authorized control level change or if there was a significant change in total adjusted capital, which could show what may require further investigation.

Zaker-Shahrak said the RBC ratio is not meaningful because of how it was calculated. Richard said that it is a rule of thumb, and it has not been calibrated based on a one- and 200-year scenario. RBC is not a risk measure, but it is a rule of thumb that regulators use to identify companies that require further investigation. Toy said he did not want to underplay the value of RBC, as it is a very important regulatory tool, but it cannot be used on its own. He said there are other factors that explain the RBC ratio, and regulators have steps in place for when they see an RBC ratio at a certain level or trending in a particular

direction, that is what the ratio was designed for. He said RBC is basically a tripwire mechanism, notifying regulators as to when they should be concerned and consider taking regulatory action. When RBC is at an extreme level, regulators are required to act, and then they should look at what is driving the RBC ratio—is it because of excessive investment risk, operational risk, or is there a liabilities issue? Toy said RBC is a vital regulatory tool, but it is one of many and is meant to warn regulators to potentially take certain actions. Hemphill agreed and said that the distinction the group is trying to make is that RBC is vital and useful, but it is something that prompts action and is not a conclusion. The group's concern is that is not how RBC is being used and its being taken as something that on its own you make a summary conclusion based.

Broadie said that historically, RBC was the first risk-sensitive capital measure developed in the regulatory community around the world. It was developed in response to a time when companies were experiencing significant insolvency, and this was a tool developed to prevent this. Broadie asked where the ranking issue is being seen. He said he was not aware of it on the property/casualty insurance sector but noted that it has been a concern. Botsko said that investment companies are saying that they cannot sell their products because it has a negative impact on their RBC. Toy said that this highlights some investment issues such as labeling investments to achieve a specific RBC charge, which is not the point of statutory accounting or RBC. A company should be investing based on the risk. Hemphill emphasized that the real concern is taking actions that are not prudent in a broader business sense to specifically manage RBC when it's not to avoid an action level.

Hemphill said there are several options for the group to clarify the purpose: 1) edit the preamble; 2) develop FAQs; 3) add guidance to the handbooks; 4) create a one-page purpose; and 5) potentially removing total adjusted capital (TAC) and authorized control level (ACL) in the annual statement. She also discussed where to post the information. Botsko said that removing TAC and ACL has been brought up in prior years, and there has been significant pressure to keep it on the five-year history page. He said when he reads the preamble, it basically says it should not be publicly available. Clark said he supports the effort but is skeptical that any significant change will happen unless the ratio becomes completely non-public. He said insurance companies are already aware of the purpose of RBC, and that purpose is clearly stated in the preamble, but companies still use it as a financial statement metric. Hemphill agreed and said it is still worthwhile to explore more significant steps such as modifying the public aspects of the annual statement. Richard said that despite regulators' best efforts, if a company still finds it useful to provide this information to investors, they may still provide this information even if it's not the correct way to use it. Chang asked if there was a consequence for a company using the RBC ratio outside of its intended purpose. Brown said that Section 8 of the Model #312 specifies that RBC is confidential, and it shouldn't be used or disseminated anywhere. RBC is a regulator-only tool to be used by the commissioner. Chang said what if there were guardrails for RBCs over 300%, and they could have different accounting treatment. She asked if that would indirectly disclose the RBC ratio or if it has to be very specific information that discloses the ratio. Brown said it was her understanding that it is the ratio and the completed RBC filing that is confidential because TAC and ACL are part of the five-year historical page. She said the reason TAC and ACL was included was for transparency but also confidentiality. She said it was not clear if there was consideration to remove those amounts after a few years.

Drutz said he concurs with the group that changing the wording may not make a difference, but he did think that changing the preamble is important. He also said he thought removing TAC and ACL from the five-year historical page would be good because if Model #312 says it is a regulatory tool, providing it to

the public doesn't make sense, as it then is used as a comparison tool. Drutz said he has heard from companies that rating agencies want the company's RBC ratio at a certain level for a certain rating. Toy said he has had several conversations with different rating agencies on that point, and they say that is an interesting area of miscommunication, because the rating agencies do not put that much emphasis on the NAIC RBC ratio because they have their own capital models. The only time they focus on the NAIC RBC ratio is when it's close to an action level, and there's potential that a regulator could act. He said it is not because the ratio is low but because of the potential that a regulator could act.

Sells said that when developing RBC, the intent was for it to be confidential. Toward the end of its development, right before it was adopted, there were arguments for result indicators. He said at the last minute, even though the entire filing was to be confidential, because of the politics at the time and arguments from the industry, they agreed to make TAC and ACL public so that the TAC could be compared to the ACL. He said that you can figure out the other levels from that one level. He said there was conversation about not including a calculation of a ratio, but the discussion was mainly about comparing TAC to ACL, and how a percentage calculation is not done. He said there was concern that if a calculated ratio was published, it would be easier for people to use that ratio as a ranking mechanism or for comparison rather than just using TAC and ACL. He said that because RBC is a regulatory requirement, and if a company is weakly capitalized, that is an indicator people should know, which is why it was included in the five-year historical page. Yeung said that the TAC and ACL was placed in the five-year historical page because of the potentially weakly capitalized companies; however, over 98% of companies are above a 200% RBC ratio. She asked if those companies should also be disclosed. Sells said that scenario was not contemplated, and he has had to explain that an RBC ratio cannot be used to indicate that one company is better than another company in terms of risk. RBC was designed to identify potentially weakly capitalized companies only, not to rank companies when they are over target levels.

Hemphill said there may be a second phase to see if there is anything the group can do better for the RBC metrics.

**Risk-Based Capital Purposes & Guidelines Ad Hoc Subgroup****Oct 10, 2023**

Participating in the meeting were: Ali Zaker-Shahrak (CA), Wanchin Chou (CT), Kevin Clark (IA), Rachel Hemphill and Matt Richard (TX), Ray Nelson (America's Health Insurance Plans—AHIP), Rebecca Freitag (Merlinos & Associates), Jim Braue (UnitedHealth Group—UHG), Crystal Brown (NAIC), Maggie Chang (NAIC), and Eva Yeung (NAIC).

Hemphill said that she discussed the preamble with Ed Toy (Risk & Regulatory Consulting), and there are more edits, and the purpose of this meeting is a continuation of last month's meeting to walk through the proposed edits. According to Hemphill, the edits are to re-emphasize certain pre-existing concepts in the preamble, e.g., purpose of risk-based capital (RBC). Hemphill introduced some strengthening language in paragraph 14 to illustrate the point that comparisons of amounts exceeding the threshold standards do not provide a reliable assessment of their relative financial strength. She proposed that this sentence be added to the preamble: "A Company with an RBC ratio of 600% is not necessarily financially stronger than a company with an RBC ratio of 400%."

The most substantial change proposed is Section F—Limited Use of Risk-Based Capital. Paragraph 22 was drafted with Toy's input, and it emphasizes that just like RBC ratios, RBC factors should not be used out of context of the RBC framework. RBC factors are not appropriate to evaluate the relative risk of investments outside of the RBC framework. Hemphill inquired whether paragraph 22 should be made broader in scope to cover not just assets (investments) but also non-assets elements. She also asked the member for feedback on any other edits that should be made.

Hemphill said she envisions that the next step would include drafting a one-pager, FAQs, or another similar document to supplement the current publications, which Brown seconded. Zaker-Shahrak inquired whether there is a clear statement that spells out the purpose of RBC. Hemphill responded that Section B of the preamble describes "Purpose of Risk-Based Capital" to define action levels. Zaker-Shahrak also challenged the addition of "A Company with an RBC ratio of 600% is not necessarily financially stronger than a company with an RBC ratio of 400%."

Hemphill said the statement is true, and there was an example (in paragraph 19 regarding reserving practices) added to illustrate this point, but she was open to expand on examples. Clark pointed out some ancillary uses of RBC ratios. For example, in statutory accounting guidance, admittance of goodwill and deferred taxes are predicated on RBC levels of the insurers, and reserving also hinges on RBC. Clark wondered whether these uses would be perceived as "violations" of RBC purposes. Hemphill said she did not believe so. She said those ancillary uses, including the current interim guidance of negative interest maintenance reserve (IMR) admittance, are consistent with the purposes of RBC, which is to aid identification of potentially weekly capitalized companies. Both agreed that edits to the preamble are warranted to acknowledge these ancillary uses.

Brown drew a parallel between the use of RBC as a guardrail for the admittance of "soft" assets and the practice of trending RBC ratios. Both are preventative and conducted prior to solvency issues surfacing. Hemphill wondered whether the recommendation to remove asset concentration limits (ACL) and total adjusted capital (TAC) from the five-year historical page would hinder the trending analysis. Brown confirmed that trending can still be performed using profiles and financial accounting standards (FAS)

tools, which are the preferable sources of data for trending. (For instance, insurers who updated their RBC filing might not necessarily update TAC and ACL in their annual statements' five-year historical page.)

Hemphill discussed two instances in the valuation manuals (e.g., VM-20 and VM-21) that reference RBC that she would propose to remove. These removals will help align with the purposes of RBC discussed so far.

Freitag said she views TAC and ACL in the five-year historical page as valuable resources in her role as an appointed actuary and examining actuary. She elaborated that as an appointed actuary, when she is evaluating material adverse deviation to reserves, it is crucial for her to evaluate how a change in liability by a certain amount would trigger what kind of change in RBC. She acknowledged that she can access RBC information and asked if it should be kept confidential and removed from annual statements. She said she finds the current five-year historical disclosure a convenient way to look up RBC information for prior years. As an examining actuary, RBC is one of the key metrics for planning the exam. She used an example of a company that had an RBC ratio on the verge of action level (e.g., 220%). This RBC ratio would suggest the company has heightened incentive to understate reserves, and this expectation would guide her examination effort. However, she agreed with the discussion within the call that an RBC ratio of 400% versus 600% may not have any meaningful indication of the insurers' relative strength.

Hemphill said she appreciated the feedback and said that maybe the pass/fail indicator is not sufficient enough. In Freitag's example, she would need information more than pass/fail. Chou appreciated the importance of the TAC and ACL information during the financial exam and financial analysis. He said another important use is the trending aspect. Significant changes in an RBC ratio year over year can provide an early warning signal. Zaker-Shahrak inquired about the company action levels. Brown walked through the various action levels:

**Company Action Level (CAL):** When an RBC ratio is between 150% and 200%, CAL is triggered and according to the *Risk-Based Capital (RBC) Model Act (Model #312)*, the insurer needs to file an RBC plan with its state insurance commissioner.

**Regulatory Action Level (RAC):** When an RBC ratio is between 100% and 150%, RAC is triggered.

**Authorized Control Level:** When an RBC ratio is between 70% and 100%, authorized control level is triggered. Once this happens, besides the need to file an RBC plan and to perform an exam/analysis, the state insurance commissioner is authorized to take regulatory control of the insurance company, if deemed to be in the best interests of the policyholders and creditors.

**Mandatory Control Level (MCL):** When an RBC ratio is 70% or below, MCL is triggered, and the state insurance commissioner is required to take regulatory control of the company.

Zaker-Shahrak said that one cannot use ratios alone to judge or rank insurance companies. Brown described her prior experience on the NAIC financial analysis team and said that her reviews included facts and circumstances and did not use RBC ratios alone.

Hemphill mentioned that Tom Botsko's (OH) intern is working on a project to see if information in RBC filings is useful in predicting insolvency. However, the project is still in its early stages, and there are no reportable items just yet. However, Hemphill asked the members if there are any aspects or components of the RBC filings that serve well to predict insolvency. Chou and Brown discussed the workstream at the

Health Risk-Based Capital (E) Working Group, which is looking into excessive growth charge. Brown acknowledged that RBC components alone are not enough to shed light on risk, and the Working Group has been analyzing annual statement data as well. The group said that there is need to review Own Risk and Solvency Assessment (ORSA) filings as well. Hemphill said that in conclusion, the use of RBC components alone to pinpoint excessive growth risk is not sufficient.

Hemphill and Brown asked the group members to perform a detailed review of the proposed revisions to preamble and provide feedback prior to next meeting.

Hemphill said she also reviewed the Framework for Regulation of Insurer Investment, which is a holistic review document exposed by the Financial Condition (E) Committee. She attempted to evaluate if there are any inconsistencies between the proposed framework and the proposed changes to the preamble. She discerned no inconsistencies but asked for feedback from the members. Brown announced that comments to the framework have just been posted and asked members to review both the framework and the comment letters. Clark said he is closely involved in the framework, and his personal view is that there is no contradiction between the framework and the discussions within this Ad Hoc Subgroup.

## RBC Purposes & Guidelines Ad Hoc Subgroup

December 12, 2023

Participating in the meeting were: Wanchin Chou (CT), Kevin Clark (IA), Tom Botsko (OH), Rachel Hemphill and Matt Richard (TX), Steve Drutz (WA), Steve Broadie (American Property Casualty Insurance Association—APCIA), Frank Huang (Merlinos & Associates), Maambo Mujala (New York Life Insurance Company), Ray Nelson (America’s Health Insurance Plans—AHIP), Tip Tipton (Thrivent), Ed Toy (Risk & Regulatory Consulting), Ron Wilkins (American Academy of Actuaries—Academy), Crystal Brown (NAIC), Maggie Chang (NAIC), Todd Sells (NAIC), and Eva Yeung (NAIC).

Hemphill stated that the purpose of the meeting is to discuss comments received on the proposed edits to the preamble (as discussed during the October 2023 meeting). Brown summarized the comments in Attachment I. Brown said the comments received are incorporated into the revised draft preamble to the extent possible. (Attachment II).

Freitag said regarding paragraph C.12, if it was intentional that all risk-based capital (RBC) levels are noted except for the mandatory control level (MCL). Brown said she will need to investigate more, but her initial reaction was that because companies at MCL are meant to be taken over by the state insurance commissioner, MCL is not included in paragraph C.12.

Hemphill gave members the opportunity to speak to their comments.

Regarding paragraph 11, Broadie said ACPI’s comment was contributed by a member of ACPI. Hemphill noted that the edit was not meant to be limiting and thought it was a good edit. Botsko concurred.

Regarding paragraph 12, Hemphill said she does not know why MCL is left off, and she asked for Botsko’s input. Botsko was not aware of a specific reason but is open to adding it if the group feels like the addition is warranted. Nelson said he can see why it was left off as it is a “mandatory” control level, and there is no anticipation required. Brown suggested, if need be, she can incorporate the reference in the *Risk-Based Capital (RBC) Model Act* (Model #312) to describe the “required” actions. Broadie explained the importance of highlighting the word “required.” The intent was to substantiate the commissioner’s action if the rehabilitation or liquidation were to be taken to the court. The Commissioner can point to Model #312 and state that it is a requirement. Hemphill agreed to enhance the preamble and add a sentence explaining required actions at MCL (as described in Model #312). There was no objection.

Regarding paragraph 14, Nelson suggested to add the words “For example” in front of the added example: “A company with an RBC ratio of 600% is not necessarily financially stronger than a company with an RBC ratio of 400%.”

Regarding paragraph 18, Hemphill said the purpose of this paragraph is to make it very clear that ancillary uses of RBC should all serve the same purpose, which is to aid in identifying potentially weakly capitalized companies. Nelson suggested the addition of the word “potentially” before the phrase “weakly capitalized” in this paragraph to ensure consistency within the preamble.

Regarding paragraph 19, Botsko suggested replacing the word “would” with “does” in the sentence, “RBC would not provide a complete, clear, or meaningful ranking of insurers.” There were no objections.



Regarding paragraph 20, Hemphill explained that the paragraph was originally drafted with assistance from Toy and was targeted to assets. The Subgroup wanted to broaden the scope beyond assets. Toy said he did not object to broadening the scope but suggested the possibility of making it clear the other examples that this paragraph applies to. Both Hemphill and Broadie said that they could think of other non-asset factors (e.g., reserves, premium, etc.) that are derived from historical experience. Clark preferred to be generic and not to spell out all the risk areas, as risk evolves over time. Hemphill seconded. Mujala questioned whether this paragraph also applies to C3, phase 1 (model-based) calculation or is it just limited to factor-based components. Clark suggested to change the language of “RBC factors” to “RBC requirements” to accommodate both types of calculations (factor-based versus model-based). Hemphill agreed.

There were no comments or further discussions on paragraph 21.

Hemphill then discussed the next step. She believed after revisions are made, the revised preamble will be ready to be discussed with the parent ad hoc group and then the Capital Adequacy (E) Task Force. Botsko concurred. Tipton brought up that the words “insurers” and “companies” are used interchangeably. Hemphill checked the rest of the preamble and saw that this interchangeable use is prevalent in the document. There was no objection to Hemphill’s proposal to present the preamble to the parent ad hoc group.

Next, Hemphill asked if anyone thinks the public disclosure of TAC and ACL in the five-year historical page is inconsistent with the preamble the group has discussed so far. Drutz found it inconsistent. Botsko had recollection that the disclosure of TAC and ACL in the five-year historical page is for the convenience of regulators. He said if that is true, and the group decided to remove the total adjusted capital (TAC) and asset concentration limits (ACL) disclosure in annual statements, the group may need to consider incorporating the historical data in RBC confidential filing for regulators’ use. Hemphill concurred. Brown reminded the members that historical RBC data is currently available to regulators through the format of profile report, and it even breaks down to the RBC-component level.

Botsko asked whether the industry representatives in the group had comments. Broadie said while he had not discussed it with his members, he believed rating agencies and investors alike have been using the data for decades. He also cautioned the group to be clear to the public on the motive for removing the disclosure, as it could be construed as hiding something. (E.g., “Is the industry in bad shape?”) Chou agreed with the commenters that there are ancillary uses of RBC data. He asked what the benefit was from removing the data, apart from holding onto the confidentiality principle of RBC. Hemphill gave some examples of her current effort to remove references of RBC in the *Valuation Manual* to avoid perceived inconsistencies. She said since the group just finished discussing the potential “limited use” of RBC as described in paragraph 18 of the preamble, it became the group’s responsibility to evaluate potential unintended use of RBC data. She believes the public disclosure of TAC and ACL in the five-year historical page might potentially encourage misuse.

Mujala wondered if there is benefit to disclosing publicly the potentially weakly capitalized companies and if so, how and where to draw a line. Drutz viewed RBC as purely a regulator tool. He said all the company actions (responses, RBC plan, etc.) are confidential. He thought the unintended use of RBC could be just as disruptive as not having RBC for public use. He said there are other tools and metrics out there to indicate the strength of insurers, and RBC is not designed to serve that purpose. Broadie expressed concern about disruption to the publication of industry-level aggregate RBC statistics. Hemphill and Yeung

reassured them that there is no plan to change the current publication, and it will continue to be available to the public. Hemphill also thought the aggregate statistics would be a good tool to dispel doubt about the “health” of the insurance industry if the removal of TAC and ACL data is proposed. Sells offered a historical perspective on why TAC and ACL are disclosed in the five-year historical page. The legacy fixed-capital RBC framework was transparent and can be reperformed. As such, it led the working group at the time to provide more transparency on the transition from a fixed to a risk-based framework. Tipton asked if Sells is suggesting removing ACL and leaving TAC in the five-year historical statement. Sells said it is up to the working group to decide.

## Attachment I

### Summary of Comments

#### **ACPI – Matt Vece and Steve Broadie:**

We have one suggestion: adding the red text, copied below, to paragraph 11 of the preamble. Thanks again and let us know if you have any questions.

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 or appropriate 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 *Risk-Based 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 (including but not limited to press releases, earnings releases, webcast materials, or any other earnings presentations or webcasts) 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.

#### **Iowa DOI - Kevin Clark:**

Edits incorporated into paragraph’s 18 and 20.

#### **Davies – Rebecca Freitag:**

**Comments on Preamble** (and my apologies if any of these comments were raised before I began attending the meetings):

1. Paragraph C.12 – it seems that all RBC levels are noted except for the Mandatory Control Level. Was that intentional? (If I’m behind the times and the Mandatory Control Level has been eliminated, please feel free to let me know).
2. Paragraph D.14 – I think the addition of the sentence shown in Track Changes is good, but I note that it may not be entirely necessary given the greater detail provided in new section E. I’m definitely not opposed to it, though.

**Comments on Discussion of TAC/ACL in Five-Year History:** I was responding to the idea that perhaps the company’s RBC amount should not appear at all in the publicly available Annual Statements (or perhaps should just appear as a “pass/fail.”) I have a number of concerns about this:

1. From my perspective, as an examining actuary, it is very helpful to know how close a company is to any kind of action level right from the outset. If I’m examining a company and I see that it has an RBC ratio of 250%, I know that there were likely strong operating incentives to make sure the reserves were not “too high” (and whether “too high” really means “conservative” or just “more conservative than we can absorb” depends on the company).

2. As an Appointed Actuary, in determining the materiality standard that I use for my Opinion, I need to know how close a Company is to any kind of RBC level. And I might want to understand how close they have been in the past, and whether this might have impacted any operational decisions. I acknowledge that I could obtain this information from the company confidentially, along with other confidential data that they provide, but it is certainly convenient to have it as part of the Annual Statement.
  
3. From a public perspective, I believe that this is the type of information that can be put to appropriate use. I understand, based on the discussions in the committee, that it has sometimes been put to erroneous use. But if we believe that an RBC ratio of 200% says something important about a company to the regulators, I think the public has an interest in being able to see the ratio, and getting a feeling as to whether or not it is close to 200% (or any other RBC level). I imagine arguments could be made that other sections of the Annual Statement should be confidential. But it appears to me that for the most part, the Annual Statements are public so that any interested entity can learn important information about the companies that they are working with. Although I understand and appreciate that the inputs to the underlying formula for calculating the company's risk based capital are confidential, I think that it is in the public's interest to be able to calculate the actual ratio, and to see it over time, as is currently the case in the Five Year History Exhibit (P&C blank).

**New York Life – Maambo Mujala:**

We think the changes to the preamble are really good and emphasize the purpose of RBC. We believe it is important to emphasize the limitations of RBC and to avoid the misuse for other purposes.

## Attachment II

# Risk-Based Capital Preamble

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### 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 in order to facilitate regulatory actions designed to, 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 or appropriate 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 *Risk-Based 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 (including but not limited to press releases, earnings releases, webcast materials, or any other earnings presentations or webcasts) 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

12. 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.<sup>1</sup> “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.”
14. Because the NAIC formula develops threshold levels of capitalization rather than a target level, it is neither useful nor appropriate 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 reliable assessment of their relative financial strength. A company with an RBC ratio of 600% is not necessarily financially stronger than a company with an RBC ratio of 400%. 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.




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<sup>1</sup> Report of the Industry Advisory Committee to the Life Risk-Based Capital (E) Working Group, p. 6; Nov. 17, 1991.

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.

#### **E. Limited use of Risk-Based Capital**

18. Use of RBC is limited to identifying potentially weakly capitalized companies to facilitate regulatory action and oversight. Any other application of RBC would be inappropriate, to the detriment of policyholders, companies, and investors. While RBC may be used in other components of the regulatory framework, such uses should be in the context of identifying weakly capitalized companies. For example, statutory accounting may leverage RBC in determining the admissibility of certain types of assets, when the benefits of those assets may not be readily available to the policyholders of a troubled company.
19. RBC would not provide a complete, clear, or meaningful ranking of insurers. For example, an insurer voluntarily strengthening assumptions used for reserving would generally reduce an insurer's RBC ratio, but does not indicate a weaker position than a similarly situated insurer who did not elect to strengthen assumptions used for reserving. Regulators are able to consider a complete picture of the insurer's financial situation to appropriately follow up on RBC action levels. Using RBC beyond its intended purpose could create perverse incentives for companies that are not at risk of triggering an action level.
20. RBC factors for particular risk categories were developed based on specific regulatory guidelines and following agreed upon procedures and methodologies. The RBC factors were developed with regulatory needs in mind. They were not developed or intended for any other use. As such, except where prescribed, RBC factors would not be appropriate to rely on in other contexts such as reserve setting or risk management, or evaluating the risk of investments. While the development of RBC factors often rely on historical data points, the data used extend over a substantial period of years and the actuarial modeling extends out over a long time horizon. They do not reflect risk at any one point in time. Moreover the granularity of an analysis for RBC purposes likely differs from the granularity appropriate for other applications. Therefore, RBC factors are not appropriate to evaluate the relative or absolute level of risk outside of the context of a regulatory framework for identifying potentially weakly capitalized companies.
21. Because RBC is a broad tool to facilitate regulatory oversight, an insurer's RBC can fluctuate without indicating a corresponding change in the insurer's financial strength.



## RBC Purposes & Guidelines Ad Hoc

January 9, 2024

Participating in the meeting were: Wanchin Chou (CT), Kevin Clark (IA), Tom Botsko (OH), Rachel Hemphill and Matt Richard (TX), Steve Drutz (WA), Steve Broadie and Matt Vece (American Property Casualty Insurance Association—APCIA), Frank Huang (Merlinos & Associates), Todd Moltumyr (America’s Health Insurance Plans—AHIP), Maambo Mujala (New York Life Insurance Company), Jeremy Rosenbaum (Guggenheim Partners), Tip Tipton (Thrivent), Ed Toy (Risk & Regulatory Consulting), Ron Wilkins (American Academy of Actuaries—Academy), Crystal Brown (NAIC), Maggie Chang (NAIC), Julie Gann (NAIC), Holly Weatherford (NAIC), and Eva Yeung (NAIC).

Hemphill kicked off the meeting by recapping key discussions from the Dec 12, 2023, meeting. She indicated that the key agenda item for this meeting is to discuss the removal of total adjusted capital (TAC) and asset concentration limits (ACL) in the five-year historical table in the annual statements.

Rosenbaum was against this proposed removal. He stated that he is from the industry and believes risk-based capital (RBC) data provides useful information to indicate the “health” of companies for regulators and investors alike. He quoted instances where RBC ratios are used in covenants of bilateral agreements in the marketplace. He said RBC ratios are not used as standalone indicators but as “part of the broader fabric” upon which the market assesses insurance companies. He was also aware of certain states that impose certain minimum RBC thresholds when approving transactions.

Toy said that based on his interaction with rating agencies, he is aware of the use of RBC as part of the holistic review of an insurer. The rating agencies have a particular focus on the possibility of regulatory action. Toy provided an example where derivative counterparties would terminate insurers’ derivative agreements if their RBC ratios went below 200%. Toy said he views these uses of RBC ratio as absolute triggers to be detrimental to regulators. Brown pointed out that RBC is a snapshot view of capitalization and won’t reflect, for example, capital contributions, corrective action, etc., that happen after year end. She also disagreed with Rosenbaum’s belief that RBC is an indicator for “health” of insurers.

Tipton sought clarification on which piece of information is proposed to be removed—ACL, TAC, or both. Hemphill said she believes, based on the read of the preamble, the most reasonable approach is to remove both. Tipton said he thought that ACL is harder than TAC to derive from other existing disclosures.

Chou suggested performing a cost-benefit analysis. He would like to see an inventory of how and where ACL and TAC data are currently used, as this could help guide the group in thinking about what practitioners are impacted by the proposal. Hemphill concurred. She said she envisioned there will be a lot of analysis, but they are not going to be performed at this group level.

Botsko stated that the Academy was made aware of this discussion and showed interest in the topic. He said he believes that additional input from the industry and the Academy at the formal group level would be helpful to perform cost-benefit and unintended consequences analysis. He was also curious about the NAIC’s opinion on the subject. Weatherford said the NAIC legal counsel has started looking into the *Risk-Based Capital (RBC) Model Act (Model #312)* and agreed with the proposal. She said the NAIC is ready to perform further analysis, and she will be monitoring the evolving discussions. Weatherford declined to

share her opinion. Brown said that ultimately this is up to regulators, and the NAIC legal counsel will be engaged to ensure compliance with Model #312. Hemphill said that she consulted with the Texas Department of Insurance's (TDI's) legal counsel, which generally agreed with the direction of the proposal based on how Model #312 and the preamble are worded. Based on that discussion, Hemphill said she believed regulators have authority to proceed with the proposal, and it is more of a policy question than legal. Hemphill sought agreement from other regulators on the proposal, which is to remove TAC and ACL from the five-year historical page. Connecticut, Iowa, and Washington supported moving the proposal to the parent ad hoc group.

Hemphill asked Rosenbaum what additional information RBC ratios provide that is deemed as incremental to the rating agencies' strength indicators/ranking. Rosenbaum responded that most asset managers have internal credit analysis departments that gather as much information as they can possibly find to evaluate an investment prior to making a decision. It's a mosaic approach, and no one indicator is suffice. He added that public disclosure of ACL and TAC also forces companies to explain their year-over-year trends. Clark disagreed and stated the use of RBC ratios in investment decisions is exactly what regulators would like to discourage. It deviates from the original intent of RBC. Hemphill said the means may not justify the end to provide transparency for decision making, just as there are other confidential filings with regulators that, despite being useful, are not meant to be disclosed.

Botsko inquired about the historical perspective of disclosing TAC and ACL, and Brown provided a recap of what had been discussed during the Dec. 12, 2023, meeting. Botsko said that the disclosure was meant to be temporary based on Brown's recap. He said that he thought there were concerns expressed by consumer groups.

## RBC RISK EVALUATION AD HOC -ASSET CONCENTRATION SUBGROUP

August 28, 2023 - Virtual

Agenda

- Introductions
- What do we mean by Asset Concentration?
- Why do we care?
- What do we currently have?
  - Ten largest issuer exposures – usually corporate or agency bond issuers
  - Portfolio Adjustment Factor – based on the total number of bonds held versus a threshold
- Why are these not good enough?
  - What risks are being missed?
    - asset classes or different subcategories (e.g., CLOs)
    - exposure to industries/sectors
  - Market Risk
- What is the right mechanism for deciding what risks are an issue/concern?
- Is RBC the right place to deal with this? What are alternatives?
  - State investment law limits
  - Disclosures via Statutory Accounting and Blanks (note General Interrogatories and Summary Investment Schedules)
  - Exam Handbook procedures

Toy, co-chair of the Asset Concentration subgroup kicked off the meeting with an introduction of members. Based on his former experience as portfolio manager and current experience as financial examiner, he suggested the Ad Hoc group look into the topic of Asset Concentration, thereby the formation of this sub-group.

Toy acknowledged that should there be gap(s) identified in relation to Asset Concentration Risk, the solution may not be in the RBC framework. There are multiple venues the risk could be addressed, such as state investment law limits, enhanced disclosures, or enhancement of exam handbook.

Clark commented the purpose of the subgroup is two-fold: (1) To revisit areas within the RBC framework that haven't been reviewed for a while (e.g., existing issuer concentration risk) (2) To identify new areas of risk (e.g., asset class/ sector concentrations) Both Clark and Toy agreed having a systematic way to pull data into RBC spreadsheet is the pre-requisite of using RBC as a tool to address risk.

Toy's view/ definition of "asset concentration" is more than just issuer exposure but should expand to asset class exposure. He used exposure to CLOs as an example. While the industry

## RBC RISK EVALUATION AD HOC -ASSET CONCENTRATION SUBGROUP

as a whole is not significantly exposed to CLO, (~3% of industry invested assets), certain insurance companies have significant exposure to CLOs, even the below investment grade tranches of CLOs. Chou echoed that the subgroup should not disregard risk based on the notion that the asset class is not material to the industry as a whole.

Botsko stated that the risk-based focus approach is not just targeting CLOs. The subgroup should consider any asset class that is large for a specific company, involve experts within the subgroup to formulate an approach, and then share findings with the Ad Hoc Group, RBC Working Groups and Capital Adequacy Task Force. From there, the parent groups would reach out to a broader audience to solicit comments.

Toy tracked back to a couple historical instances where additional disclosures were sufficient to deal with risk identified, such as subprime mortgage loan disclosure around 2008 and security lending disclosures as of more recent.

Toy reminded the subgroup that the most important reason the subgroup revisit the RBC framework is to ensure the framework is effective in identifying insurance companies that have solvency issues. With that in mind, if no solvency issues created by asset concentration, one might conclude no further action deemed necessary.

Adolf questioned whether RBC is the right tool, given so much more oversight were instituted since 2008 (FAWG, ORSA, other enhanced financial disclosures and regulated financial reviews).

Toy elaborated on one of the agenda points – Market Risk. The following recent developments attributed to heightened Market Risk: more private placement investments, new asset classes that are structurally complex or have more liquidity risk due to smaller market. These all led to more volatility and hence “Market Risk”. He also gave the example of RMBS where market volatility due to prepayment variability and cash flow structures can be high (e.g., interest only strips).

Toy asked that NAIC staff follow up for the internal compendium document that summarizes different investment law limits by States.

Rosenbaum expressed his view of the state limits: most are wide and put outside boundaries on what could be invested. They appear to adopt model law in some shape and form, e.g., rating category limits and diversification limits are pretty standard adoptions. Clark reminded the subgroup that state investment laws may need modernization as they may not address changes in capital markets (e.g., no distinction between structured securities and corporate bonds). Rosenbaum asked if Clark could touch on the recent updates to IA investment guidelines. Clark said the refresh has introduced certain principle-based components to the investment guideline, e.g., it refers to SAP Bond Definition for classification of investments.

Toy has an observation that there is fair amount of inconsistency across state investment laws.

## RBC RISK EVALUATION AD HOC -ASSET CONCENTRATION SUBGROUP

Drutz posed a question about what prospects, if any, to ensure the 10 largest issuer exposure are being reported accurately. Gann acknowledged that NAIC Staff was aware of a disconnect between financial statement disclosure in the form of Supplemental Investment Risk Interrogatory (SIRI) and RBC guidance. Gann went on and summarized changes to SIRI adopted in 2019/2020, including exclusion of diversified fund from look through approach in identifying top 10 issuers. Clark suggested takeaways as follows: (1) to determine if any of the adopted changes to SIRI should be brought over to RBC, (2) to determine whether additional updates or clarifications are needed, e.g., are the diversified vs. non-diversified consideration only applicable to funds or apply to structured securities also. Botsko reminded the subgroup that similar to the project of refreshing guidance over affiliate investment instructions, the group can consider giving examples/ illustrations if that help with interpretation.

Next, Toy turned to Exam Handbook (Handbook). Toy said the Handbook provides good, solid guidelines for examiners in identifying investment risks. However, just like RBC framework, the Handbook is also heavily reliant on a systematic data pull mechanism.

As parting thoughts, Clark was curious whether there are any other capital models (e.g., rating agencies', internal models etc. that can shed light on how others handle asset concentration risk. Wilson asked if the subgroup would look into capital model of other jurisdictions (APEC, UK etc.) Toy was skeptical how useful it would be to make reference to foreign jurisdictions. According to his experience, the U.S system is quite incompatible with Solvency II and they are two different systems. Clark would welcome jurisdictional data points, acknowledging that they may be irrelevant to US system.

Toy will work with Clark to formulate more specific agenda items going forward. Cadence of the meeting is expected to meet every couple of weeks.

**September 18, 2023 - Virtual**

### Agenda

- **Review August 28 Summary Report**
- **Review & start building inventory of asset concentration considerations (attachment – Excel)**
- **Discuss overarching evaluation framework**
  - **What factors would indicate an RBC solution is warranted.**

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No correction or addition to the August 28, 2023 Summary Report was proposed by the attendees. No formal adoption of the summary report was deemed necessary.

Toy kicked off the discussion by introducing an inventory of asset concentration considerations (the “Inventory”) put together by the NAIC Staff prior to the call. The starting point of the inventory was current/ existing investment-related disclosures in the statutory annual statements. (Footnotes, General Interrogatory, Supplemental Investment Risk Interrogatories / SIRI). Toy said while we would not preclude the need to develop additional disclosure(s) or statutory accounting guidance, the most reasonable starting point is the existing disclosures. Chang briefly walked through the layout of the Inventory.

### **Clark’s comments – principle-based framework.**

Morris (ACLI) inquired about whether there will be a risk assessment component to the Inventory. Clark responded that the Inventory is just the first part of the exercise, and a wide net is cast: to inventorize areas of potential concentration. The second part of the exercise is to develop a thought process to help determine whether the potential concentrations identified would warrant an RBC solution. Clark suggested putting together a flow chart similar to the one presented by Academy at RBC Investment Risk and Evaluation Working Group (RBCIREWG) Summer National meeting at Seattle (the Flow Chart). The key is to lay out principles that would help the ad hoc subgroup to work through the Inventory and narrow down the scope. Toy agreed with Clark on the Flow Chart and they both stated that they did not see everything in the Inventory would pose solvency risk, even if concentration is identified. For example, concentration in US Treasuries or Corporate Bonds in general is not likely to pose solvency risk. Once the Flow Chart is developed, one should run the items in the Inventory against the Flow Chart and analyze accordingly. Whether concentration would pose solvency risk is one of the decision points in the Flow Chart. Toy reminded everyone that even if anything falls out from the Flow Chart, there are multiple alternatives to address the risk. Morris (ACLI) also agree the Flow Chart is an excellent idea. Clark supplemented that the gating factor or first point of the Flow Chart should be whether or not the concentration poses linear risk.

## **Toy's comments – Sector concentration & Emerging asset risks.**

Toy went on to provide his feedback on the Inventory. He clarified that currently, there is no disclosure of Sector information for insurers' bond and stock investments in the statutory filings. Toy experienced himself firsthand the struggle to identify insurers' exposure to a certain sector (e.g., banking) during his financial exams. It is also a struggle for the NAIC staff, he believes, and a "missing piece" in the data set. That said, Toy did not believe having Sector disclosure is super high on the priority list as there are other factors that might mitigate the risk. Toy pointed out another sector concentration consideration-Property Type of Real Property and Mortgage loans is especially relevant for current economy. Besides concentration / exposure to office buildings, concentration to construction loans also become problematic recently. Currently, construction loans are only disclosed in life insurers' Mortgage loan Worksheet for RBC filings (LR004). One may consider enhancing the disclosure (e.g., consider disclosure in Blanks) if warranted. Morris (ACLI) posed a question about whether the framework should be malleable to address emerging risks. Toy responded with agreement that the RBC framework should not be a closed book. He quoted Phil Barlow, chair of RBCIREWG, and his idea of a placeholder for emerging investments in the RBC framework, likely a higher capital charge for that placeholder "bucket". To that end, Clark stressed the importance of having proper disclosure to help identify & scope emerging risks. However, how to get from the point of risk identification to determination of a new RBC factor, that would require a framework / thought process and therefore he reiterated the importance of developing the flow chart.

## **Other questions & comment**

#1 Q: Adolf sought clarification as to whether based on discussion thus far, certain categories of investments should be eliminated.

A: Toy responded that he is hesitant to do that as different circumstances may lead to the conclusion that even concentration in US Treasuries may pose risk (e.g., due to asset liabilities mismatch). Clark agreed to leave everything on the table and suggested creating a column in the Inventory to document the thought process that leads to discarding the items or how the risks are addressed and therefore waive further actions. That documentation would help us take credit for evaluating the risk. However, Clark does not believe we need to list & document every possible asset class.

#2 Q: Wilson asked if the Single Name/Issuer Concentration should be performed at group/ultimate parent level as opposed to the current instruction requirement at issuer level.

A: Toy responded that while the current RBC instruction is not explicitly clear on aggregation method, he personally believes that for bonds, aggregation should be done at parent level in the instances that the issuer is reliant on the credit of the parent company. The current instruction that requires the use of first 6 out of 9 digits in cusips is supposed to help with identifying issuer relationships. Another disclosure that would help is Legal Entity Identifier

## RBC RISK EVALUATION AD HOC -ASSET CONCENTRATION SUBGROUP

(LEI). However, given the haphazard nature of the insurers' LEI disclosure, it is going to be eliminated as part of the Bond project. Gann provided rationale why the LEI disclosure is going to be eliminated in bond schedules. Toy concluded this topic by saying he has no data to back up whether the top 10 aggregation data reported by filers are reliable and accurate or not.

#3 Q: Wilson asked if the Single Name/ Issuer Concentration should be performed at Holding Company level.

A: Toy reminded the group that RBC calculation is performed at legal entity by legal entity basis. He cautioned that review at group level might potentially lead to inadvertent omission of issue when small legal entities within the group use group level materiality and omit concentration risk that is meaningful to the standalone entity.

#4 Q: Wilson asked if we should consider look through in aggregating exposure.

A: Toy responded that it depends. Look through does not seem appropriate for diversified mutual funds but the answer could change when it comes to non-diversified funds. Marcotte stated that SIRI has top 10 asset disclosure that can potentially be leveraged off. Chang reminded the group that one of the brainstorm items during 8/28 subgroup call is to align guidance between SIRI and RBC on asset concentration disclosure. Whether or not to look-through funds is one of the areas that need alignment.

#5 Wilson commented that for insurance companies that obtain ratings from AM Best, sector information should be readily available as sector information is part of the deliverable to AM Best. Wilson provided AM Best rating deliverable template after the conclusion of the call.

#6 Q: Adolf inquired if aggregation of data at industry level is required for the purpose of analysis and flow charting.

A: Toy has experience with NAIC's Financial Data Repository (FDR), which has capability of aggregation. Clark stated that it would be pretty far along in the flow chart then we start thinking about RBC methodology and aggregation. Yeung reminded the group that RBC data for individual insurers is confidential and can only be provided at aggregate level.

## Next Steps

1. Attendees are encouraged to review the Inventory and provide feedback to the following:
  - Are there any other potential asset concentration considerations to add?
  - Are you aware of any area of improvement of current disclosures to help better scope the risks? (Toy gave two examples. First, he believes current foreign investment disclosure could use some improvements– in his opinion, structured securities issued by Cayman Islands Issuer/Trust are not truly “foreign investments”. Second, referrals to Blanks may be considered to expand on current foreign investment disclosure such that transparency is provided for country of issuance. The rationale is that solvency



## RBC RISK EVALUATION AD HOC -ASSET CONCENTRATION SUBGROUP

risk for investments in developed countries is inherently different than investments in developing countries.)

- Which items on the Inventory should we prioritize?
2. Botsko suggests adding column/ notation in the Inventory to indicate applicability to which formulas (Health, Life, P/C, ALL).
  3. Clark & Toy & Chang will start looking into a principle-based framework (see Clark's comment section)

DRAFT

## RBC RISK EVALUATION AD HOC -ASSET CONCENTRATION SUBGROUP

## October 13, 2023, Call Summary Report

**Agenda**

1. Opening remarks
2. Walk through decision tree/flow chart.
3. Next meeting

The following 23 individuals attended the Oct. 13, 2023, Asset Concentration Subgroup call:

<b>Asset Concentration Ad Hoc Subgroup</b>		
<b>Name</b>	<b>State</b>	<b>Company/Organization</b>
<b>Kevin Clark, Co-Chair</b>	IA	
<b>Ed Toy, Co-Chair</b>		Risk & Regulatory Consulting LLC
Wanchin Chou	CT	
Tom Botsko	OH	
Matthew Richard	TX	
Steve Drutz	WA	
Alan Morris		American Council of Life Insurers (ACLI)
Steve Broadie		American Property Casualty Insurance Association (ACPI)
Matthew Vece		ACPI
John Golden		Athene
Mark C. Abbott		Athene
Amnon Levy		Bridgeway Analytics
Brett Manning		Bridgeway Analytics
Sabrina Wilson		Clearwater Analytics
Ponni Vel		Equitable
Jeff Johnson		Global Atlantic Financial Group (GAFG)
Tip Tipton		Thrivent
Jeff Johnston		NAIC
Crystal Brown		NAIC
Dan Daveline		NAIC
Eva Yeung		NAIC
Maggie Chang		NAIC
Robin Marcotte		NAIC

Because there were new members added to the group, Clark kicked off the meeting by discussing the purpose of the Subgroup.

- The Subgroup is formed under the RBC Risk Evaluation Ad Hoc Group which ultimately reports to the Capital Adequacy (E) Task Force.

## RBC RISK EVALUATION AD HOC -ASSET CONCENTRATION SUBGROUP

- The Subgroup is tasked to review the risk-based capital (RBC) formula to 1) identify areas that need to be updated and 2) identify areas for improvement with particular emphasis on asset concentration risk.
- The Subgroup does not mean to possess decision-making authority. Any areas of concern identified will be reported to the parent Ad Hoc group. Referrals to other working groups are also anticipated.
- RBC solution is not the only resolution to any findings by the Subgroup.

Clark said the flow chart/decision tree is the primary focus of the call and was drafted with an anchoring principle in mind: RBC framework should be kept as simple as possible to avoid being overly complicated, which would compromise its usefulness as a regulatory tool to identify weakly capitalized companies. With that in mind, RBC should be the last resort in the decision tree, he said.

Clark gave a summary of what had been discussed in the prior two meetings. Then he walked the Subgroup through a decision tree that was drafted to guide the deliberation process of whether RBC is the right solution for any asset concentration considerations identified in the future.

Decision Point Within the Decision Tree	Discussion Summary
Box A—Considering Asset Concentration Risk	<p>Clark said that this is the starting point of the decision process and is where potential asset concentration considerations come into play. Evaluation is a key activity here, he said.</p> <p>Broadie inquired how the group decides if there is a concentration issue that needs to be addressed. Clark reiterated that it is a collective effort of the subgroup to inventory the issues, and for the purpose of the walkthrough, no risk/issue is being singled out. Both Clark and Toy agreed that once the decision tree is finalized, the next step is to run the potential issues identified by regulators/the Subgroup against the flow chart to systematically evaluate the solutions.</p>
Box B—Is the Risk Non-Linear with Increase in Exposure?	<p>Clark stated this decision point is to determine whether concentration in a particular element could lead to an increase in risk that isn't otherwise captured in the primary RBC charge.</p> <p>Clark asked the group to determine if "non-linear" is the right terminology. He gave an example of an instance of concentration where there is no "non-linear risk," which was concentration in corporate bond that is otherwise well-diversified.</p> <p>Botsko wondered if "correlation of risk" is what the terminology "linear/non-linear" means.</p> <p>Toy pointed out that the challenge with this box is to determine the tipping point where concentration in ownership would pose non-linear risk. In the illustration that he provided, which was a person who invested his entire retirement nest egg in shares of the company he worked for, examination of the risk at the portfolio level is crucial. Morris echoed what was said and inquired about the need to develop a metric or threshold here in the decision process to help decide if the concentration is severe enough to warrant further consideration.</p>

## RBC RISK EVALUATION AD HOC -ASSET CONCENTRATION SUBGROUP

	<p>Vel sought to clarify if the correlation of risk is determined at the asset class level or portfolio level. Both Toy and Clark agreed that it is too early to define/limit the scope and, therefore, will keep the scope broad for now.</p> <p>The consensus of the Subgroup for this decision point was to redeliberate the terminology “non-linear”.</p>
Box C—Do Existing Guardrails Prevent Concentration?	<p>Clark used exposure to below investment grade (BIG) investments as an example and stated that there probably is already a state statute that limits insurers’ exposure to BIG investments. If one concludes that such a guardrail is effective, one would conclude no further consideration is deemed necessary.</p> <p>There were no comments from the subgroup on this point of the decision tree.</p>
Box D—Potentially Material to Material Portion of Industry?	<p>Clark reminded the Subgroup that he brought up the topic of defining materiality during the RBC Risk Evaluation Ad Hoc Group call. He believes it is more appropriate to deliberate materiality at the parent group level, as other subgroups will likely run into the discussion of materiality as well.</p> <p>He was not aware of materiality being defined in current RBC instructions, preamble, or others but would like to confirm his understanding. Botsko thought “materiality” was more so an accounting concept but supported the cause to explore this concept further. Clark elaborated on the challenge of defining materiality. He said that while it is relatively easy to define materiality for a single insurer, how to determine materiality at the industry level and how to define materiality for RBC purposes could be challenging. The determination is bound to be judgmental and may require some principles and framework to assist. Botsko agreed and mentioned that materiality is also not defined in examination. It was kept general enough to allow room for judgment.</p> <p>Toy advocated for the point of view of Philip Barlow, associate commissioner of insurance, District of Columbia Department of Insurance, which is to implement a placeholder for emergent asset types that are yet to be material to the industry as a whole but worth segregation for monitoring or for an interim solution.</p> <p>Morris thought the discussion thus far would lead to a two-tier materiality. For example, if the asset concentration identified is material to a single company, certain corrective actions other than RBC solution should be considered. (Tier 1). If the asset concentration identified is material to the industry, one should continue through the decision tree to determine whether RBC action is warranted (Tier 2). Clark agreed with Morris. He emphasized that the decision point uses the word “potentially” because one should also consider trend. If one concludes that the asset concentration will soon become material in the near future, that risk should not be ignored even though it is not material at the moment of evaluation.</p> <p>The consensus of the subgroup for this point in the decision tree was to table it for further discussion at the parent Ad Hoc Group meeting.</p>
Box E—Can Risk Be Effectively Mitigated Through Other Regulatory Tools?	<p>As brought up in the opening remarks, RBC should be the last resort in tackling the asset concentration risk. This decision point requires one to evaluate if there are other more effective means to mitigate identified risks. Clark gave several examples, such as</p>

## RBC RISK EVALUATION AD HOC -ASSET CONCENTRATION SUBGROUP

	<p>financial statement disclosures, financial analysis, or examination procedures. Referrals to other groups may be warranted.</p> <p>No comment from the subgroup on this point of the decision tree.</p>
Box F—Is There a Systematic and Practical Way to Measure the Risk?	<p>Clark introduced this decision point (together with Box G) by reminding the group that RBC is quantitative by nature, so one should evaluate whether there is a methodology readily available or a need to develop a methodology to quantify the risk. This decision point is somewhat interrelated to Box G below, he said. He asked for the Subgroup's help to determine whether Box F and Box G should be combined.</p> <p>The consensus of the Subgroup was that Box F and Box G, despite somewhat overlapping, should stand on their own.</p>
Box G—Is the Necessary Data Currently Available?	<p>Morris advocated for Box G to be separated and stand on its own. He stated there would be instances where data are available but are not deemed to be sufficient. Both Morris and Toy agreed the ultimate outcome of this step could be:</p> <ul style="list-style-type: none"> <li>• Enhancement to the data call;</li> <li>• Improvement of data accessibility; and</li> <li>• Referrals to the Statutory Accounting Principles (E) Working Group and the Blanks (E) Working Group.</li> </ul> <p>Toy pointed out that if data cannot be gathered quantitatively in an annual statement, footnotes, interrogatories, supplemental disclosures, etc., then we are left with enhancing guidance in the <i>Financial Analysis Handbook</i> and the <i>Financial Condition Examiners Handbook</i> so that the risks are dealt with through qualitative discussions with the insurers.</p>
Box K—Develop RBC Framework to Capture Risk	<p>Clark had envisioned the role of the subgroup as making recommendations only. The bulk of work for developing RBC solutions should be performed at the respective working group level.</p> <p>Botsko wondered if after analyzing obtained data, there would be instances when one would conclude at Box K that RBC is still not a fitting solution. Toy explained the Risk-Based Capital Investment and Evaluation (E) Working Group's attempt to carve out certain government debts and to tailor an RBC factor for those investments more than 10 years ago. The group at that time decided that there was simply not enough data and did not proceed with a new set of factors.</p> <p>Clark admitted that analysis performed at Box K could lead to the realization of certain flawed conclusions made along the decision-making processes (e.g., not as material as initially thought, not quite practical to measure the risk as initially thought, etc.) However, once clearance is obtained in all the decision points, Clark said he truly cannot think of any instances of how RBC is not the fitting solution.</p> <p>The Subgroup's consensus was the question of whether the flow chart for Box K needs to be tweaked or not.</p>

**RBC RISK EVALUATION AD HOC -ASSET CONCENTRATION SUBGROUP**

Other matters that were discussed by the Subgroup included:

1. Despite being developed initially for the purpose of asset concentration discussion, Morris said he believes the flow chart can be applied more broadly to other RBC discussions.
2. Botsko suggested running an asset concentration consideration through the flow chart to determine if any further refinements are needed. Clark agreed.
3. Clark encouraged the Subgroup members to have active participation in order to maximize perspectives and feedback obtained.
4. The Subgroup decided on the cadence of meeting, which is at least every two to three weeks, and Friday is preferable.

The Subgroup agreed on next steps.

1. Subgroup members were tasked to review the flow chart while considering the discussions during this meeting and to provide comments by Oct. 20, 2023.
2. Subgroup members were tasked to provide comments on asset concentration inventory.

## RBC RISK EVALUATION AD HOC - ASSET CONCENTRATION SUBGROUP

## October 27, 2023, Summary Report

**Agenda**

1. Opening remarks + administrative matters
2. Receive comments from members
  - ACLI (Attachment A)
  - Equitable (Attachment B)
3. Walk through revised flow chart (Attachment C)
4. Walk through revised inventory (Attachment D)
5. Other matters

The following 25 individuals attended the Oct. 27 Asset Concentration Subgroup meeting:

Asset Concentration Ad Hoc Subgroup		
Name	State	Company/Organization
<b>Kevin Clark, Co-Chair</b>	IA	
<b>Ed Toy, Co-Chair</b>		Risk & Regulatory Consulting LLC
Wanchin Chou	CT	
Tom Botsko	OH	
Matthew Richard	TX	
Doug Stolte	VA	
Steve Drutz	WA	
Alan Morris		American Council of Life Insurers (ACLI)
Steve Broadie		American Property Casualty Insurance Association (ACPI)
Matthew Vece		ACPI
John Golden		Athene
Mark C. Abbott		Athene
Amnon Levy		Bridgeway Analytics
Brett Manning		Bridgeway Analytics
Sabrina Wilson		Clearwater Analytics
Ponni Vel		Equitable
Maureen Adolf		Eversheds Sutherland
Jeff Johnson		Global Atlantic Financial Group (GAFG)
Jillian Werner		John Hancock
Tip Tipton		Thrivent
Crystal Brown		NAIC
Eva Yeung		NAIC
Julie Gann		NAIC
Maggie Chang		NAIC
Robin Marcotte		NAIC

## RBC RISK EVALUATION AD HOC - ASSET CONCENTRATION SUBGROUP

Clark kicked off the meeting by thanking the members who submitted comments/feedback prior to the call. Before handing it over to the commenters, Clark walked the Subgroup through changes made to the flow chart (Attachment C) in response to discussions during the Oct. 13 call:

Decision Point Within the Decision Tree	Summary of Updates and discussions made in response to the edits
<p>Box B—Does a Higher Degree of Correlation of Risk Exist Within the Intended Statistical Safety Level Than Assumed in Determining RBC Factors?</p>	<p>Clark presented a major update made to Box B. In lieu of the concept of “non-linear risks,” Clark explained the decision point here is to identify whether the concentration poses a higher degree of correlation of risks than what is contemplated in the primary risk-based capital (RBC) factors.</p> <p>Toy amplified what Clark stated. He believed Box B is the most difficult box to “get our arms around.” Toy thought of this decision point as “whether the concentration element identified is something a regulator should care about?” Toy also affirmed the importance of having a flow chart because important decision points such as Box B would be revisited frequently as readers move through the flow chart.</p>
<p>Box K—Develop RBC Framework to Capture Risk at Respective RBC Working Groups</p>	<p>Clark introduced refinements made to Box K. First, he reiterated the development of RBC factors/framework should be made at the applicable working-group level.</p> <p>In response to the Subgroup’s discussion on Oct 13, Clark also added a looping mechanism where one could conclude the need to revisit prior decision points as they learn new information.</p>

Next, Morris spoke to ACLI’s comment letter (Attachment A). The comment letter was divided into two main sections. The first section captures comments specifically directed to various decision points in the flow chart, namely Box B, Box D (materiality), and Box F. He said the key message here is to ensure there are objective and consistent criteria, metrics, and measurements. The second section captures two general observations. The first is the need to have a scope of application for the flow chart. Morris asked whether the flow chart needs another decision point to evaluate the correlation of risks between asset classes. The second is including a “looping back mechanism” in the flow chart, especially in Boxes E-K, which Morris advocated.

Clark and Toy reacted to ACLI’s comments as follows:

1. While it is ideal to have objective metrics, Clark pointed out that the Subgroup may need to put principles around the decision point in lieu of bright lines. The balancing factors to consider could be industry versus individual companies, trends, etc., and could be subjective. Clark reiterated his belief that materiality discussion should be held at the parent Ad Hoc group level. Toy seconded the need to develop principles. He said the principles coupled with the agreed-upon process will ensure the right level of transparency in the decision-making process.
2. Both Clark and Toy agreed it would be beneficial to have Nancy Bennett (American Academy of Actuaries Academy—Academy) participate in the Subgroup. An overview of the design of RBC factors and portfolio adjustment factors (PAFs) were identified as future agenda topics.



## RBC RISK EVALUATION AD HOC - ASSET CONCENTRATION SUBGROUP

3. Pertaining to ACLI's general observations, Clark said he would like to keep the scope very broad for now and would not preclude the consideration of correlation of risks among asset classes.

Next, Vel spoke to Equitable's comment letter (Attachment B) and focused on comments pertaining to the flow chart. (Equitable's comments on the Inventory were tabled for the next meeting due to time constraints). Equitable suggested languages specifically tailored for Boxes B and D and posed a question on materiality (see Attachment B for details). Lastly, Vel suggested running real-life examples of concentration elements against the flow chart, saying they would be helpful in identifying gaps or areas for improvement.

Clark and Toy reacted to Equitable's comments as follows:

1. Clark agreed that real-life examples would be helpful and should be an agenda topic for future meetings.
2. Both Clark and Toy thought Equitable's comments could boil down to materiality assessment at different vantage points. For example, Equitable asked three questions: "What is defined as 'concentration?"; "What is the materiality consideration for the portfolio versus relative to the industry?"; and "At what point do the regulators care about the concentration observed?"
3. Clark also contested Equitable's comment on Box B, which was, "Could the total insurer portfolio loss from the concentrated position, including other correlated exposures, plausibly result in loss that materially consumes total insurer surplus?" Clark stated Box B should be more theoretical and thought Equitable's suggested edits would imply quantification exercises be performed earlier than Box D. Clark sought clarification from Equitable. Vel used single-name exposure as an example and eventually agreed that the loss to surplus consideration would be part of the consideration falling under Box D. In addition, Toy reminded the Subgroup that the risk of loss to surplus varies depending on the type of assets in consideration. For example, the risk of loss to surplus from concentrated ownership in A-rated versus B-rated investments varies. Toy also gave an overview of the intended design of PAFs. According to Toy, the bond factors are developed based on a hypothetical bond portfolio with a set number of issuers in mind. The PAFs were designed to adjust the basic bond factors for diversification that is more or less than the diversification assumed in the hypothetical bond portfolio.

Levy then explained how the current C-1 Bond factors are calibrated. C-1 factors look at a pool of bonds' maximum loss over a period of time, factoring in nuances, such as tax offset. The first step is to construct a representative portfolio that is heterogeneous and considers name/issuer concentration. The maximum loss over a period of 10 years could result from the default of several issuers, and uncertainty over recovery is considered. Levy said what is noteworthy is when the factors are deliberated, there is a single factor for each rating, and that should be interpreted as an average risk that abstracts from the name concentration. Then, the doubling of the capital for the largest 10 non-NAIC 1 single-name investments is intended to capture the name concentration, and the PAFs consider how well-diversified the portfolios are. During the derivation of PAFs, Levy stated that they performed scenario analysis upon actual insurers' portfolios and assessed what the risk of the portfolios would look like if they had different parameters for the name concentration (e.g., consider doubling top 5, 10, 20, or 30 names). After the analysis, it was determined that doubling the top 10 names on average across insurance holdings seems to be the most fitting and reasonable approximation. The PAFs took into consideration the benefits of diversification. The factors were also

## RBC RISK EVALUATION AD HOC - ASSET CONCENTRATION SUBGROUP

calibrated to insurers' actual holdings, and it was determined that the current PAFs optimized the fit of the function of PAFs.

Levy also clarified that while people often associate BB bond as riskier than AA, bond generally has a lower level of credit risk with all else equal, but it's important to understand that within the context of C-1 framework, ownership of a BB-rated bond isn't going to result in a higher likelihood of surplus being blown, as more capital is required for that BB investment. The C-1 framework is an attempt to level set how capital is being managed across the credit spectrum.

Finally, Levy believes one thing that would help the conversation of materiality is to define and identify the risks. That would help make the conversations less hypothetical and help the thought process of determining materiality. Levy further sought to clarify whether the asset concentration risk discussion is limited to credit risk (as measured by C-1 factors) or broader in scope. Toy said while credit risk is the traditional area of focus by the regulators, he personally is concerned about more than just credit risk. He sees the risk of loss of surplus attributable to assets other than bonds, e.g., Schedule B and Schedule BA investments. The concern for these assets is the risk of loss to surplus attributable to market volatility. Toy acknowledged that bond is a significant asset class for insurers (accounts for 75% of invested assets), but even with bonds, Toy does not think 100% credit risk but likely other risks that need to be considered.

Clark concluded the meeting by announcing that the Subgroup should get back into the Inventory (Attachment D), prioritize the issues, and then start working through the flow chart. Toy gave his final remark by pointing out that the list of concentration elements in the inventory is not exhaustive in nature and is driven by historical observations. Any new findings or evolution identified in the future could shape and form the document.

**Appendix - Attachments**



Attachment A ACLI%20comment%  
20on%20Flow%20Ch



Attachment B Equitable comments  
on Flowchart and Inve



Attachment C Asset%20Concentrati  
on%20Subgroup%20



Attachment D Asset%20Concentrati  
on%20Subgroup%20

## RBC RISK EVALUATION AD HOC - ASSET CONCENTRATION SUBGROUP

## November 16, 2023, Summary Report

**Agenda**

1. Opening remarks + administrative matters
2. Overview of portfolio adjustment factors (PAF), discuss how PAF relates with bond factors and top 10 concentration factors (Academy)
3. Revised asset concentration inventory (Attachment D)
4. Equitable comment letter on inventory (Attachment B)
5. TBD – walk through sector concentration (if time allows)
6. Other matters

The following 28 individuals attended the Nov. 16, 2023, Asset Concentration Subgroup meeting:

Asset Concentration Ad Hoc Subgroup		
Name	State	Company/Organization
<b>Kevin Clark, Co-Chair</b>	IA	
<b>Ed Toy, Co-Chair</b>		Risk & Regulatory Consulting LLC
Carrie Mears	IA	
Tom Botsko	OH	
Matthew Richard	TX	
Doug Stolte	VA	
Greg Chew	VA	
Steve Drutz	WA	
Jerry Holman		American Academy of Actuaries (Academy)
Nancy Bennett		Academy
Alan Morris		American Council of Life Insurers (ACLI)
Mark C. Abbott		Athene
Kim Welsh		Athene
Caroline Busby		Blackrock
Amnon Levy		Bridgeway Analytics
Brett Manning		Bridgeway Analytics
Sabrina Wilson		Clearwater Analytics
Ponni Vel		Equitable
Maureen Adolf		Eversheds Sutherland
Jeff Johnson		Global Atlantic Financial Group (GAFG)
Jillian Werner		John Hancock
Tip Tipton		Thrivent
Crystal Brown		NAIC
Dave Fleming		NAIC
Eva Yeung		NAIC
Julie Gann		NAIC
Maggie Chang		NAIC
Robin Marcotte		NAIC

## RBC RISK EVALUATION AD HOC - ASSET CONCENTRATION SUBGROUP

Toy kicked off the meeting by introducing guest speakers Jerry Holman and Nancy Bennett (American Academy of Actuaries—Academy), who were requested by the co-chairs to provide background on the development of portfolio adjustment factors (PAF) and how PAF interplays with C-1 bond factors. Bennett and Holman were involved in the original development of PAF and C-1 factors. They referred to a presentation (Appendix A) that was originally presented to the Investment Risk-Based Capital (E) Working Group in 2016. Bennett cautioned that the presentation was not updated for subsequent development (e.g., PAF and C-1 factors were subsequently revised using factors proposed by Moody's Analytics in 2021). Since her presentation focuses on historical background, the presentation was deemed helpful to facilitate discussion.

Timeline:

Year	Development
1994	<ul style="list-style-type: none"> <li>- The year risk-based capital (RBC) was first implemented.</li> <li>- PAFs were developed by an industry group.</li> <li>- The Academy was unable to locate documentation of the legacy PAF methodology.</li> </ul>
2010	<ul style="list-style-type: none"> <li>- The NAIC's C1 Subgroup asked the Academy to review the capital requirements for bonds.</li> <li>- Without proper documentation of the original PAF rationale, Bennett said the Academy's approach was a "strictly mathematical process".</li> </ul>
2016-2017	<ul style="list-style-type: none"> <li>- The Academy considered alternative methods and recommended a more accurate measure of diversification risk.</li> <li>- Both regulators and the industry advocated for a simpler structure; therefore, the Academy recommended PAFs based on a method that measured diversification solely on the number of securities in the portfolio.</li> </ul>
2020-2021	<ul style="list-style-type: none"> <li>- The Academy recommended PAFs based on mathematical results. Regulators applied discretion and adjusted the PAFs to assume greater (smaller) diversification in smaller (larger) companies' portfolios. Note that regulators adopted PAFs recommended by Moody's, not those recommended by the Academy.</li> <li>- Bennett emphasized that PAF recognized risk diversification of a <u>bond portfolio</u>. It's different than the concentration factors that apply to <u>all invested assets</u> including bonds, mortgages, etc.</li> </ul>

Holman continued the presentation by explaining how the C-1 factors interact with PAFs (a two-step process). The starting point is the construction of a representative portfolio, which can be thought of as a set of modeling points that captures sizes, positions, issuers, distribution of ratings, and sizes of investments. The Academy evaluated seven different portfolios that differed in size and ultimately settled on one portfolio that was at the midpoint of the industry distribution, which was the Representative Portfolio, consisting of 824 corporate issuers. The holdings within the Representative Portfolio were then used as input for the Academy's modeling of the C-1 base factors developed for the 19 credit ratings. The Academy developed base C-1 bond factors for each of the 19 ratings. These base ratings resulted in the pre-funding of credit losses at the regulator-prescribed statistical safety level (96<sup>th</sup> percentile over 10 years). (Step 1)

The second step was to adjust the base factors to reflect the reduction in portfolio risk due to the diversification of holdings within an insurer's bond portfolio. These PAFs recognize differences between an insurer's actual holdings compared to the representative portfolio (in terms of number

## RBC RISK EVALUATION AD HOC - ASSET CONCENTRATION SUBGROUP

of issuers only). The Academy evaluated different potential combinations of break points for PAF and ran an analysis (an optimization process) to identify a combination that fit the purpose. (Step 2)

Holman stated that the two final products, C1 factors and PAFs, should work hand in hand in any insurer's portfolio to reproduce the statistical target safety level specified by regulators for the industry as a whole.

Holman continued to describe an alternative approach considered by the Academy at that time. (The alternative approach not only considers the number of issuers but also the variation of dollar size associated with each issuer in the portfolios.) The alternative approach was deemed a bit too complex for the purpose of RBC and, henceforth, was not adopted, even though it provided a better fit for the purpose. However, through this discussion of an alternative approach, Holman highlighted to the subgroup the limitation of current factors: it was developed based on the Representative Portfolio with multiple assumptions (assuming average distribution across industry attributes like size, amounts, ratings, sector, asset mix, etc.) To the extent that an insurer portfolio deviates significantly from the assumed averages, the current factors would not pick up the inherent asset concentration risk, which could be material or rise to a level of concern.

Bennett reminded the Subgroup that the asset concentration factor (top 10) design was not revisited by the Academy. In addition, Holman re-emphasized that by design, PAF only reflects diversification in terms of the number of issuers but would not adjust the charges for other diversification/concentration considerations, such as sector, asset type concentration, etc.

Toy recalled that during the factor development process, there was back and forth between "number of issues" versus "number of issuers." He said the Academy's presentation reminded the group that the latter was contemplated by the PAF. Toy also inquired about the treatment of structured securities. Bennett clarified that each structured security is counted as one issuer, regardless of how many assets were held within the structure (i.e., no look-through). Toy was still unclear about whether structured securities are counted at issue level or aggregated by originator upon counting.

Clark inquired whether structured securities are represented in the Representative Portfolio. Both Bennett and Holman believe only corporate bonds were included <sup>Note 1</sup> based on the following:

- The Academy was aware of the significant difference in capital requirement or modeling methodology between corporate bonds versus structured securities.
- The Academy believed the data set provided by the NAIC (as of 2011) excluded structured securities. Also, structured securities back in 2011 would be less prevalent among insurers.

Toy thought there was a need to revisit the 2011 data set to confirm whether structured securities are included and if so, how were structured securities counted. Holman confirmed that he still possesses the 2011 data set obtained from the NAIC. Both Clark and Toy would not preclude the need to revisit the factors/framework should the group find out structured securities are not part of the Representative Portfolio. Toy was also curious about how the insurers count structured securities when performing RBC calculations.

Levy agreed with Clark that Schedule D reporting differentiates between corporate versus structured securities, if reported correctly. He noted that in slide No. 12 (Appendix A), there were instances when insurers had over 1,000 issuers within their portfolio. Since there are roughly 1,000 rated corporate issues in the United States, he inferred that more than corporate bonds are counted <sup>Note 1</sup>. Speaking to his experience at Moody's, Levy said he believes more than corporate bonds are used with the exclusion of government bonds/treasuries. In terms of the convention of counting structured

## RBC RISK EVALUATION AD HOC - ASSET CONCENTRATION SUBGROUP

securities, Levy said his personal viewpoint is that one should acknowledge the legal separateness of each issuance and therefore differentiate them by issuance from an economics and risk standpoint.

Assuming Moody's C-1 and PAF factors (which were adopted) incorporated structured securities in the modeling, Clark inquired whether structured securities were treated differently by Moody's. Levy stated that Moody's modeling framework is different than what is just presented by Bennett and Holman. While the Academy's model uses the concept of an economic state model comprised of contractions and expansion periods, Moody's opted for a structural correlation model (MA Correlation Model), as Moody's noted that the legacy model was not capturing concentration risk efficiently. The MA Correlation Model set the counterparties' correlation to be constant, acknowledging different counterparties had very different correlation structures. For example, the correlation structure between large financial institutional issuers is incredibly high. The equity return of the top 10 financial institutions in the U.S. is north of 80% correlated. The correlation structure among large corporations, such as Microsoft, J&J, etc., (as compared to smaller businesses) is also very high, similarly in the 80% range. In contrast, smaller businesses are far more likely to be impacted by idiosyncratic events, and therefore, the correlation between two small companies is easily approximately 10%. Since the MA Correlation Model chose a singular correlation number, Moody's disclaimed that end users should understand that structured assets and municipalities counterparties are going to have very different correlation structures than the chosen one in the MA Correlation Model. Moody's viewed PAF as an error correction framework. When one realizes the base factor doesn't account for certain dynamics inherent in the actual portfolio, PAF is used as an overlay to correct that "error."

Clark inquired whether Moody's Representative Portfolio (MA Representative Portfolio) considers asset mix, and if so, whether there is allocation to structured securities. Levy responded that the composition of industry holdings was considered in the MA Representative Portfolio but had no allocation to structured securities. Due to some confusion in the discussion, Clark recapped as follows:

In determining the Representative Portfolio (which was used to develop base factors and PAF), the makeup of the portfolio was considered, including the kind of dispersion among sectors. For simplicity's sake, structured securities were essentially treated as corporate bonds. <sup>Note 1</sup>As it comes to PAF, it won't factor in the sector concentration but only calibrate the base C-1 factors to align with the number of issuers within the Representative Portfolio. Clark suspected that the number of issuers in PAF calculation included structured securities at the issuance level as reported on Schedule D. The industry likely would not be motivated to aggregate at the sponsor/originator level unless there is explicit instruction, and there is none (Clark did not preclude aggregation at sponsor/originator level may be the right answer). Clark said he wondered whether each tranche of the securitization would be viewed as one count of issuer. Chang and Toy thought that would be unlikely given the instructions said aggregation at first six digits of the Committee on Uniform Security Identification Procedures (CUSIP) number.

Both Clark and Toy agreed the Subgroup would need some clarification on how the industry compiles the "number of issuers" data in light of the current RBC instruction. As a next step, Clark and Toy tasked Chang to investigate what feeds into the development of PAFs and to pull the most recent instructions for PAF and asset concentration factor filings. Holman reminded the group that Chang should source the data from Moody's, as their proposal was finally adopted in 2021.

Due to time constraints, agenda items 3-6 were tabled for future discussions.

## RBC RISK EVALUATION AD HOC - ASSET CONCENTRATION SUBGROUP

**Note 1** Toward the end of the call, Levy clarified his thought process. He said that even though there are about 1,000 rated corporate issuers, insurers also own privately rated issuances. As such, his inference may not be correct. Levy confirmed via email after the call that both the Academy and Moody's used "Life insurers' holding data ... filter to exclude noncorporate exposures..."

## Appendix A – Academy's presentation



C1 Portfolio Adjust to  
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## RBC RISK EVALUATION AD HOC - ASSET CONCENTRATION SUBGROUP

## December 19, 2023, Summary Report

**Agenda**

1. Debrief on Nov. 16 meeting discussion.
2. Asset Concentration Inventory—comments by Ed Toy (Attachment D).
3. Walk through sector concentration consideration using flow chart (Attachment C).
4. Any other matters.

The following 26 individuals attended the Dec. 19, 2023, Asset Concentration Subgroup meeting:

Asset Concentration Ad Hoc Subgroup		
Name	State	Company/Organization
<b>Kevin Clark, Co-Chair</b>	IA	
<b>Ed Toy, Co-Chair</b>		Risk & Regulatory Consulting LLC
Carrie Mears	IA	
Tom Botsko	OH	
Doug Stolte	VA	
Nancy Bennett		American Academy of Actuaries (Academy)
Alan Morris		American Council of Life Insurers (ACLI)
Steve Broadie		American Property Casualty Insurance Association (APCIA)
John Golden		Athene
Mark C. Abbott		Athene
Kim Welsh		Athene
Kevin Shen		Athene
Caroline Busby		Blackrock
Amnon Levy		Bridgeway Analytics
Sabrina Wilson		Clearwater Analytics
Maureen Adolf		Eversheds Sutherland
Husain Bootwala		Guggenheim Partners Investment Management
Jillian Werner		John Hancock
Tip Tipton		Thrivent
Dave Fleming		NAIC
Julie Gann		NAIC
Maggie Chang		NAIC
Robin Marcotte		NAIC
Charles Therriault		NAIC
Eric Kolchinsky		NAIC
Marc Perlman		NAIC

Clark kicked off the meeting by providing a report on follow-up work that was performed since the last meeting was conducted on Nov. 16. Further research and offline meetings helped solidify Clark's understanding of C1 base factors and the portfolio adjustment factors (PAFs) derivation process. To

## RBC RISK EVALUATION AD HOC - ASSET CONCENTRATION SUBGROUP

sum up, the current understanding is that the representative portfolio, a key input to modeling C1 factors, did not include U.S. government, structured securities, and municipals. Despite the relatively lower perceived diversification in the representative portfolio, Clark stated that the PAFs are applied to both corporate and structured asset holdings within an insurer's portfolio per the risk-based capital (RBC) instruction, thereby correctly reflecting credit of diversification benefit.

Another clarification made was that different tranches of any particular securitization are likely counted as one issuer/issuance because they share the same first six digits of the Committee on Uniform Securities Identification Procedures (CUSIP) number.

Finally, Clark reiterated that PAFs only reflect diversification in terms of the number of issuers but will not adjust the charges for other diversification/concentration considerations, such as sector, asset type concentration, etc.

Bennett reminded the Subgroup that if there is a need to refine capital requirements due to the recognition of concentration risk, both base C-1 and PAFs need to be considered in tandem, or otherwise, they would create a mismatch.

Toy went on to discuss the asset concentration inventory (inventory). He provided a high-level overview of the thought process that went into the development of the inventory. Toy left his instinctual thoughts in Column D after his review of the inventory, and they are based on his experience as an examiner as well as a portfolio manager. Toy added two other considerations in the inventory under the "Other Considerations" category. First, Toy added structured notes about bonds that have principal and/or interest cash flows linked to indices other than interest rates. Second, Toy added to the inventory investments that are more susceptible to interest rate risk. He noted that the one addition that included prepayment risk of RMBS as part of interest rate risk is not a C1 issue, but rather a C3 issue.

Therriault recommended adding privately rated securities to the inventory. Another consideration of concentration risk is the number of securities whose ratings are sourced from a single rating agency. Toy appreciated the feedback and stated that while current investment schedules indicate which investments are privately rated through the Securities Valuation Office's (SVO's) administrative symbol "PL," there is currently no disclosure on the source of rating. Therriault understood there are licensing issues that prevent such disclosure, but a suggestion would be to disclose how many rating agencies the investment ratings are sourced from without specifically naming the rating agencies. On a related issue, Toy stated that investment schedules have disclosures of private placement, but he noted there is no distinction within the disclosure between private placements that are tradeable under Rule 144A restricted securities versus true private placements. Toy pointed out that concentration in private placements, etc., is less likely a C-1 risk and more of a liquidity risk. The group agreed to add these under the "Other Considerations" category and note what disclosures are currently available.

Toy moved on and discussed single-name concentration. Busby said she would like to follow up on with Blackrock's 2019 proposal, which was to remove the SVO-identified bond exchange-traded fund (ETF) in arriving top 10/top five in order to align with the annual Supplemental Investment Risk Interrogatories (SIRI) instruction. NAIC staff clarified that the proposal was referred to the Risk-Based Capital Investment Risk and Evaluation (E) Working Group and is currently within the working group's working agenda, so the working group agreed to waive further consideration within the Subgroup. Clark raised a question about whether there are other alignments other than the SVO-identified bond ETF. Chang believed there would be another alignment, such as differentiating the diversified and non-diversified fund logic used in SIRI, but believes the Risk-Based Capital Investment

**RBC RISK EVALUATION AD HOC - ASSET CONCENTRATION SUBGROUP**

Risk and Evaluation (E) Working Group is the more appropriate venue to address those alignments. Therriault clarified that the SVO in general only reviews the ETF in terms of designation and credit risk. The SVO would not opine on whether the ETF is diversified or not. Busby stated that the majority of bond ETFs should be diversified, except for U.S. Treasury and government agencies ETFs.

Toy gained support from the Subgroup that concentration in NAIC 1 or the highest quality investment, even if there is single-name exposure, should not be concerning.

Chang pulled up the Asset Concentration Factor LR010 instruction and noted that the current instruction is a bit light on how to deal with BA investments when counting the top 10/top five. Clark said if the members would like to suggest clarification verbiage, please direct it to the NAIC staff.

Toy concluded the meeting by encouraging the members to closely review the inventory and provide suggestions to prioritize future discussions.

Due to time constraints, agenda items 3 and 4 were not discussed in this meeting.

## RBC RISK EVALUATION AD HOC - ASSET CONCENTRATION SUBGROUP

## January 31, 2024, Summary Report

**Agenda**

1. Opening remarks
2. Equitable's comments on inventory (Attachment B)
3. Flow chart—walk-through sector concentration (Attachment C)
4. Brainstorm agenda items for future meetings (Attachment D)
5. Any other matters

The following 31 individuals attended the Jan. 31, 2024, Asset Concentration Subgroup meeting:

Asset Concentration Ad Hoc Subgroup		
Name	State	Company/Organization
<b>Kevin Clark, Co-Chair</b>	IA	
<b>Ed Toy, Co-Chair</b>		Risk & Regulatory Consulting LLC
Wanchin Chou	CT	
Lei Rao-Knight	CT	
Tom Botsko	OH	
Matthew Richard	TX	
Doug Stolte	VA	
Greg Chew	VA	
Steve Drutz	WA	
Alan Morris		American Council of Life Insurers (ACLI)
Steve Broadie		American Property Casualty Insurance Association (APCIA)
Matthew Vece		APCIA
Mark Abbott		Athene
Kim Welsh		Athene
Kevin Shen		Athene
Amnon Levy		Bridgeway Analytics
Sabrina Wilson		Clearwater Analytics
Ponni Vel		Equitable
Maureen Adolf		Eversheds Sutherland
Amanda Benjamin-Smith		Genworth
Husain Bootwala		Guggenheim Partners Investment Management
Tip Tipton		Thrivent
Crystal Brown		NAIC
Dave Fleming		NAIC
Eva Yeung		NAIC
Julie Gann		NAIC
Maggie Chang		NAIC
Robin Marcotte		NAIC
Charles Therriault		NAIC

## RBC RISK EVALUATION AD HOC - ASSET CONCENTRATION SUBGROUP

Eric Kolchinsky		NAIC
Peter Kelly		NAIC

Clark kicked off the meeting with a brief introduction of the key items in the meeting agenda: 1) Equitable' comments and 2) test run of the flow chart. Clark and Toy both agreed that once the key aspect of the flow chart is nailed down, it will be ready to be sent to the parent ad hoc group for review. Clark stated this review should precede the deep dive of other asset concentration elements in the inventory (attachment D). Toy re-emphasized that the inventory is not exhaustive. He also anticipates some of the inventory items will be quickly or easily disposed of/waived in future meetings. Clark echoed this statement.

Next, Vel (Equitable) presented comments on the inventory: 1) The elements identified reflect historical developments and are not necessarily forward-looking and 2) expand sector concentration and asset class concentration to capture underlying collaterals (both structured and non-structured collateral) of structured securities.

Toy welcomed Vel's comments and invited Equitable to further comment on the commentary he left on Column D of the inventory. Toy extended the same invitation to all subgroup members. Clark agreed with the first comment and asked if Vel had any specific emerging items to add to the inventory. Vel did not single out any specific item but emphasized that the intent of Equitable's comment was to highlight the fluid nature of the inventory. With the infinite possibilities of concentration elements, filters are needed to help the subgroup focus and prioritize. Abbott agreed with the need for filters and said the flow chart incorporated materiality filters. He expressed that there is distinction between tail systemic risk versus idiosyncratic risks. The former will affect a broader group of insurers and warrant a closer look than the latter. Clark agreed and welcomed help from the members with updating the inventory to capture the former type of risk. Toy also agreed that the inventory should be dynamic and forward-looking.

Toy discussed the future of the subgroup. Toy anticipates the subgroup to be short-lived, and once the flow chart is recommended to the parent ad hoc group, it is up to the parent ad hoc group and ultimately the Capital Adequacy (E) Task Force to determine the process going forward (e.g., including asset concentration discussion in the task force's working agenda or delegating to a more formal working group to the matter, such as the Risk-Based Capital Investment Risk and Evaluation [E] Working Group).

Clark led the discussion on the test run of the inventory using the concentration element—sector concentration. Morris had completed a test run and shared his observation. Morris identified that the flow chart is intended to be an identification tool and not a resolution tool. As such, the process is not necessarily quantitative and dealing with thresholds, tolerances, and others is not anticipated.

Clark and Toy agreed with the observation. Kolchinsky questioned Box B "Does a higher degree of correlation of risk exist within the intended statistical safety level than assumed in determining RBC factors." He said it appears to be quantitative and asked if this decision point should come later in the process. Clark pointed out that the decision point is more like a gating criterion. The initial assessment at this decision point can be intuitive without doing quantitative analysis. With the looping mechanism in the flow chart, one can move through the flow chart if there is uncertainty. Quantitative analysis will ultimately be needed further along in the flow chart process to either validate the intuitive assessment or reject it. Toy agreed and asked if the decision point in Box B should be re-worded to avoid misperception.

## RBC RISK EVALUATION AD HOC - ASSET CONCENTRATION SUBGROUP

Clark continued with the walk-through by defining sector concentration, which is the concentration of portfolio investments in certain industries or sectors, e.g., concentration in financial institutions, utilities, etc. Moving on to Box B, Clark asked the group if members would view a concentration in certain sector results with a greater degree of risk than was contemplated in the risk-based capital (RBC) formula. The group decided that in the case of a sector concentration, there is a higher degree of risk that exists than what is contemplated in the base RBC factors. The risk is higher because the issuers (e.g., financial services institutions) are subject to risks that are highly correlated. As such, it would be a “Yes” for Box B. Abbott reminded the subgroup that there is a risk mitigation mechanism internally placed among insurers, which is the use of internally developed investment guidelines. Toy noted diversity in robustness while reviewing insurers’ investment guidelines. Adolf reminded the subgroup that there are other risk mitigants such as the use of Own Risk and Solvency Assessment (ORSA) reporting.

Clark then discussed Box C “Do existing guardrails prevent concentration?” Clark was not aware of a specific guardrail in the form of a state investment law. He said ORSA reporting is a regulatory tool that falls more squarely in Box E and is not a guardrail per se. He acknowledged that the investment guidelines that Abbott alluded to are guardrails but apparently are not regulatory guardrails. Clark polled the subgroup on whether insurers’ internal investment guidelines should be considered in Box C. Toy said he hesitates to do this due to lack of universality of investment guidelines. There was no objection from the subgroup to clarify Box C as “Do existing regulatory guardrails prevent concentration?” The subgroup also did not object to Clark’s observation that there are currently no regulatory guardrails against sector concentration. As such, it would be a “No” for Box C.

Clark then discussed Box D “Potentially material to material portion of industry.” Clark reminded the subgroup members that the subgroup previously agreed that if it has potential to become material in the future, it is worthy of consideration. Adolf observed that concentration in the financial services sector is being used in the walk-through so far and asked if this walk-through is only applicable for concentration in financial services sector. Toy said the use of concentration in the financial services sector appears appropriate, as insurers seem to be more weighted in that sector. The recent turmoil among a few regional banks also highlights the risk. That said, there are other sectors that are also risky, e.g., energy, biotech, etc. Clark suggested keeping the walk-through broad and to assume the exercise is performed on any sector concentrations.

Due to time constraints, the subgroup agreed to continue the walk-through during the February meeting.

## RBC RISK EVALUATION AD HOC - ASSET CONCENTRATION SUBGROUP

## February 15, 2024, Summary Report

**Agenda**

1. Opening remarks
2. Flow Chart—Resume walk-through of sector concentration
3. Brainstorm agenda items for future meetings
4. Any other matters

The following 29 individuals attended the Feb. 15, 2024, Asset Concentration Subgroup meeting:

<b>Asset Concentration Ad Hoc Subgroup</b>		
<b>Name</b>	<b>State</b>	<b>Company/Organization</b>
<b>Kevin Clark, Co-Chair</b>	IA	
<b>Ed Toy, Co-Chair</b>		Risk & Regulatory Consulting LLC
Tom Botsko	OH	
Lei Rao-Knight	CT	
Carrie Mears	IA	
Matthew Richard	TX	
Doug Stolte	VA	
Greg Chew	VA	
Alan Morris		American Council of Life Insurers (ACLI)
Steve Broadie		American Property Casualty Insurance Association (APCIA)
Matthew Vece		APCIA
Mark C. Abbott		Athene
Kim Welsh		Athene
Kevin Shen		Athene
Amnon Levy		Bridgeway Analytics
Nitsa Einan		Bridgeway Analytics
Sabrina Wilson		Clearwater Analytics
Ponni Vel		Equitable
Maureen Adolf		Eversheds Sutherland
Jeff Johnson		Global Atlantic Financial Group
Husain Bootwala		Guggenheim Partners Investment Management
Jeremy Rosenbaum		Guggenheim Partners Investment Management
Tip Tipton		Thrivent
Crystal Brown		NAIC
Eva Yeung		NAIC
Julie Gann		NAIC
Maggie Chang		NAIC
Robin Marcotte		NAIC
Eric Kolchinsky		NAIC

## RBC RISK EVALUATION AD HOC - ASSET CONCENTRATION SUBGROUP

Clark resumed the walk-through of the asset concentration flowchart, using sector concentration as an example. Coming to the decision point Box D, since there is currently no annual statement disclosure data to help evaluate i) whether concentration exists and ii) whether such concentration, if any, is material, Clark proposed to assume there is potential concentration and continue the deliberation process, especially in light of the looping mechanism through which one can assess materiality and concentration quantitatively in the later phase of the flow chart. Toy seconded.

Toy also believed that disclosure in financial statements may be warranted due to lack of comprehensive data from public sources (e.g., Bloomberg). In addition, different public sources could have defined sector/industry differently and thereby hamper comparability. Several subgroup members including Abbott, Bootwala, and Morris brought up different considerations (e.g., echoing diverse definitions of industry/sector classes currently used by rating agencies, the need for materiality threshold, and the subjectivity in materiality assessment respectively). Clark also pointed out the interplay between risk correlation in Box B and the materiality assessment process in Box D. He said the two need to be considered in tandem. Ultimately, no member objected to moving through the flow chart, despite lack of disclosure/data available in the moment.

Moving onto the next decision point Box E, Toy asked if one should move to Box I instead and consider the need to obtain financial statement disclosure. Clark disagreed. He believed the deliberating decision point in Box E, "Can risk be effectively mitigated through other regulatory tools," can help determine whether financial disclosure is truly necessary. Given cost/benefit consideration, one cannot expect defaulting to request more disclosures. Members already brought up several regulatory tools, including Own Risk and Solvency Assessment (ORSA), in the January meeting. It was concluded that such tools are more fitting to be considered at decision point Box E than Box B. Toy stated that ORSA is a self-reported assessment, and its reliability may come second to other regulatory tools like financial examiner and financial analysis reviews. He said there is no clear guidance as to how to think of material concentration in financial examiner/analysis handbooks.

Broadie inquired whether Hazardous Financial Condition Regulation should be considered as one of the tools. Toy said he needed to brush up on those regulations before he responded. Clark offered his opinion that various regulatory tools, including financial analysis procedures, financial examinations, review of the ORSA report, and periodic touch points with risk management function of the insurers in totality, are sufficient to identify potential sector concentration. Morris agreed those tools are useful for the identification of risk. Toy seconded but questioned that the current decision point has a word choice of "mitigated." He asked how these regulatory tools "mitigate" the identified risk. Clark responded that identification is the first step of the mitigation process, and regulators can challenge the insurers' asset allocation or request risk mitigation efforts by the insurers through regular touch points.

Clark also thought this discussion so far also helped illustrate what instances one should consider Box I Financial Statement disclosure, if one concluded from the handbook review process that financial statement disclosure is more effective for regulatory supervision purposes. Abbott suggested using financial statement interrogatories to gather, for example, the largest sector exposure systematically and in a centralized fashion. Abbot suspected that gathered information would be highly dependent on insurers' investment strategies as well as the type of investments involved (e.g., private versus public). Clark concluded that currently, sector concentration risk could be effectively identified/mitigated through regulatory tools, and therefore, the answer to Box E is "Yes."



**RBC RISK EVALUATION AD HOC - ASSET CONCENTRATION SUBGROUP**

As the group moved to Box I, Toy suggested further refinements in handbook guidance to make sure clear guidance is provided if one observed disproportional sector exposure, e.g., further evaluate credit quality of the investments in the pertinent sector, dialogue with risk management, etc. No member objected to this conclusion.

The group then discussed the next steps. Botsko would like to see another walk-through before recommending the flow chart to the parent ad hoc group, and Clark would like to solicit more feedback from them. After the flow chart is approved by the parent group, the subgroup will look to the parent group's guidance on whether a detailed discussion of the rest of the asset concentration elements should be evaluated at the subgroup level or with other formal groups such as the Capital Adequacy (E) Task Force or the Risk-Based Capital Investment Risk and Evaluation (E) Working Group. Botsko also emphasized the need to collaborate with other working groups/task forces (e.g., Valuation of Securities [E] Task Force) by soliciting inputs from impacted groups.

Adolf inquired about whether the finalized flow chart would become another standing regulatory tool or just to meet the RBC Risk & Evaluation Ad Hoc Group's need for a short period of time. Both Botsko and Clark agreed that it is up to the working groups/task force but that it is a resource that can guide discussions. Adolf also obtained clarification from Botsko, Clark, and Toy that the flow chart is not intended for evaluating individual company concentration/exposure. It was intended to evaluate industry-wide topics.

Clark concluded the meeting by soliciting from the members a nomination for the next walk-through. He said he also would like to memorialize the discussions and create an introductory guidance in written format to aid the usage of the flow chart.

## GEOGRAPHIC CONCENTRATION AD HOC SUBGROUP

September 13, 2023

Agenda

- Introductions—*Wanachin Chou (CT)*
- Discuss the Applicability of Life and Health Risk-Based Capital (RBC) Formulas—*Wanachin Chou (CT) and Tom Botsko (OH)*
- Discuss the Current Florida and Louisiana Companies' Insolvent Issues Related to Geographic Concentration—*Wanachin Chou*

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Chou said that he and Botsko met with a Louisiana state insurance regulator to discuss the possibility of modifying the property/casualty (P/C) RBC formula to better reflect the geographic concentration issue. Botsko said some companies in southeast Louisiana became insolvent due to the issue of geographic concentration. He said he planned to discuss this issue with Florida state insurance regulators to determine whether this is also a concern there. Findings will be reported back to the Ad Hoc Subgroup at its next meeting.

Botsko also said that he thinks it is the Ad Hoc Subgroup's responsibility to determine whether the RBC formula is the best thing to address this issue. He asked whether this issue should be handled by the other NAIC groups if not. Chou said the Ad Hoc Subgroup should also brainstorm on whether life and health companies have geographic concentration issues related to the federal Affordable Care Act (ACA) or long-term care (LTC). Brown said she will discuss this issue with the Health Risk-Based Capital (E) Working Group chair and report the findings at the next meeting.

Edward Toy (Risk & Regulatory Consulting) said he remembered AM Best has some information about how the geographic concentration impacts the smaller P/C companies. He also stated that S&P Global Ratings has a proposal on a capital model for geographic concentration. Toy said he would request and share the information with the Ad Hoc Subgroup before its next meeting. Chou said the Ad Hoc Subgroup will meet monthly until this task is completed.

## GEOGRAPHIC CONCENTRATION AD HOC SUBGROUP

November 15, 2023

Agenda

- Discuss Louisiana Insolvent Issues—*Wanchin Chou (CT)*
- Discuss Any Other Matters—*Wanchin Chou (CT)*

Chou said the purpose of this meeting was to hear from Stewart Guerin (LA) on how Louisiana handles geographic concentration risk. Guerin said Hurricane Ida hit Louisiana, primarily concentrated in the New Orleans area, which is one of the state's most heavily populated regions. As a result, Louisiana had four companies that went into receivership because their reinsurance was inadequate to cover the losses. He also stated that another company that was domiciled in Washington, DC, but wrote business in Louisiana had similar issues. Guerin also stated that nothing in the financial reporting indicated heavy concentration in a small area, such as at a county parish level. Guerin said that as a result of those insolvencies, the legislature inactivated the Insure Louisiana Incentive Program, which was a grant offered by the state to attract companies to come write homeowners business in Louisiana. As part of that process, companies that applied for these grants are required to provide information on how much they are writing in every parish within Louisiana so the state knows what the concentrations are. Guerin stated that the program was instituted at a limit with their distribution by parish, with no insurer exceeding 25% without getting a waiver from the state insurance commissioner to encourage companies to spread out their risk. Guerin said we do not know whether the NAIC can address this concentration risk instead of taking legislation to get the necessary data.

Edward Toy (Risk & Regulatory Consulting) said he thought the rating agencies did some work on the issue of geographic concentration several years ago. Guerin said all the companies that went insolvent were not rated by AM Best or S&P Global Ratings. They were all rated by Demotech, which is not uncommon in Louisiana or Florida. He also stated that the discussion with Demotech is mostly on grading requirements and how much reinsurance these companies should have to maintain the "A" rating, which is needed to keep writing homeowners and business insurance effectively. Toy said he thought that AM Best's Capital Adequacy Ratio (BCAR) had a qualitative adjustment for geographic concentration. He said he would invite them to present on the issue to this group. Joseph Sieverling (Reinsurance Association of America—RAA) asked how to look at geographic concentration without considering the net exposure. Guerin said the measure is based on direct premium written and by the parish. Tom Botsko (OH) said he will invite Demotech to present to this group so it can gain a better understanding of the rating process. Chou said we will invite Florida to share its experience managing geographic concentration risk at the Ad Hoc Subgroup's next meeting.

## GEOGRAPHIC CONCENTRATION AD HOC SUBGROUP

December 13, 2023Agenda

- Hear from Florida About its Geographic Concentration Issue—*Virginia Christy (FL)*
- Hear from Demotech on:
  - Its Rating/Evaluation Process
  - Tech-Enabled Claim Instigation and its Impact on Carriers—*Joseph Petrelli (Demotech)*

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Wanchin Chou (CT) said the Ad Hoc Subgroup invited: 1) Christy to share how Florida handles the monitoring and evaluating of its geographic concentration issue; and 2) Petrelli to provide a brief presentation on Demotech's rating process.

Christy said Florida handles geographic concentration using a system from Quasar that captures and collects personal and commercial property policy data at the county level. She stated that each company is subject to report its Quasar data on a quarterly basis. In addition, Florida relies on the Florida Commission on Hurricane Loss Projection Methodology (FCHLPM) to approve the catastrophe models as the models consider geographic concentration and the policy exposure data specification for each company. Christy said Florida also performs an annual reinsurance data call including models that produce various probable maximum losses (PMLs) by recurrence time events measured against expected reinsurance recoveries. Moreover, the data call has a stress test portion, which determines the reinsurance programs' sustainability against different potential storm scenarios. Christy also stated that the Catastrophe Reporting Form collects the Florida claims data after the catastrophe. Those claims are reported by county, zip code, and line of business. In addition, Christy said companies are only allowed to use a model that has been approved by the FCHLPM. Nicole Crockett (FL) also commented that the model the companies choose to use must be aligned with the model they submitted with rate filings.

Petrelli said Demotech's philosophy on reinsurance is 1 in 130 PML, with all switches on in the first event; 1 in 150 PML with all switches on in the second event; and reinsurance placement protection in place to the extent that there is a third or subsequent event. Demotech also tracks: 1) the models the companies use; 2) the version of the models; 3) switching models; 4) reinsurance brokers; 5) the panel of reinsurers; 6) zip code concentrations; 7) county concentrations; and 8) data quality. Botsko asked how Demotech evaluates non-accredited companies. Petrelli said Demotech has its own rating process. If a company is not rated at all, Demotech will look for collateralization. Petrelli also said he believed that the four insolvent companies in Louisiana not only used the same catastrophe modeler but also used the same insurance to value ratio.

## GEOGRAPHIC CONCENTRATION AD HOC SUBGROUP

January 10, 2024

Agenda

- Hear from AM Best on Best's Capital Adequacy Rating (BCAR) and How it Evaluates Enterprise Risk Management (ERM) and Geographic Concentration Risk—*Paul Brown (AM Best)*
- Discuss its 2024 Goals and Expectations—*Wanchin Chou (CT)*
- Discuss its Next Meeting—*Wanchin Chou (CT)*
  - When?
  - Topics to be Discussed
- Discuss Any Other Matters—*Wanchin Chou (CT)*

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Paul Brown (AM Best) said his presentation would include how AM Best considers geographic concentration risk in the insurance and rating process. Richard Attanasio (AM Best) said that in 2017, AM Best went to different assessment categories, which was called Best's Credit Rating Methodology (BCRM) Building Block Approach. He stated that the building blocks included balance sheet, operating performance, business profile, enterprise risk management (ERM), comprehensive adjustment, rating (life/drag), and issuer credit rating. Attanasio also said that geographic concentration impacts all these blocks, but most prominently, business profile, operating performance, balance sheet strength, and ERM. He indicated that in terms of geographic concentration, AM Best looks at: 1) the type of business companies write; 2) exposure companies face; 3) granularity companies provide in the risk profile; and 4) characteristics of companies' books of business.

Attanasio stated that in the ERM block, AM Best looks at how companies manage their: 1) aggregate exposures; 2) level of reinsurance; 3) risk management capabilities; and 4) stress test. Thomas Mount (AM Best) said the credit rating methodology document has a few references to the geographic concentration, such as in the overall business profile assessment. He said a Florida-only property writer would get a negative assessment within the business profile category. Chou asked the AM Best speakers how they quantify the geographic concentration risk. Mount said the Best's Capital Adequacy Relativity (BCAR) model does not pick up geographic concentration. He said the BCAR model only picks up the line of business concentration; however, he thought it would get picked up in the probable maximum losses (PML) in the capital model. In addition, if any concentration risk other than the property risk impacts the company's performance, those will get adjustments on the premium page based on the company's profitability.

Chou asked how AM Best assesses small to medium-sized insurers. Mount said AM Best uses: 1) the stress testing approach to determine the potential impacts to the balance sheet; and 2) the historical volatility of the company in terms of impact from catastrophe assessments. He stated that the more volatility that the company is exposed to due to the catastrophe will certainly make for a more conservative BCAR

## GEOGRAPHIC CONCENTRATION AD HOC SUBGROUP

assessment. Attanasio reiterated that AM Best uses the capital model, BCAR, and other factors such as PML and overall risk as its starting point to determine the balance sheet strength.

Chou asked whether AM Best provides any assessment rating service for insolvent companies in Louisiana and Florida. Attanasio said AM Best just released an impairment report for year-end 2022, which highlighted 66 companies that were impaired and unrated. Brown said AM Best rates approximately 2,700 insurers in the U.S., with almost 2,000 of those being property and casualty (P/C) companies. The remaining number is divided between life and health companies. Also, there are not many Florida companies that come to AM Best for the rating process. Stefan Holzberger (AM Best) said there are some small companies that are not economically able to come to AM Best for a rating. Mount said, as previously mentioned, that balance sheet strength includes the following components: 1) BCAR; 2) stress tests; 3) liquidity; 4) asset liability management; 5) internal capital models; 6) quality of capital; 7) quality of reinsurance; 8) reinsurance dependence; 9) appropriateness of reinsurance program; and 10) fungibility of capital. Chou said the Ad Hoc Subgroup's focus is to discuss how the RBC formula can be enhanced to provide an early warning signal.

## GEOGRAPHIC CONCENTRATION AD HOC SUBGROUP

January 31, 2024

Agenda

- Hear from S&P Global Ratings on:
  - Its Rating/Evaluation Process
  - Tech-Enabled Claim Instigation and its Impact on Carriers—*Joseph Petrelli*
- Discuss Next Meeting—*Wanchin Chou (CT)*
  - When?
  - Topics to be Discussed
- Discuss Any Other Matters—*Wanchin Chou (CT)*

John Iten (S&P Global Ratings) said S&P Global Ratings' assessment came in two ways: 1) business diversity; and 2) operating performance. The diversity is combined with line of business diversification and geographic diversification. He also stated that the overall assessment is based on a qualitative approach. If a company had a high property catastrophe exposure, it could result in a 1- or potentially 2-notch downward adjustment in the financial risk profile.

Carmi Margalit (S&P Global Ratings) said the S&P Global Ratings capital model is a big part of the rating construct. It is one of the inputs alongside other quantitative and qualitative aspects. He stated that the model has no explicit credit or detriment to geographic diversification. It effectively assumes that a company is relatively well diversified geographically. Margalit said the vast majority of rated issues in the U.S. are very large and diversified from a geographic standpoint. He said the S&P Global Ratings capital model makes a baseline assumption of good geographic diversification. If a company does not have good geographic diversification, then there is a risk of not being adequately captured within the model. He also said S&P Global Ratings does not have a lot of the single state of Florida insurers on the property/casualty (P/C) side.

Chou asked about the company size threshold. Margalit said there is no threshold on company size, but companies that ask for a rating tend to be larger. Iten said S&P Global added a new criterion in its capital model, which is 1 in 200 and 1 in 500 net aggregate probable maximum loss (PML). He said a small Florida homeowner company that does not have much capital and is probably not buying enough reinsurance will take a big hit. Therefore, the S&P Global rating would be low. Iten also stated that the model currently does not have a matrix to look at this type of company. Iten said he and Margalit will share the articles, capital model criteria, and methodology criteria with the Ad Hoc Subgroup.

Chou asked how S&P Global Ratings measures the reinsurance arrangement for smaller companies. Iten said the new capital model criteria have an explicit charge for the credit quality of the reinsurers. Details will be included in the materials that S&P Global Ratings will share later.

Guidance | Criteria | Insurance | General:

# Insurers Rating Methodology

July 1, 2019

**(Editor's Note:** On Nov. 15, 2023, we republished this guidance document. This updated version is effective in jurisdictions where "Insurer Risk-Based Capital Adequacy--Methodology And Assumptions," published Nov. 15, 2023, is effective. Alternatively, for jurisdictions where "Refined Methodology And Assumptions For Analyzing Insurer Capital Adequacy Using The Risk-Based Insurance Capital Model" published June 7, 2010, remains effective, the previous version of this guidance, prior to the Nov. 15 update, remains effective. See the "Revisions And Updates" section for details.)

## OVERVIEW AND SCOPE

1. This document provides additional information and guidance related to the application of S&P Global Ratings' "Insurers Rating Methodology," published July 1, 2019. It is intended to be read in conjunction with those criteria. For further explanation on guidance documents, please see the description at the end of this article.

## GUIDANCE

### General

2. When applying sections of the criteria or guidance that reference dollar-based values, we may consider how foreign-exchange translations affect an insurer's financial statements and information, and normalize these movements to the extent we deem analytically relevant.

### Key Publication Information

- Original publication date: July 1, 2019
- This article is related to "Insurers Rating Methodology," published July 1, 2019.
- We may revise our guidance from time to time when market dynamics warrant reevaluating the variables and assumptions we generally use in our analysis.

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## Determining The Rating: Key Steps

3. Where table 1 of the criteria indicates two possible anchor outcomes, examples of how we may choose the anchor are:
  - The combination of a strong business risk profile and strong financial risk profile could result in an anchor of 'a' if we deem both of the assessments are in the upper end of the strong category. Conversely, we could choose an anchor of 'a-' if we deem both of the assessments to be closer to satisfactory.
  - The combination of a strong business risk profile and fair financial risk profile could result in an anchor of 'bbb+' if, in aggregate, the assessment of the financial risk profile is closer to satisfactory.

## Business Risk Profile

### Competitive position

4. **Competitive advantage.** We assess the following sources of competitive advantage when analyzing an insurer's overall competitive position:
  - Market or niche position if leading to an effective barrier to entry for other competitors or pricing power;
  - Scale or efficiency of operations, allowing for lower overall expense ratios and either a pricing advantage or higher profitability for the insurer;
  - Brand name recognition or reputation where the insurer is differentiated from the perspective of its current or potential policyholders or, where applicable, its intermediaries; and
  - Strength of distribution, leading to improved control over the insurer's cost structure and either greater ability to execute on strategic initiatives or more stable revenues.
5. We consider these factors holistically when determining an insurer's overall competitive position. Any one of these factors, if a significant strength or weakness, could have a material impact on our overall view of the insurer's competitive position.
6. We typically view an insurer as lacking competitive advantage when it is limited in scale and does not operate in an identifiable niche. For example, for an insurer that does not operate in an identifiable niche and is unable to sustain premiums (typically for non-life insurers) or assets (typically for life insurers) consistently above approximately \$50 million, we'd typically view it as lacking competitive advantage.
7. **Business diversity.** When assessing an insurer's diversity, we typically consider the number of material lines of business or business segments, both insurance and non-insurance; geographic footprint; and the potential correlation between the lines of business or segments. Examples of business lines or segments are defined under life insurance and non-life insurance in the Glossary of the criteria.
8. For example, we are likely to consider an insurer with three or more business segments, each contributing more than 20% to earnings, operating in multiple geographic regions, with earnings patterns that are not highly correlated, to have business diversity.

**Guidance Criteria Insurance General: Insurers Rating Methodology**

9. **Profitability.** We typically assess profitability using one or more of the following metrics, depending on the sector(s) in which the insurer operates:
  - Return on equity (all insurers);
  - Return on assets (typically life insurers);
  - Prebonus, pretax earnings divided by total assets (typically life insurers);
  - Return on revenue (typically non-life insurers); and
  - Combined ratio, net of ceded reinsurance (typically non-life insurers).
10. We may supplement these with other ratios when we deem them relevant for a particular sector.
11. Profitability, over time, is a likely consequence of a healthy competitive position. We generally expect an insurer that has a stronger overall competitive position to exhibit consistently higher and more stable profitability metrics than its competitors. We typically determine an insurer's competitors based on whether they compete within similar lines of business or similar markets.
12. When considering the level, sustainability, and volatility of an insurer's profitability, we may also consider the riskiness of the insurer's products relative to peers with the same IICRA. For example, an insurer with low-risk products, leading to more stable profitability, may be viewed more favorably than a peer with a similar level of profitability that has higher-risk products that lead to more volatile profitability.
13. Our assessment of an insurer's profitability is informed by our view of the insurer's approach, underlying rationale, and methods for risk-return optimization, and we may consider the prevailing inflation and interest rates. Risk-return optimization is the process by which insurers are able to form a view on prospective profitability when taking into account the required risk capital.
14. We typically assess an insurer's approach to risk-return optimization, and its effective and consistent execution in key areas, such as:
  - The company's strategic planning,
  - Product pricing and repricing,
  - Strategic asset allocation,
  - Reinsurance strategy and net retained risk profile,
  - New risk-bearing initiatives (including mergers and acquisitions, and entry into new markets), and
  - Capital and economic capital budgeting.
15. We view favorably a well-defined process for allocating capital among different products, lines of business, and risk factors we believe will lead to sustainable profitability. Our analysis focuses not only on the choice and outcome of the strategic decisions, but, more importantly, on the risk/reward rationale underlying the insurer's chosen strategy and consistency with its risk appetite, and the potential evolution of that strategy and competitive position. For example, we view favorably a company that demonstrates evidence of allocating capital to optimize its risk-returns within its risk appetite and tolerances. We could also view favorably a mutual company that demonstrates a track record of allocating capital such that it supports its defined business goals, such as maximizing value to policyholders.

## Insurance Industry And Country Risk Assessment

16. For an insurer operating in more than one market, we combine the IICRAs, reflecting the exposure to the markets in which the insurer operates. Typically, we measure these exposures using gross premiums written, insurance liabilities, or insured exposure in those markets. We combine the IICRAs from the insurer's main markets to generally cover at least 80% of its exposures, including all countries representing a material exposure, typically more than 10%.
17. For a country or sector with no IICRA, we use the IICRA of the country-sector combination whose country and industry characteristics we consider most similar to those of the country or sector where the insurer operates.
18. **Global industries.** Insurers operating in the property and casualty (P/C) reinsurance, life reinsurance, trade credit insurance, and marine protection and indemnity (P&I) sectors are assigned the sector's global score for the relevant proportion of their business. This is because they typically write this type of business in multiple countries around the world.
19. However, if an insurer or reinsurer in these four sectors focuses on a single country or region, we apply IICRAs at a country level.
20. **Profitability.** We use relevant metrics that reflect the return prospects of the industry, consistent with the profitability metrics applied in our competitive position assessment.
21. When considering profitability, we determine whether there is excessive risk taking within the sector, and we may consider this in the context of prevailing inflation and interest rates. We may determine excessive risk taking is occurring where we perceive that any of the following characteristics exists:
  - The industry has significantly relaxed its underwriting standards,
  - New and unproven products have been introduced and are growing rapidly,
  - Mis-selling risk is heightened,
  - Commissions to intermediaries have significantly increased, or
  - Premiums are insufficient to achieve long-term profitability.
22. **Product risk.** We assess sources of product risk stemming from business written, liabilities, and matching assets, if relevant. For example, exposure to significant "tail" risks, natural catastrophes, or asset-liability mismatch risks across the industry may materially affect results. When material sectorwide risk exposures are comprehensively and effectively reinsured or otherwise mitigated, we recognize this in our consideration of product risk. High product risk is typically a negative factor in our industry risk analysis.
23. **Barriers to entry.** Barriers to entry are usually regulatory and operational. Low barriers to entry are typically a negative factor in our industry risk analysis.
24. **Market growth prospects.** Market growth prospects are an indicator of the levels of maturity and competition within the market and, consequently, the sustainability of profitability. We base the assessment on the growth of (or contraction in) the market, generally based on premiums or assets. We view a market that we expect to contract in real terms as a negative factor.

**Guidance Criteria Insurance General: Insurers Rating Methodology**

25. **Institutional framework.** We base our assessment of the strength of an institutional framework on our views of the regulatory framework, its application, and on the standards of governance and transparency. If we determine that regulation is not effective or that there is a clear deficiency in the standards of either governance or transparency for the industry, it will be a negative factor for industry risk.
26. Our assessment is informed by the depth and frequency of monitoring of insurers and the regulator's track record of intervention to reduce or mitigate the effects of insurer failures. A regulatory framework that is comprehensive and effective for the authorization and ongoing supervision of insurers with incentives for good risk management is a supportive factor.
27. We assess governance standards by evaluating the balance of stakeholder interests among owners, managers, lenders, and policyholders. We consider corporate governance that is transparent, prudent, and independent of undue external influences as supportive of lower risk for an insurance industry. Conversely, opaque or imprudent governance that does not materially constrain those external influences increases that risk. We assess transparency by evaluating the frequency and timeliness of reporting, the quality and standardization of financial reports, and the quality of accounting and disclosure standards.

**Financial Risk Profile****Capital and earnings**

28. **Capital and earnings assessment.** The specific application of table 8 in the criteria is detailed in table 1 here, which applies to all insurers other than bond insurers. We typically apply our capital model criteria (see Related Criteria) to compare currently available capital resources with capital requirements. We then apply our projections for: changes in the capital base, such as our forecast of retained earnings (to determine prospective total adjusted capital, or TAC), and business growth or contraction and changes in risk profile (to determine prospective risk-based capital, or RBC, requirements).

Table 1

**Capital And Earnings Assessment**

<b>Assessment</b>	<b>Description</b>
Excellent	Prospective TAC is at or above the prospective RBC requirement at the 99.99% confidence level.
Very strong	Prospective TAC is below the prospective RBC requirement at the 99.99% confidence level but at or above the prospective RBC requirement at the 99.95% confidence level.
Strong	Prospective TAC is below the prospective RBC requirement at the 99.95% confidence level but at or above the prospective RBC requirement at the 99.8% confidence level.
Satisfactory	Prospective TAC is below the prospective RBC requirement at the 99.8% confidence level but at or above the prospective RBC requirement at the 99.5% confidence level.
Fair	Prospective TAC is no more than 30% below the prospective RBC requirement at the 99.5% confidence level.
Marginal	Prospective TAC is more than 30% below but no more than 60% below the prospective RBC requirement at the 99.5% confidence level.
Weak	Prospective TAC is more than 60% below the prospective RBC requirement at the 99.5% confidence level and there is no significant risk of breaching the minimum regulatory capital requirements.

Table 1

**Capital And Earnings Assessment (cont.)**

Assessment	Description
Vulnerable	Significant risk of breaching the minimum regulatory capital requirements.

TAC--Total adjusted capital. RBC—Risk-based capital.

29. When determining whether to adjust the capital and earnings assessment, we consider the net impact of all relevant factors and the magnitude of the understatement or overstatement of the capital and earnings assessment from applying table 1. We also consider the relative strength or weakness within the capital and earnings assessment category.
30. We typically consider the following, as well as other information, when determining whether capital and earnings is understated or overstated:
- If the assumptions in our capital and earnings analysis materially under- or overstate the insurer's risks;
  - If the assumption of capital fungibility and risk diversity in our consolidated capital analysis overstates capital and earnings owing to legal, contractual, or regulatory restrictions;
  - If the insurer has a propensity for acquisitions or uncertain shareholder distributions that we are unable to reliably quantify;
  - Excessive growth in insured exposures if we assess that management does not have the capacity to manage increases in risk exposures;
  - If the insurer is more vulnerable to losses than those assumed under the capital model--for example, where capital is consistently under approximately \$1 billion or equivalent;
  - If the composition of capital overly relies on weaker forms of capital to support the capital and earnings assessment (as examples, we may consider nonfungible equity-like reserves, discount on non-life reserves, hybrid instruments, and debt instruments as weaker forms of capital);
  - If the ability to reduce future discretionary bonuses and share losses with policyholders (also known as the "loss-absorbing capacity of technical provisions") is materially understated in our capital model; or
  - If our interest rate risk capital requirements materially understate an insurer's exposure to yield shocks, for example owing to convexity risk in either assets or liabilities that is not adequately captured in the capital model.
31. For purposes of considering limits to the capital and earnings assessment, we base our assessment of capital on TAC as defined in the relevant capital model criteria.

**Risk exposure**

32. **Risk controls.** We typically consider an insurer's risk control program is effective when it:
- Identifies, measures, monitors, and manages the risk exposures;
  - Has a track record of effectively managing risk exposures to remain within its defined risk appetite and limits, even during stressful periods;
  - Has an established risk-specific risk management structure that comprehensively identifies risk exposures from all sources;

**Guidance Criteria Insurance General: Insurers Rating Methodology**

- Employs risk monitoring and risk reporting in a timeframe appropriate for the risk profile;
  - Has a formal and clearly communicated risk limit system that is linked to its risk appetite;
  - Uses effective risk mitigation strategies to proactively contain exposures to be within risk limits; and
  - Has clearly defined risk limit enforcement policies that address risk limit breaches in an effective and timely manner.
33. We consider the efficacy of the risk controls in managing and mitigating risk exposures to a level that is consistent with a company's risk appetite and limits.
34. We may give greater consideration to risk controls that we determine are of greater importance based on an insurer's exposures. For example, we give greater weight to market risk controls for an insurer with a large variable annuity business with living benefit guarantees or a large life with-profits business, than for a P/C insurer with only short-term liabilities and limited equities and real estate in its investment portfolio.
35. An example of how risk controls affect risk exposure is: An insurer has exposures that we would otherwise consider high risk. But, we determine that the insurer's risk controls are effective at limiting the potential volatility in capital and earnings to levels consistent with a moderately high assessment for risk exposure.
36. **Risks not captured in our capital and earnings analysis.** When assessing the impact of risks not captured in our capital and earnings assessment, and whether they may have a material impact, we consider any risk mitigants. For example, an insurer may have an employee benefit plan, with liabilities that are material relative to capital. If such a plan is underfunded, it may give rise to considerable volatility in capital and earnings. We may consider this risk to be limited where there is a track record of strong and sustainable overfunding.
37. **Risk concentrations or risk diversification.** Risk concentrations can cause an insurer's capital and earnings to be more volatile. We typically assess concentrations net of risk mitigation (e.g., hedging, reinsurance, or collateral) when we determine the mitigants are effective. The source of concentrated risk exposures can include credit exposures relating to assets, reinsurance, hedge, or other counterparties; market risks relating to foreign exchange, interest rates, or equities; geographic mortality or morbidity concentrations; geographic P/C catastrophe event concentrations; and risk correlations between investments and insured exposures. Examples include:
- A concentrated credit exposure to a small number of reinsurers or hedge counterparties or to investments in a small number of obligors or single sector or industry;
  - A material exposure to high-risk assets (see Glossary) in the investment portfolio or through reinsurance or other counterparties;
  - Material potential aggregations in casualty claims (sometimes referred to as casualty clash); and
  - Material potential geographic aggregations in property risk.
38. **Complexity of products and risks.** Complex products and risks can cause an insurer's capital and earnings to be more volatile. Examples include:
- For life insurers that issue variable annuities with guaranteed living benefits, unhedged market exposures that have significant potential to cause volatility;

**Guidance Criteria Insurance General: Insurers Rating Methodology**

- Material exposure to terrorism, cyber, or emerging risks;
- Material deficiencies in reinsurance protection relative to the risk profile;
- Large discrete portfolios of legacy liabilities with significant potential for volatility; and
- Material exposure to certain long-tail businesses such as workers' compensation and long-term care.

**Funding structure**

39. A company's ability and willingness to change its capital structure--such as the demonstrated ability to raise equity through public markets in times of stress--is a potential mitigant to the risk from leverage identified in the funding structure assessment. We may weaken our assessment of funding structure if we consider the use of operational leverage significantly increases an insurer's risk.
40. Our assessment of funding structure is informed by the following metrics and is dependent on our analysis of a company's capital structure and individual characteristics.
41. **Financial leverage.** We typically assess funding structure as moderately negative when we expect leverage to exceed 40%, and negative when we expect it to exceed 50%.
42. We may weaken our assessment of funding structure when we consider an insurer with leverage close to these thresholds that also has significant intangibles relative to its equity.
43. We may weaken our assessment of funding structure when we consider an insurer's financial leverage is understated due to material distortions in reported balances. Consider the following examples:
  - When there is an accounting mismatch between the valuation of assets and liabilities, we may determine reported equity is overstated by the inclusion of unrealized gains on bonds backing life insurance liabilities.
  - When we believe significant deficiencies exist in reported liabilities, we may determine reported equity is overstated, and therefore the financial leverage ratio is understated.
44. If we determine that reported equity is materially understated, we may consider it a mitigant to the risk from leverage identified in the funding structure assessment when financial leverage is overstated due to material distortions in reported balances. For example, we may determine reported equity is understated, and therefore the financial leverage ratio is overstated, when we believe significant redundancies exist in reported liabilities (for example, the value of in-force life business, contingency or other equity-like reserves not otherwise included in reported equity).
45. **Fixed-charge coverage.** We may weaken our assessment of funding structure by one or more categories when we expect coverage to remain less than 4x. If an insurer's fixed-charge coverage ratio raises concerns about the sustainability of financial leverage, even when greater than 4x, we may weaken our assessment of funding structure by one or more categories.
46. **Financial obligations to EBITDA.** We may weaken our assessment of funding structure by one or more categories when we expect the financial obligations-to-EBITDA ratio to remain greater than 4x. If this ratio raises concerns about the sustainability of financial leverage, even when less than 4x, we may weaken our assessment of funding structure by one or more categories.

## Modifiers

### Governance

47. We will typically assess governance as moderately negative if an insurer displays material shortcomings in any of the following areas:
- The board's independence from management to provide effective oversight of it;
  - The board's control as the final decision-making authority with respect to key enterprise risks, compensation, or conflicts of interest;
  - Presence of a professional and independent board of directors that is engaged in risk oversight on behalf of all stakeholders, including noncontrolling interests;
  - Suitability and transparency of accounting policy choices;
  - Regulatory, tax, or legal infractions; or
  - Consistent and effective communication to stakeholders, including controls around financial reporting.
48. If any of these pose a severe risk to an insurer, we typically assess governance as negative.
49. **Risk management culture.** Our view of an insurer's risk management culture informs our assessment of governance. In particular, we focus on the following key areas:
- Risk governance. We typically consider the extent to which the risk management culture is embedded in the organization and characterized by a well-defined and independent enterprise risk management (ERM) governance structure that supports effective risk management at an enterprise level. We view negatively a lack of support by the board of directors and senior management for ERM, and insufficient active involvement in the ERM process.
  - Risk appetite framework. We consider the process by which desired risks are identified, the risk appetite is developed, how overall risk limits are established, and how the ERM framework supports the effective selection, mitigation, and management of risks to meet business goals. We view unfavorably an insurer that maintains aggressive or poorly defined risk limits, or has risk limits that are inconsistent with its risk appetite framework.
  - Risk reporting and communication. We view unfavorably a failure to disclose, or limited internal communications of, risk exposures to the board of directors. We also view unfavorably internal risk reporting that is not frequently updated, not granular enough to reflect significant risk exposures, or not communicated consistently.
  - Incentive compensation structures. We view negatively compensation structures that are inconsistent with the insurer's strategic long-term goals and objectives, or that are not based on an analysis of risk-return tradeoffs.

### Liquidity

50. We typically assess the liquidity ratio as favorable when it exceeds 2.2x, adequate when between 1x and 2.2x, and unfavorable when less than 1x.
51. We define the liquidity ratio as:



## Stressed liquid assets + backup facilities

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### Stressed insurance liability outflows + short term debt

52. We typically include as liquid assets most publicly traded common stocks and bonds, money market instruments, deposits, and cash. We subject the values of liquid assets to the following haircuts for the liquidity analysis to determine stressed liquid assets:
- Listed equities: 50%
  - Rated bonds: 35% unless they are rated 'BBB-' or higher (10%), or we determine the bonds are vulnerable to nonpayment (e.g., rated in the 'CCC' category or lower) (100%)
  - Deposits at rated banks: 5% unless the deposits are at a bank rated 'BBB-' or higher (1%), or at a bank where we determine the deposits are vulnerable to nonpayment (e.g. the bank is rated in the 'CCC' category or lower) (100%)
  - For the purposes of determining the liquidity haircuts for bonds and bank deposits, references to ratings include public, private, confidential or mapped ratings, or credit estimates, assessments, or other measures of creditworthiness that are broadly equivalent to either 'BBB-' or higher or 'CCC' category or lower.
  - Other asset classes, including investment in affiliates; hedge fund investments; private placements with a mandatory minimum holding period of one year or greater; unrated bonds, except if demonstrably of a creditworthiness equivalent to the above ratings; private equities; loans and mortgages; property; posted collateral or collateral that is otherwise encumbered or pledged (other than those related to insurance policyholder obligations); and any other assets that don't fit any of the above categories, as well as assets held in certain ownership situations or assets that we believe would only be transferred at a significantly discounted price: 100% charge
  - We may include (or adjust for) certain entity- or sector-specific assets when material, provided that an insurer can demonstrate that it is possible to convert them promptly into cash. The applicable charge would be one of the above, based on a review of its specific liquidity characteristics.
53. Backup facilities include only committed credit facilities for general financing or for backing up debt obligations (up to the issued amount)--in both cases with a maturity sufficient to cover liquidity needs (e.g., for liquidity requirements arising in the next 12 months, the credit facilities do not mature within 12 months) and only those provided by banks of a credit quality equivalent to 'BBB-' or higher. The analysis typically includes amounts drawn as a liquidity requirement and the entire size of the facility as a resource. Alternatively, the analysis can ignore the amounts drawn, but then consider as a liquidity resource only the facility's undrawn amount. If credit facilities are provided by banks of a credit quality equivalent to 'BB+' or lower, we may consider including the backup facility when the bank providing the backup facility is rated higher than the insurer.
54. To determine stressed insurance liability outflows, we typically consider (where applicable for the respective insurer) the following:
- Stressed insurance liability outflows are typically defined as:  $\{(\text{net non-life claim reserves} + \text{net non-life reserve charge}) / \text{non-life claims reserve duration}\} + \text{natural catastrophe and pandemic}$

**Guidance Criteria Insurance General: Insurers Rating Methodology**

charges + net non-life premium charge + 35% (life liabilities that are subject to withdrawal, surrender, or lapse risk);

- The non-life claims reserves duration reflects an insurer's mean term of claims reserves and is subject to a floor of one year;
  - The net non-life reserve charge, net non-life premium charge, and natural catastrophe and pandemic charges are typically equal to the respective 99.5% confidence level capital requirements from the capital model; and
  - Determining stressed insurance liability outflows using values gross of reinsurance if we expect significant delays in reinsurance claim recoveries or reinsurance reinstatement premiums.
55. We typically include in short-term debt hybrid securities with simultaneous call and step-ups over the next 12 months, since we assume for the purposes of the liquidity assessment that the issuer will call the instruments.
56. We typically consider whether an insurer's liquidity resources are sufficient to cover the following exposures, when material, under moderate stress:
- Rating triggers,
  - Collateral posting requirements,
  - Covenant requirements, and
  - Confidence sensitive liabilities.
57. Examples of where we may weaken our liquidity assessment include:
- We believe a large proportion of a company's life liabilities are highly likely to be paid out (e.g., through surrenders or lapses) in the near term due to an event (e.g., mergers and acquisitions or negative reputational developments).
  - We determine regulatory or other provisions may significantly restrict the flow of cash and liquid assets among legal entities within a rated group.

**Sector-Specific Applications**

58. The sector-specific applications provide additional details on applying the criteria to specific subsectors or situations (such as start-ups and run-offs).

**Bond insurance**

59. **Competitive position.** For bond insurers, operating return on equity is the primary metric that informs our view of a sector's and insurer's profitability. When operating return on equity is not available, we use the typical metrics for the P/C insurance sector.
60. **Capital and earnings.** The specific application of table 8 (in the criteria) for bond insurers is detailed in table 2 here. We typically apply a separate capital model for bond insurers, as detailed in the bond insurance capital adequacy criteria (see Related Criteria) to assess capital and earnings. We typically do not apply additional projections beyond those outlined in the bond insurance capital adequacy criteria.

Table 2

**Capital And Earnings Assessment--Bond Insurers**

Assessment	Description
Excellent	Capital adequacy ratio at or greater than 1.0x
Very strong	Capital adequacy ratio at or greater than 0.9x and less than 1.0x
Strong	Capital adequacy ratio at or greater than 0.8x and less than 0.9x
Satisfactory	Capital adequacy ratio at or greater than 0.6x and less than 0.8x
Fair	Capital adequacy ratio at or greater than 0.45x and less than 0.6x
Marginal	Capital adequacy ratio at or greater than 0.25x and less than 0.45x
Weak	Capital adequacy ratio less than 0.25x and there is no significant risk of breaching the minimum regulatory capital requirements
Vulnerable	Significant risk of breaching the minimum regulatory capital requirements

61. **Risk exposure.** For bond insurers, we also consider exposure to self-insured bonds, the largest obligor test, and growth in exposures.
62. We typically view self-insured bonds in the investment portfolio of greater than approximately 10% of total investments as a risk concentration that could cause an insurer's capital and earnings to be more volatile.
63. The largest obligor test is calculated as the greater of the stressed losses resulting from a default scenario of:
- The two largest exposures rated 'AAA' or lower
  - The three largest exposures rated lower than 'AAA'
  - The four largest exposures rated lower than 'AA-'
  - The six largest exposures rated lower than 'A-'
  - The eight largest exposures rated lower than 'BBB-'
  - The 10 largest exposures rated lower than 'BB-'
  - The 12 largest exposures rated lower than 'B-'
64. This test excludes exposures already in default because the financial impact of these defaults is already incorporated in the capital and earnings assessment.
65. We calculate stressed losses by multiplying the par value of the obligation by 100% minus the recovery parameter. Recovery parameters by risk category for U.S. municipal and non-U.S. local and regional governments (LRGs) are in table 3. For corporate and non-LRG public-sector issuers, the recovery parameter is 5%. Stressed loss potentials for structured finance exposures are determined on an individual transaction basis using the same credit-gap concept employed to determine capital charges.

Table 3

**U.S. Municipal And Non-U.S. Local And Regional Government Recovery Parameters For Largest Obligors Test**

Risk category	Recovery (%)
1 and 2	60

Table 3

### U.S. Municipal And Non-U.S. Local And Regional Government Recovery Parameters For Largest Obligors Test (cont.)

Risk category	Recovery (%)
3 and 4	30

See the BI capital adequacy criteria article listed in the Related Criteria section for details on the applicable category for a given issuer.

66. The greatest of the stressed loss totals, calculated as defined above, is expressed as a percent of a bond insurer's capital. Typically, if the result is 25% or greater, the outcome of the test would be viewed as a risk concentration that could cause an insurer's capital and earnings to be more volatile.
67. **Liquidity.** For bond insurers, stressed insurance liability outflows typically include our view of loss and loss adjustment expenses reserves payable in the next 12 months, and may incorporate our prospective view of additional loss events.
68. This paragraph has been deleted.  
[Table 4 has been deleted.]
69. This paragraph has been deleted.
70. This paragraph has been deleted.  
[Table 5 has been deleted.]
71. This paragraph has been deleted.
72. This paragraph has been deleted.  
[Table 6 has been deleted.]
73. This paragraph has been deleted.

### Start-up insurers

74. An insurer that lacks a track record of past performance is typically considered a start-up. We typically assess competitive position no higher than fair for a start-up insurer given its lack of a track record of sustainable profitability by which it could demonstrate its competitive advantage. We typically assess capital and earnings no higher than strong, and may weaken our capital and earnings assessment from applying table 8 (in the criteria) by one category to reflect the inherent uncertainties in projecting capital and earnings for an insurer during its start-up phase. For a start-up, we do not assess risk exposure as low.

### Insurers in run-off

75. We would typically consider an insurer (or group) that fully or substantially closes to new business to be in run-off. We typically assess competitive position no higher than fair for a run-off insurer given the lack of competitive advantage. An insurer that is active in acquiring closed life blocks (sometimes referred to as a closed-fund consolidator) is not considered an insurer in run-off.

## Glossary

76. We typically define the ratios and terms as referenced in the Glossary, and may reflect analytical adjustments for nonrecurring items or to otherwise take into consideration issuer-specific reporting conventions.
77. **Combined ratio.** The ratio of the sum of loss expense, loss adjustment expense, and operating expenses divided by premiums earned. All elements are net of ceded reinsurance. We may use net premiums written (NPW) in the denominator where net premiums earned is not available or where expenses are not deferred in the accounting system the insurer uses (e.g., U.S. statutory accounting).
78. **EBIT.** Earnings before interest (other than interest on nonrecourse or operational leverage) and taxes. We may apply analytical adjustments for items such as nonrecurring events; realized investment gains/losses; or impairments to goodwill.
79. **EBITDA.** Earnings before interest (other than interest on nonrecourse or operational leverage), taxes, depreciation, and amortization. We may apply analytical adjustments for items such as nonrecurring events, realized investment gains/losses, impairments to goodwill, or other non-cash items. Where we believe depreciation and amortization is immaterial, we may use EBIT in the relevant ratios.
80. **Financial leverage.** Financial obligations/(reported equity + financial obligations). We deduct from reported equity any off-balance-sheet pension deficit, net of tax, and any financial obligations included in reported equity, such as preferred stock. We typically include noncontrolling interests as part of reported equity. We may use net assets rather than reported equity, for example in the case of mutual insurers.
81. **Financial obligations.** Includes total debt as reported plus leases (whether on or off-balance sheet), pension deficit (net of tax), any financial obligations reported as equity such as preferred stock, debt reported in other liabilities, and other financial obligations adjustments, minus any debt that we consider to be either nonrecourse or operational leverage. Lease commitments are typically reflected at a net present value using the disclosed rate or a 7% discount rate (unless we determine that a higher rate would be appropriate).
82. **Financial obligations/EBITDA.** Determines the number of years of normalized earnings required to pay back debt and is another measure of the sustainability of the level of debt taken on by an insurer.
83. **Fixed-charge coverage.** EBITDA/fixed charges. Fixed-charge coverage represents an insurer's ability to service interest on financial obligations out of EBITDA. Fixed charges include total interest expense including interest expense reported as investment expense, lease expense, and preferred stock dividends (tax-adjusted), minus any interest expense on debt that we consider to be nonrecourse or operational leverage.
84. **High-risk assets.** We typically include the following in our definition of high-risk assets:
- Fixed-income investments or deposits in institutions that are rated 'BB+' or lower;
  - Unrated bonds and loans, except if demonstrably of a credit quality equivalent to 'BBB-' or higher;
  - Unaffiliated equity investments in common stocks and preferred stocks (unless rated

**Guidance Criteria Insurance General: Insurers Rating Methodology**

investment grade); and

- Investments in equity real estate assets (except for own use), investments in partnerships, joint ventures, and other alternative investments.

85. For the purposes of this assessment, and where material, we may consider assessing the credit quality of unrated assets using alternative measures, such as a credit estimate.
86. **Operating return on equity (operating ROE, for bond insurers).** The ratio of operating income (net income excluding aftertax realized gains or losses on investments; aftertax unrealized gains or losses on credit derivatives, with the exception of credit impairments on those derivatives; and fair-value adjustments related to the company's credit risk) divided by equity. Equity excludes the accumulation of other comprehensive income and aftertax unrealized gains or losses on credit derivatives, with the exception of credit impairments on those derivatives, and fair-value adjustments related to the company's own credit risk.
87. **Operational leverage.** We define operational leverage as debt issues or programs that are generally limited to funding financial assets, for financial intermediation, providing capital relief, creating risk mitigation, or similar purposes. However, we only consider such programs as operational leverage where we determine the resources allocated to the program are largely sufficient to meet debt service and other financial obligations relating to the program under stressed credit conditions, without reliance on the company's other financial resources. We do not consider debt raised for general corporate purposes as operational leverage.
88. **Prebonus, pretax earnings divided by total assets.** Prebonus pretax earnings are the sum of EBITDA and policyholder dividends. Total assets are the average of opening and closing total assets (less reinsurance assets) for the year.
89. **Return on assets (ROA).** EBIT divided by the average of opening and closing total assets (less reinsurance assets) for the year.
90. **Return on equity (ROE).** Reported net income divided by the average of opening and closing reported equity for the year. Reported net income is before remuneration of preferred stock and noncontrolling interests. Reported equity includes noncontrolling interests and preferred stock.
91. **Return on revenue (ROR).** EBIT divided by total revenue. Total revenue is the sum of net premiums earned (or net written premium if net earned premium is not available), net investment income, and other income. We remove the effects of realized and unrealized gains or losses from investments and derivatives to provide a more complete picture of an insurer's revenue-generating abilities.
92. **Single sector or industry.** Sectors may be aggregated as follows:
- Nondomestic government obligations: Aggregated by jurisdiction.
  - Non-U.S. obligations of local and regional governments: Aggregated on a national basis.
  - U.S. municipal bonds: Tax-backed and appropriation-backed government obligations, municipal water sewer obligations, and public university obligations are aggregated by state, and each state is viewed as a sector. In addition, the following types of municipal bonds are viewed as individual sectors on a national basis: private education, health care, housing revenue, transportation, public power and other utilities, and other not-for-profit obligations.
  - Structured finance: By country, each of the following is defined as a sector: residential mortgage-backed securities; commercial receivables; autos; credit cards; student loans;

**Guidance Criteria Insurance General: Insurers Rating Methodology**

commercial real estate, including commercial real estate collateralized debt obligations (CDOs); CDOs of asset-backed securities; all else, including corporate CDOs.

- Corporate securities: Sectors as defined under S&P Global's Global Industry Classification Standard (GICS).

**Revisions And Updates**

- On March 1, 2023, we republished this guidance document to update paragraph 16 to capture direct exposures for the IICRA assessment for countries/sectors exceeding a 10%, as opposed to 5%, threshold. We also updated paragraphs 43 and 44 to highlight that we may make adjustments to funding structure assessments when financial leverage is above (or below) our thresholds but overstated (or understated) due to material distortions in reported balances. In addition, we updated the contact list.
- On Nov. 15, 2023, we republished this guidance document after the publication of "Insurer Risk-Based Capital Adequacy--Methodology And Assumptions." We replaced references to 'AAA', 'AA', 'A', and 'BBB' with 99.99%, 99.95%, 99.8%, and 99.5%, respectively, in table 1. We also updated paragraph 30 to add considerations for determining whether the capital and earnings assessment is understated or overstated, as well as replaced the term "P/C" with "non-life." In addition, we updated paragraph 54 to replace references to 'A' with 99.5%, as well as replaced the term "property catastrophe charge" with "natural catastrophe and pandemic charges" and deleted references to "net trade credit exposure charges." Furthermore, we replaced the term "confidence level charges" with "confidence level capital requirements." We also deleted the sector-specific mortgage insurance and title insurance sections of the guidance (paragraphs 68-73 and tables 4-6) and deleted references to mortgage insurers in paragraph 28, so the liquidity and capital and earnings sections, including table 1, now apply to mortgage and title insurers. Finally, we updated criteria references. The previous versions of paragraphs 30, 54, and 68-73 and tables 4-6 are below:

30. We typically consider the following, as well as other information, when determining whether capital and earnings is understated or overstated:

- If the assumptions in our capital and earnings analysis materially under- or overstate the insurer's risks;
- If the assumption of capital fungibility and risk diversity in our consolidated capital analysis overstates capital and earnings owing to legal, contractual, or regulatory restrictions;
- If the insurer has a propensity for acquisitions or uncertain shareholder distributions that we are unable to reliably quantify;
- Excessive growth in insured exposures if we assess that management does not have the capacity to manage increases in risk exposures;
- If the insurer is more vulnerable to losses than those assumed under the capital model--for example, where capital is consistently under approximately \$1 billion or equivalent; or
- If the composition of capital relies primarily on weaker forms of capital to support the C&E assessment. We typically consider value of in-force, discount on P/C reserves, and hybrid/debt instruments as weaker forms of capital.

54. To determine stressed insurance liability outflows, we typically consider (where applicable for the respective insurer) the following:

**Guidance Criteria Insurance General: Insurers Rating Methodology**

- Stressed insurance liability outflows are typically defined as:  $\{(\text{net non-life claim reserves} + \text{net non-life reserve charge})/\text{non-life claims reserve duration}\} + \text{net property catastrophe charge} + \text{net non-life premium charge} + \text{net trade credit exposure charge} + 35\%$  (life liabilities that are subject to withdrawal, surrender, or lapse risk);
- The non-life claims reserves duration reflects an insurer's mean term of claims reserves and is subject to a floor of one year;
- The net non-life reserve charge, net non-life premium charge, net property catastrophe charge, and net trade credit exposure charge are typically equal to the respective 'A' confidence level charges from the capital model; and
- Determining stressed insurance liability outflows using values gross of reinsurance if we expect significant delays in reinsurance claim recoveries or reinsurance reinstatement premiums.

68. Capital and earnings. The specific application of table 8 (in the criteria) for mortgage insurers is detailed in table 4 here. We typically apply a separate capital model for monoline primary mortgage insurers, as described in the mortgage insurer capital adequacy criteria (see Related Criteria), to assess capital and earnings.

Table 4

**Capital And Earnings Assessment--Mortgage Insurers**

<b>Assessment</b>	<b>Description</b>
Excellent	Prospective sources of capital are at or above prospective uses at the 'AAA' stress level.
Very strong	Prospective sources of capital are below the prospective uses at the 'AAA' stress level but at or above the prospective uses at the 'AA' stress level.
Strong	Prospective sources of capital are below the prospective uses at the 'AA' stress level but at or above the prospective uses at the 'A' stress level.
Satisfactory	Prospective sources of capital are below the prospective uses at the 'A' stress level but at or above the prospective uses at the 'BBB' stress level.
Fair	Prospective sources of capital are below the prospective uses at the 'BBB' stress level but at or above the prospective uses at the 'BB' stress level.
Marginal	Prospective sources of capital are below the prospective uses at the 'BB' stress level but at or above the prospective uses at the 'B' stress level.

69. Liquidity. For mortgage insurers, the net non-life reserve charge and the net non-life premium charge are typically equal to the respective 'A' confidence level charges from the insurance capital model. In cases where net premiums written do not essentially reflect the off-balance-sheet mortgage risk exposure, we may use net premiums earned or incorporate a prospective view of additional losses.

**Title insurance**

70. Capital and earnings. We view claim reserves and statutory premium reserves as capital available to absorb losses that are therefore added to TAC. Most title-specific assets, such as title plants and agent balances, are written off. To calculate liability risks, we incorporate 7.5% as our base case for likely losses on the insured portfolio. The base case is based on our analysis of the relationship (from Schedule P of the U.S. statutory statements) of reserves to premiums for the industry. To stress the base case, we apply the multiples shown in table 5.



Table 5

**Liability Risk Calculation**

Rating-based stress	Multiple	Resulting gross charge (% of premiums)
AAA	5	37.5
AA	3.1	23.25
A	2.1	15.75
BBB	1.5	11.25
BB	1.2	9
Base	1	7.5

71. To determine interest rate risk, we apply the interest rate risk methodology described in our capital model criteria.

72. In view of the revenue volatility inherent in the title industry, the operating risk charge reflects a scenario in which revenue falls while expense reductions lag. In our experience, the largest year-to-year increases in statutory expense ratios are about 5%. We extrapolate charges for other stress levels as shown in table 6.

Table 6

**Operating Risk Calculations**

Rating-based stress	Multiple	C-4 (% of operating income)
AAA	$(5.0/2.1) = 2.38$	11.9
AA	$(3.1/2.1) = 1.48$	7.4
A	$(2.1/2.1) = 1.00$	5
BBB	$(1.5/2.1) = 0.71$	3.6

73. Liquidity. For title insurers, we typically incorporate the liability risk charge and insurance operating risk charge in lieu of premium and reserve risk charges (as defined above) equal to the respective 'A' confidence level in our consideration of stressed insurance liability outflows.

## RELATED PUBLICATIONS

### Related Criteria

- Insurer Risk-Based Capital Adequacy--Methodology and Assumptions, Nov. 15, 2023
- Insurers Rating Methodology, July 1, 2019
- Methodology And Assumptions For Analyzing Bond Insurance Capital Adequacy, July 1, 2019

### Related Research

- Criteria And Guidance: Understanding The Difference, Dec. 15, 2017

This report does not constitute a rating action.

This article is a guidance document for Criteria (Guidance Document). Guidance Documents are not Criteria, as they do not establish a methodological framework for determining Credit Ratings. Guidance Documents provide guidance on various matters, including: articulating how we may apply specific aspects of Criteria; describing variables or considerations related to Criteria that may change over time; providing additional information on non-fundamental factors that our analysts may consider in the application of Criteria; and/or providing additional guidance on the exercise of analytical judgment under our Criteria.

Our analysts consider Guidance Documents as they apply Criteria and exercise analytical judgment in the analysis and determination of Credit Ratings. However, in applying Criteria and the exercise of analytic judgment to a specific issuer or issue, analysts may determine that it is suitable to follow an approach that differs from one described in the Guidance Document. Where appropriate, the rating rationale will highlight that a different approach was taken.

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## Insurance Industry And Country Risk Assessment:

# U.S. Life

December 28, 2023

## Key Factors

Strengths	Weaknesses
Robust capital and liquidity, supported by favorable operating performance.	Challenging economic environment and shallow recession risks may significantly pressure life insurers' profitability.
Strong regulatory oversight record.	Rising interest rates and persistent inflation might pressure credit quality.

## Rationale

S&P Global Ratings' insurance industry and country risk assessment for the U.S. life insurance sector is low. This assessment reflects our view that the sector faces very low country risk and moderately low industry risk.

The sector benefits from strong regulatory oversight, institutional strengths, and extensive mortality experience. It also benefits from the U.S. economy's vast scale, depth, and proactive monetary policy. U.S. life insurers were resilient throughout the turbulent COVID-19 pandemic period and continued to have capital strength and outsized growth during the current higher interest rate environment.

We expect that most U.S. life insurers will continue posting steady performance during the next few years. We also expect U.S. life insurers will continue to grapple with stressed investment portfolios and slightly less demand compared with the past few years as the pandemic enters an endemic phase. Supporting factors include comparatively strong capital positions of life insurers, modest merger and acquisition activity, and a healthy demand for life insurance and retirement products. While key interest rates have increased, helping with new money yields and increasing spread earnings opportunities, impact from higher rates on profitability often takes a longer time to unfold.

## Country Risk: Very Low

We view country risk in the U.S. as very low, reflecting the country's large, diversified, and resilient economy, extensive economic policy flexibility, relatively strong record of economic growth, and broad financial markets. These characteristics provide life insurers with a favorable operating

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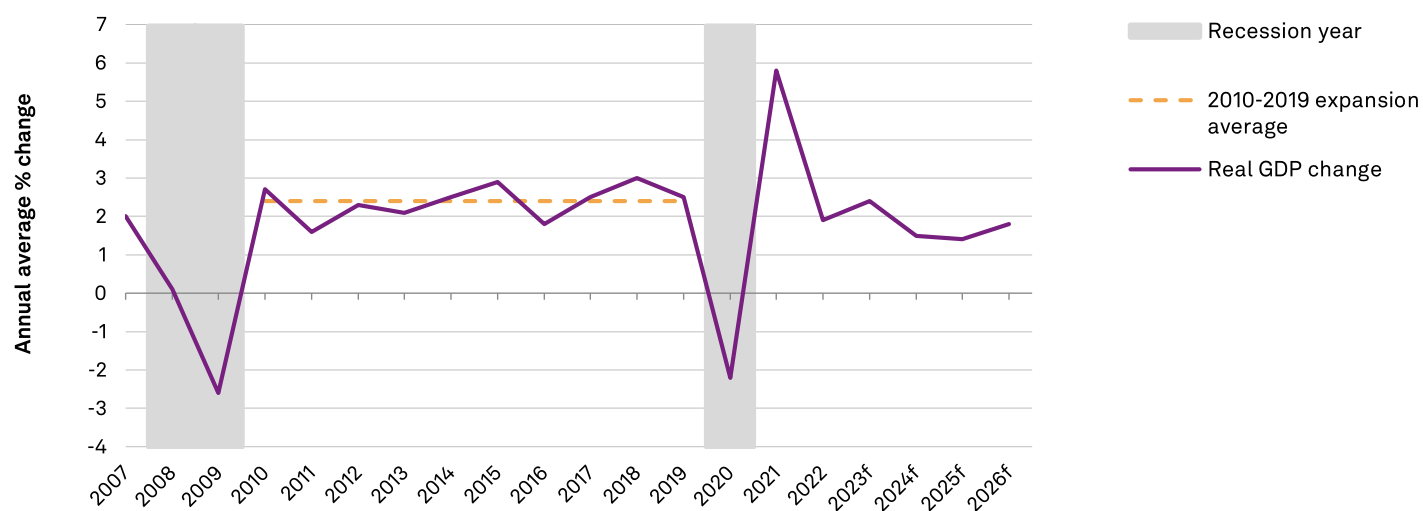
## Insurance Industry And Country Risk Assessment: U.S. Life

environment and steady premium growth prospects.

The United States maintained its 'AA+' rating on March 16, 2023, reflecting institutional strength, rule of law, and a robust financial market. The stable outlook is based on economic stability, policy, predictability, and the dollar's global reserve status. However, weak public finances pose a challenge, with a rising debt burden. Congressional action on the debt ceiling is crucial, and the central bank plays a key role in stabilizing markets. Despite a resilient economy, GDP growth is expected to decelerate to below 2% in 2024, averaging 1.6% in the next three years.

Chart 1

## Real GDP growth is likely to dip below trend



f--Forecast. Source: S&P Global Ratings.

Despite numerous rate increases by the Federal Reserve since March 2022, the U.S. economy has been resilient. We forecast real GDP to expand by 2.4% in 2023, and expect the 10-year Treasury yield to peak at 4.9% in the fourth quarter of 2023. Continued economic strength can be attributed to a greater share of fixed-rate debt protecting households and businesses amid high interest rates, as well as generally favorable public sector policies.

The lagging effects of monetary policy and elevated interest rates have become more evident in the second half of 2023. We expect slower growth to continue into 2024, expecting real GDP growth of 1.5%, which we do not expect to reach the longer run sustainable growth rate of 1.8% until 2026. Although still persistently high, inflation has decelerated in 2023, and we project it to return within the U.S. Fed's 2% target range by the third quarter of 2024. Moreover, we also forecast Treasury yields to gradually decline to 3.0%-3.5% over the next two years.

Table 1

## S&amp;P Global Ratings' U.S. Economic Outlook, November 2023

Key Indicators	2019	2020	2021	2022	2023F	2024F	2025F	2026F	2027F
Real GDP (% change)	2.5	-2.2	5.8	1.9	2.4	1.5	1.4	1.8	1.8

## Insurance Industry And Country Risk Assessment: U.S. Life

Table 1

**S&P Global Ratings' U.S. Economic Outlook, November 2023 (cont.)**

Key Indicators	2019	2020	2021	2022	2023F	2024F	2025F	2026F	2027F
Consumer spending (% change)	2	-2.5	8.4	2.5	2.2	1.8	1.6	2.1	2.3
Equipment investment (% change)	1.1	-10.1	6.4	5.2	0	0.8	2.2	2.7	3.3
Nonresidential construction (% change)	2.5	-9.5	-3.2	-2.1	11.3	0.4	0.3	1.5	0.9
Residential construction (% change)	-1	7.2	10.7	-9	-11.1	-0.1	3.9	2.5	0
Core CPI (% change)	2.2	1.7	3.6	6.2	4.8	2.8	2.3	2.1	2.2
Unemployment rate (%)	3.7	8.1	5.4	3.6	3.7	4.3	4.6	4.5	4.3
10-year Treasury note yield (%)	2.1	0.9	1.4	3	4.1	4.3	3.5	3.1	3
Unit sales of light vehicles (annual total in mil.)	17	14.5	15	13.8	15.4	15.4	15.6	15.7	16

Notes: Core CPI is consumer price index excluding energy and food components. F--forecast. Sources: Bureau of Economic Analysis, Bureau of Labor Statistics, The Federal Reserve, S&P Global Market Intelligence Global Link Model, S&P Global Ratings Economics' forecasts.

**Industry Risk: Moderately Low**

We expect U.S. life insurers will have the necessary capacities to withstand the economic headwinds of the next few years. The above-pace growth over the past few years will likely begin to normalize, but rising interest rates have spurred strong sales of retirement-focused securities like fixed annuities and fixed-index annuities, and life insurance remains a need for a growing number of Americans.

The rise in interest rates have led to unrealized losses in insurers' investment portfolios and increased disintermediation risk, however, we do not expect insurance companies to be forced sellers of these assets at a realized loss to fund liquidity or customer outflows. We are monitoring lapse risk closely, however, so far, surrenders and lapses have been generally consistent with companies' pricing, and insurance companies have had sufficient liquidity from existing cash flows and assets and accordingly believe this risk to be manageable.

U.S. life insurers deftly maneuvered the elevated mortality and economic losses that accompanied the pandemic, and remain well-poised from a capital standpoint. We consider an economic slowdown over the next few years to be manageable and unlikely to result in significant negative impacts to the credit quality of the industry.

Table 2

**Key Metrics for U.S. Life Industry**

(%)	2025f	2024f	2023f	2022	2021	2020
Return on equity	8.0 – 9.0	8.0 – 9.0	7.50 - 8.50	7.96	8.52	5.35
Return on assets	0.40 - 0.50	0.40 - 0.50	0.45 - 0.55	0.48	0.46	0.29
Return on revenue	3.0 – 4.0	3.0 – 4.0	3.0 – 4.0	3.74	4.18	2.63

f--S&P Global ratings forecast. Source: S&P Global Market Intelligence.

### Factors supporting profitability

- The U.S. life insurance sector's core products tend to be more sensitive to interest rate risk and equity market risk than those of other insurance sectors. Products designed to accumulate cash value (through fixed, indexed, or variable accumulation methods) are particularly vulnerable to these risks, as are generally the investment strategies used to fund traditional long-term care products or other living benefits. The industry has had a solid history of mitigating the risk of asset-liability mismatch.
- Life insurance is a mature industry in the U.S., and tends to grow at a pace that is less reactive historically to short-term developments than in less established industries. Indeed, life insurance industry penetration in the U.S. economy (gross life insurance premiums as a share of gross domestic product) has historically grown on par with that of the broader economy. While we expect that trend to persist over the long term, the next few years may diverge somewhat from historical norms. More difficult economic conditions tend to result in proportionally more consumer resources being directed toward fulfilling shorter-term priorities, leaving the long-term value that life insurance provides less discernible to some consumers during economic headwinds, but the core value will still be there.
- The regulatory framework of the U.S. provides the expectation of an ordered marketplace, in which life insurers can fairly compete for business. It also reinforces a shared conceptual understanding of the value of consumer protections and minimizes market incentives to engage in anticompetitive behavior. Regulators in the U.S. have a history of successful market intervention outcomes by preventing or subverting negative impacts on consumers from insurer impairment or failure. State regulators create and maintain solvency requirements for insurers' continued operation in each state and diligently enforce these requirements.

### Factors limiting profitability

- Uncertainty surrounding the timing and magnitude of potential interest rate movements amplifies the necessity for robust capitalization, as debt funding strategies developed during the era of very low interest rates may become less ideal during a protracted period of inflation and the resulting increases in cost of funding. While the industry has historically had a solid capacity to mitigate the risk of asset-liability mismatch during the era of near-zero interest rates, lingering inflation and rising interest rates may require adapting asset-liability management strategies.
- Asset-liability mismatches have narrowed over the past year as liability durations shortened in response to interest rate increases. Key interest rates also remain near historical lows despite increases, which may pressure the investment yields of the industry. In a more modest capacity, rising prices may squeeze economically marginal consumers and lead them to reduce prioritization of life and annuity products that they otherwise would have been inclined to maintain.
- Invested assets remain the most prominent risk to U.S. life insurers' balance sheets. A long-term trend toward increasing allocations of 'BBB' bonds and growing allocations to private bonds, mortgages, and alternatives as a liquidity trade-off began in response to the near-zero interest rates that persisted for more than a decade. Although insurers have historically had low levels of impairments and downgrades of bond investments, at this time recessionary risk lingers and so too does the corresponding potential for downgrades and, correspondingly higher capital charges of these investments.



## Related Criteria

- Insurers Rating Methodology, July 1, 2019
- Country Risk Assessment Methodology And Assumptions, Nov. 19, 2013

## Related Research

- U.S. 'AA+/A-1+' Sovereign Ratings Affirmed; Outlook Remains Stable, March 27, 2023
- Economic Outlook U.S. Q1 2024: Cooling Off But Not Breaking , Nov. 27, 2023
- [US Life Outlook 2023: Mortality To Improve; Capital Levels In Focus; LDTI Reform](#), Jan. 3 2023

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## Insurance Industry And Country Risk Assessment:

# U.S. Property/Casualty

September 1, 2023

## Key Factors

### Strengths

- Strong regulatory record with an effective state-based insurance framework.
- Favorable pricing momentum, which has contributed to positive top-line growth.
- Capitalization a relative strength across the industry at year-end 2022, despite deterioration in underwriting results and depreciation of fixed-income securities valuations.

### Risks and weaknesses

- Challenging loss costs across many lines of business (mainly in personal lines), worsened by inflationary pressures on materials and labor costs.
- Litigious legal system can result in higher economic and punitive damage awards.
- Exposure to a wide range of weather-related losses that hurt industry underwriting performance

## Rationale

S&P Global Ratings assesses the industry and country risk of the U.S. property/casualty (P/C) insurance sector as intermediate. Our assessment is comparable with several other P/C markets, notably the U.K. and France.

The sector benefits from strong regulatory oversight, strong long-term economic fundamentals underpinned by high wealth levels, and economic diversification. Our view also reflects elevated product risk and potential for volatile profitability. Insurers continue to take advantage of a relatively strong economy and firm pricing to improve underlying underwriting profitability, though commercial rate increases are expected to slow through 2024 and 2025.

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## Country Risk: Very Low

In our view, the U.S. has a large, diversified, and resilient economy; extensive monetary policy flexibility; relatively strong record of economic growth; and broad financial markets. These characteristics provide P/C insurers with favorable operating conditions and steady premium growth prospects.

After a sharp rebound in the U.S. economy in 2021 due to the COVID-19 vaccine rollout and various monetary and fiscal stimulus measures by the Federal Reserve and U.S. government, economic growth slowed in 2022 to be more comparable with pre-pandemic levels. Real GDP grew by 2.1% in 2022, compared with 5.9% in 2021. Higher interest rates affected economic growth in 2022, and we forecast growth to slow further this year because of slower consumer spending and nonresidential construction. Our base-case forecast is for real GDP growth to fall to 1.7% in 2023 and 1.3% in 2024.

Inflation continues to run well above the Fed's target. However, it has declined in 2023, compared with 2022, because of interest rate hikes in 2022 and early 2023. We expect the core consumer price index to ease to 5% in 2023, compared with 6.2% in 2022, and to 3.3% in 2024. We expect an average 10-year Treasury yield of around 3.7% for 2023.

## Industry Risk: Moderately High

The U.S. P/C market has satisfactory prospective profitability and material potential earnings volatility, in our assessment. Earnings volatility could stem from product risk due to uncertainty surrounding the ultimate cost of longer-tail liabilities driven by litigation risk, and various natural catastrophe exposures.

We view the U.S. legal system as generally litigious. Consequently, U.S. P/C insurers remain more exposed to unpredictable claims settlements and related reserve volatility from unanticipated spikes in claims severity or frequency than most other jurisdictions.

An improvement of our industry risk assessment would likely depend on the sector's underwriting profitability, as measured by the combined ratio, stabilizing below 95%, which we view as unlikely. (A combined ratio under 100% indicates an underwriting profit.)

## Factors supporting profitability

**The U.S. P/C sector posted an improvement in underwriting performance during 2018-2021, but it then weakened in 2022.** After reporting underwriting losses in 2017, the U.S. P/C sector maintained break-even to modest underwriting profitability over the next four years (2018-2021), with an average combined ratio of around 99%. The stronger underwriting performance was mainly due to improved pricing. However, in 2022, the combined ratio deteriorated to 102.7%. This deterioration was mainly the result of sharply higher claims costs in personal auto because of inflationary pressures on parts and labor costs, along with higher miles driven. Favorable pricing in most commercial lines and favorable prior-year loss reserve development partially offset the deterioration. In 2022, personal lines delivered a combined ratio of 109.9% (2021: 101.7%), while commercial lines performance was strong with the combined ratio improving to 94.6% (2021: 96.7%).

## Insurance Industry And Country Risk Assessment: U.S. Property/Casualty

**We expect the sector to report a combined ratio of 102%-105% in 2023.** Our expectation reflects higher catastrophe losses (10-12 points) and still elevated claim losses in the personal lines, partly offset by continued rate increases in most commercial lines. For 2024-2025, we expect combined ratios of 99%-101%, assuming improved personal lines underwriting performance and normalized catastrophe losses of about eight points.

**We expect direct premiums written to be up 8%-10% in 2023.** This reflects continued strong rate momentum, before moderating to 4%-6% in 2024-2025. Direct premiums written for 2022 grew by 9.8%. This was mainly owing to increased pricing across most lines of business and, to a lesser extent, increases in unit exposure.

**We consider the U.S. institutional framework to be strong, based on our assessment of regulatory oversight and its track record.** We see no evident deficiencies in governance or transparency. We view the state-based insurance supervisory framework as effective, though this decentralized structure can impede regulatory change. Regulatory oversight has been stronger in recent years after the own risk and solvency assessment (ORSA) standards was implemented.

### Factors limiting profitability

- The U.S. P/C sector is exposed to various weather-related events including winter storms, earthquakes, hurricanes, wildfires, and convective storms, which adversely affect underwriting performance.
- The litigious nature of the country's legal system leads to potentially unpredictable claims settlements.
- Interest rate hikes in 2022 have affected bond investment portfolio valuations given the high allocation to bonds in most U.S. P/C insurers' investment portfolios, though longer term the increase in rates will boost net investment income.

### Key U.S. P/C insurance industry risk metrics

	2025F	2024F	2023F	2022	2021	2020	2019	2018
Direct P/C premiums written (Bil. \$)	1,050-1,100	1,000-1,050	950-1,000	876	798	729	712	678
Direct P/C premiums written growth (%)	6-7	6-7	9-10	9.8	9.4	2.3	5.0	5.6
P/C combined ratio (%)	99-101	99-101	102-105	102.5	99.7	98.8	99.0	99.3
Return on statutory capital & surplus (%)	4-5	3-4	2-3	3.9	5.6	5.9	6.8	6.9

Source: S&P Global Ratings and S&P CapitalIQ Pro F- Forecast

Insurance Industry And Country Risk Assessment: U.S. Property/Casualty

Chart 1

U.S. nominal GDP growth versus P/C direct premiums written growth



Source: S&P Global Ratings and S&P CapitalIQ Pro F- Forecast  
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Chart 2

U.S. P/C industry combined ratio by segment



Source - S&P CapitalIQ Pro  
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Insurance Industry And Country Risk Assessment: U.S. Property/Casualty

Chart 3

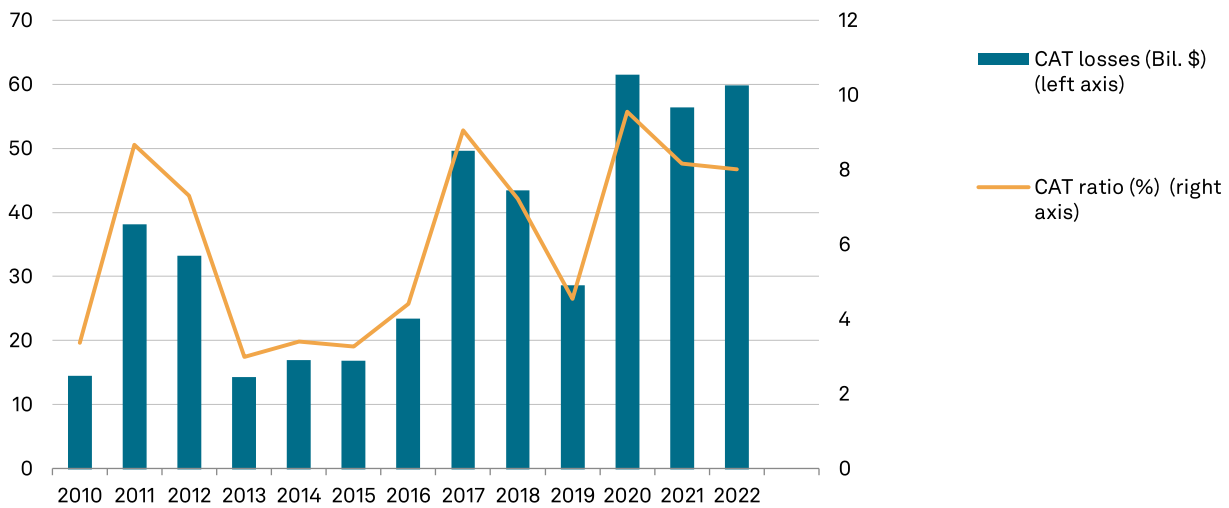
Favorable prior year reserve development



Source: Reserve Release until 2022 from ISO; NPE (used for calculating ratio) & 6M 2023 reserve release from S&P CapitalIQ Pro  
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Chart 4

U.S. catastrophe losses



Source: ISO for CAT Losses; NPE for calculating CAT ratio from S&P CapitalIQ Pro  
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## Related Criteria

- Insurers Rating Methodology, July 1, 2019
- Country Risk Assessment Methodology And Assumptions, Nov. 19, 2013

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Criteria | Insurance | General:

# Insurer Risk-Based Capital Adequacy--Methodology And Assumptions

November 15, 2023

## OVERVIEW AND SCOPE

These criteria provide S&P Global Ratings' methodology and assumptions for analyzing the risk-based capital (RBC) adequacy of insurers and reinsurers. We apply the output from these criteria in our insurance framework (see our insurers rating methodology in "Related Criteria") to assess capital and earnings--a key rating factor for insurers.

These criteria apply globally to all insurers in the life, property/casualty, health, mortgage, trade credit, and title insurance and reinsurance sectors. We apply the bond insurance capital adequacy criteria (see "Related Criteria") to assess the risk-based capital adequacy of bond insurers.

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### Key Publication Information

- Effective date: These criteria are effective Nov. 15, 2023, except in jurisdictions that require local registration. In those jurisdictions, the criteria are effective only after the local registration process is completed.
- This updated methodology follows our request for comment (RFC) titled "Request For Comment: Insurer Risk-Based Capital Adequacy--Methodology And Assumptions," published May 9, 2023. For the changes between the RFC and the final criteria, see "RFC Process Summary: Insurer Risk-Based Capital Adequacy," published Nov. 15, 2023.
- These criteria supersede the criteria articles listed in the "Fully Superseded Criteria" section at the end of this article.

## CONTENTS

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### SECTION 1: STRUCTURE OF THE METHODOLOGY

#### SECTION 2: TOTAL ADJUSTED CAPITAL

Routine Adjustments To Common Shareholders' Equity To Determine ACE And TAC

Company-Specific Adjustments To ACE And TAC

#### SECTION 3: RISK-BASED CAPITAL REQUIREMENTS

Credit Risk

Market Risk

Other Asset Risks

Non-Life Technical Risks

Natural Catastrophe Risk

Life Technical Risks

Pandemic Risk

Product-Specific Capital Charges

Life Value-In-Force Capital Charge

### SECTION 4: DIVERSIFICATION

Level 1 Diversification

Level 2 Diversification

Level 3 Diversification

### SECTION 5: APPENDIXES

Glossary

Market Variables

## METHODOLOGY

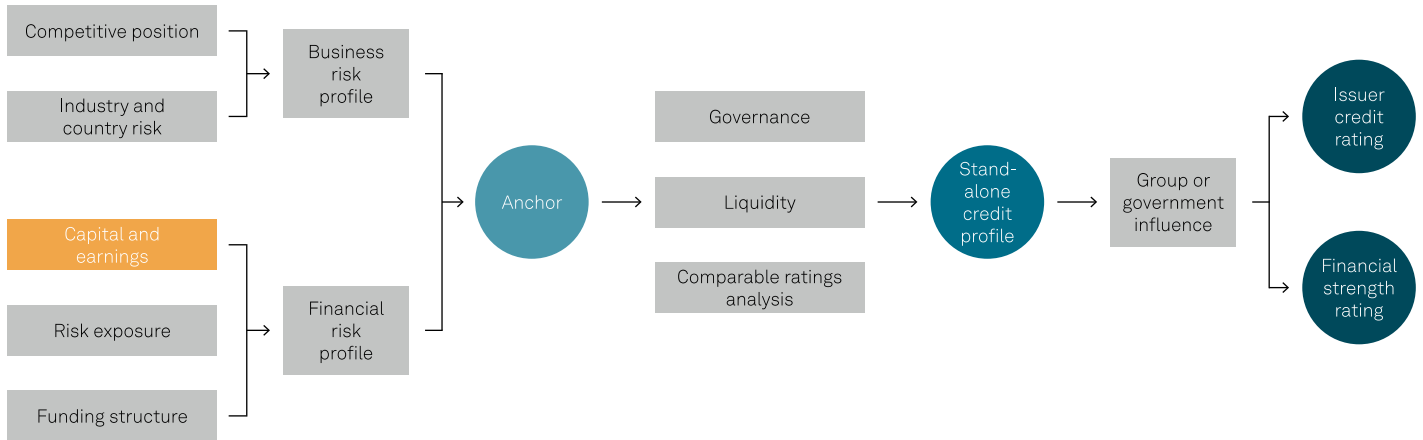
### SECTION 1: STRUCTURE OF THE METHODOLOGY

The methodology describes the framework for assessing the capital adequacy of insurers and reinsurers. The output from these criteria is the starting point to assess capital and earnings in our insurance ratings framework (see chart 1). The glossary contains definitions of terms we use in these criteria.

Criteria Insurance General: Insurer Risk-Based Capital Adequacy--Methodology And Assumptions

Chart 1

Insurance ratings framework

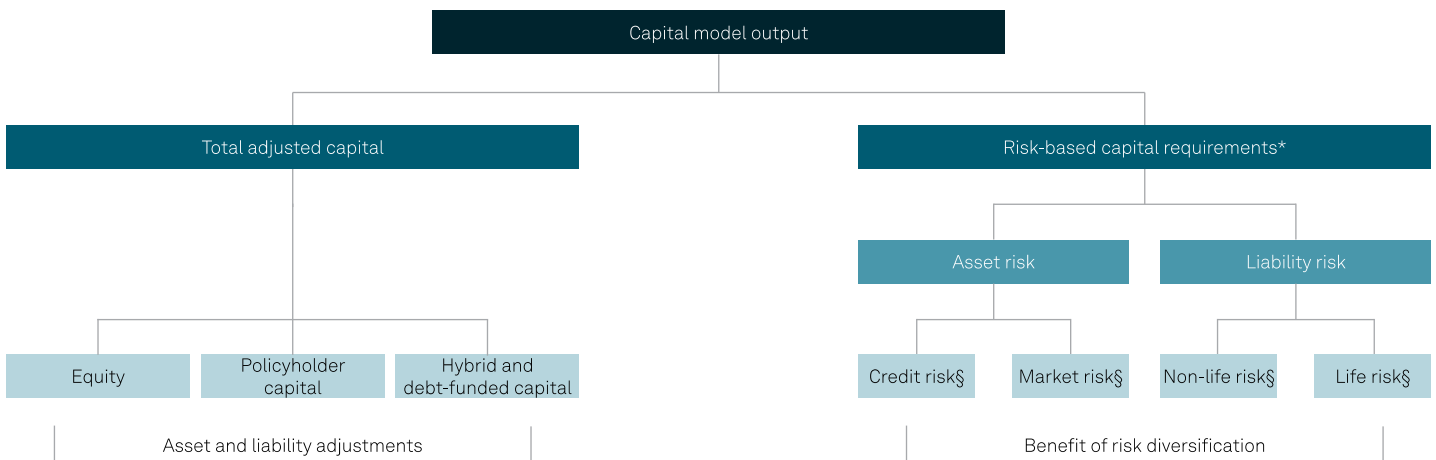


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In our capital analysis, we compare our measure of capital, total adjusted capital (TAC), with our measure of RBC requirements at different stress levels, based on an insurer's risks (see chart 2).

Chart 2

Capital model output



\*The different stress levels we use for individual risks are 99.5%, 99.8%, 99.95%, and 99.99%.

§Subject to any applicable company-specific adjustments.

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RBC requirements are the amounts of capital in excess of reserves that an insurance company may need to cover losses from different risks in stress scenarios. The stress scenarios we typically apply to calibrate RBC requirements for individual risks are:

- 99.5% (moderate stress);
- 99.8% (substantial stress);

**Criteria Insurance General: Insurer Risk-Based Capital Adequacy--Methodology And Assumptions**

- 99.95% (severe stress); and
- 99.99% (extreme stress).

The calibration of the RBC requirements represents the potential volatility in risk drivers over a one-year period, measured using a value-at-risk (VaR) approach. We base the calibration on observed volatility, generally using data for periods of up to 30 years--depending on the risk--supplemented by scenario-based analysis and analytical judgment where appropriate. We also use scaling factors relative to a 99.5% confidence level to calibrate risk charges at higher confidence levels--for example, where there is a limited time series of data.

The total RBC requirement is the sum of the capital requirements for each risk less an explicit credit for risk diversification. This explicit diversification is in addition to implicit diversification that is embedded in many of the individual charges that were calibrated with indices and industry-level data. The explicit diversification credit brings the sum of the capital requirements across each risk to a level commensurate with the defined stress scenarios.

## Financial Statements

For companies or groups producing financial statements in accordance with International Financial Reporting Standards (IFRS) or generally accepted accounting principles (GAAP), we typically calculate TAC and use exposures from information contained in those statements.

However, in certain countries, some companies produce financial statements only in accordance with the local regulatory basis (statutory basis) of accounting. We may calculate TAC and use exposures from information contained in these regulatory financial statements if there are no IFRS or GAAP financial statements or if the regulatory financial statements provide information that we believe is more relevant to our capital analysis.

We may also use information from other sources, such as survey information from issuers, to supplement information in reported financial statements.

## SECTION 2: TOTAL ADJUSTED CAPITAL

TAC is the measure we use to define the capital available to meet a company's capital requirements. We calculate TAC using a globally consistent methodology. To determine TAC, we adjust common shareholders' equity (or policyholders' surplus, such as for mutual companies) for differences in valuation assumptions for assets and liabilities, including for different accounting standards (see table 1). We believe TAC is a more economic view of the capital that is available to absorb losses than reported equity (or surplus).

Table 1

### Components Of Total Adjusted Capital

#### Common shareholders' equity/policyholders' surplus

Plus	Equity noncontrolling interests
------	---------------------------------

**Criteria Insurance General: Insurer Risk-Based Capital Adequacy--Methodology And Assumptions**

Table 1

**Components Of Total Adjusted Capital (cont.)**

Minus	Investments in own shares/treasury shares
Minus	Shareholder distributions not accrued
Minus	Intangible assets
Plus/minus	Postretirement employee benefits
Plus/minus	Unrealized gains and losses on investments
Plus/minus	Non-life reserve adjustments
Plus/minus	Life reserve adjustments
Plus/minus	Company-specific analytical adjustments to determine ACE
<b>= Adjusted common equity (ACE)</b>	
Plus	Hybrid capital/debt-funded capital (subject to tolerance limits)
Minus	Investments in noninsurance subsidiaries and unconsolidated insurance subsidiaries
Plus	Policyholder capital available to absorb losses
Plus	Unrealized gains on investments backing participating life business
Plus/minus	Company-specific analytical adjustments to determine TAC
<b>= Total adjusted capital (TAC)</b>	

Adjustments to common shareholders' equity are net of the related tax impact, unless otherwise stated.

Adjusted common equity (ACE) offers a narrow definition of the group's capital resources because it excludes items such as hybrid capital instruments, eligible debt-funded capital, and policyholder capital. These items may, however, be included in TAC. TAC represents the capital that is available to absorb losses in the insurance business, which is why we typically exclude the capital invested in noninsurance businesses from TAC.

## **Routine Adjustments To Common Shareholders' Equity To Determine ACE And TAC**

Routine adjustments to common shareholders' equity or policyholders' surplus are made where applicable. Adjustments to determine ACE and TAC are net of the related tax impact. Adjustments for items that are on balance sheet are net of the related on-balance-sheet deferred tax asset or liability. We apply tax-effect adjustments for items that are off balance sheet. Where the tax effect is not disclosed or is otherwise unavailable, we use the effective tax rate. We may adjust the value of on-balance-sheet deferred tax assets that relate to other items where asset recoverability is questionable or distant.

### **Common shareholders' equity**

Common shareholders' equity (or regulatory surplus where we use the regulatory financial statements) is the starting point for determining ACE and TAC. For mutual companies, we may use policyholders' surplus or net assets. Common shareholders' equity excludes any minority interests, preferred stock, or hybrid securities that are included in total equity. Where we use regulatory surplus, we also exclude items that do not relate to common shareholders' equity, such

## Criteria Insurance General: Insurer Risk-Based Capital Adequacy--Methodology And Assumptions

as the policyholder dividend liability.

For group capital models that are not based on consolidated financial statements (for example, if the financial statements do not include the group parent):

- We deduct from common shareholders' equity the total amount of hybrid equity and debt-funded capital that is funding the capital of the insurance entities (see the section on hybrid capital and debt-funded capital);
- We typically deduct intragroup transactions from common shareholders' equity (for example, a loan from a subsidiary to its parent in lieu of a dividend); and
- We include adjustments for other entities, such as the group parent, to ensure our capital analysis fully captures the resources and risks of the consolidated group.

### Equity noncontrolling interests

ACE includes the holdings of certain minority investors in consolidated group entities (also called equity minority interests). We add them to shareholders' equity because they constitute capital controlled by the group that is available to absorb losses. However, there are some noncontrolling interests that we do not include in equity noncontrolling interests, such as minority interests in special-purpose entities that are not operating subsidiaries or those relating to consolidated property companies or funds. If equity noncontrolling interests are negative, we deduct this amount from shareholders' equity.

### Investments in own shares or treasury shares

If an insurer reports treasury shares (or has investment in its own shares) as assets, we deduct this figure from shareholders' equity to determine ACE to produce a consistent measure of the resources available to absorb losses.

### Shareholder distributions not accrued

We deduct from shareholders' equity the expected dividend relating to the most recent financial year that is not accrued on the balance sheet (including any expected distributions on other capital instruments included in equity). This deduction recognizes capital expected to be paid out.

If an entity has not formally announced a dividend or if that information is otherwise unavailable, we deduct our estimate, based on factors such as the company's stated dividend policy or historical payouts. We also deduct dividends that will be paid in the form of ordinary shares unless there is a clear strategy not to eliminate the dilutive effect.

If a company has withdrawn its proposed dividend (in effect canceling the proposed dividend), we do not deduct this amount from shareholders' equity. But if a dividend has been proposed and then deferred, we deduct this amount if we expect payment will be made within a year. Otherwise, we capture the deferred payment in our forecasts.

### Intangible assets

We deduct goodwill and other intangible assets from shareholders' equity to determine ACE. This recognizes that these assets are unlikely to be realizable during stress (e.g., they may be integral

**Criteria Insurance General: Insurer Risk-Based Capital Adequacy--Methodology And Assumptions**

to the ongoing operations of the business) and ensures consistency between companies that have grown organically and those that have grown through acquisitions.

We do not adjust equity for negative goodwill. We typically treat intangibles related to nonaffiliated equity investments as assets exposed to equity market risk and do not deduct such intangibles from shareholders' equity.

**Postretirement employee benefits**

To determine ACE, we deduct from equity any deficits in defined-benefit employee pension (or long-term health care) schemes that are held off balance sheet.

We also deduct from equity on-balance-sheet surpluses related to defined-benefit employee pension (or long-term health care) schemes to determine ACE, unless we believe the surplus is fungible (i.e., not ring-fenced) and sustainable. We add off-balance-sheet surpluses if we believe they are fungible and sustainable.

**Unrealized gains and losses on investments**

We add to shareholders' equity unrealized investment gains (or deduct unrealized investment losses) that are not included in reported equity (or surplus). This adjustment ensures we capture the full market or fair value of investments in ACE and to align the valuation with the exposures we use to determine capital requirements.

We may adjust the value of assets if we have doubts about the valuation of certain investments or asset classes. For example, for property investments, we may consider factors such as the frequency of conducting property valuations, whether the valuation is conducted by independent parties, and whether the property is income producing. We are more likely to haircut the value if it relates to development property or land that is not yet income generating.

For life insurers, we may exclude from ACE the unrealized gains and losses on fixed-income assets if all or a meaningful portion of the life liabilities are valued at fixed discount rates and we do not have sufficient information to determine or estimate their value based on nonfixed discount curves (see the section on the life reserve valuation adjustment).

**Associates and joint ventures:** To calculate ACE, we include the difference between the market value and book value of the group's shareholdings in listed associates and joint ventures that we determine the group does not control (we apply our group rating methodology to determine control; see "Related Criteria"). To determine capital requirements, we apply the relevant asset risk charge to the exposure (e.g., for listed equity investments, we apply the relevant listed equity charge to the market value of the group's shareholdings of such entities).

**Non-life reserve adjustments**

**Non-life reserve surpluses and deficits:** Where we determine that a company's reserves are either deficient or in surplus compared with our view of the best estimate (for example, by our own reserve analysis, external actuarial review, or explicit margins required by regulation), we include an adjustment for the surplus or deficit in ACE. We deduct from shareholders' equity the amount of any reserve deficiency and add to shareholders' equity the amount of any reserve surplus.



**Criteria Insurance General: Insurer Risk-Based Capital Adequacy--Methodology And Assumptions**

**Other equity-like non-life reserves:** We include in ACE other equity-like reserves that we determine are available to absorb future unexpected non-life losses (see glossary for examples). We include these reserves net of any associated on-balance-sheet tax impact (e.g., a related deferred tax asset) or tax-adjust them otherwise. We do not typically tax-adjust equity-like reserves that are tax deductible. If the financial statements that are the primary basis for determining ACE do not allow these reserves under the relevant accounting standards, but they are held under the relevant local accounting standards used for tax purposes, we also include in ACE the related deferred tax liability on equity-like reserves that are tax deductible.

**Non-life reserve discounting:** To determine ACE, we typically adjust non-life technical reserves for the impact of discounting when an insurer reports a material proportion of its reserves on an undiscounted basis. We usually do not adjust non-life technical reserves when they are already discounted, nor when undiscounted reserves are expected to settle on average within one year. Where we adjust non-life technical reserves for the impact of discounting, we calculate the adjustment as follows:

$$\text{Non-life technical reserves (net of reinsurance)} * (1 - \text{tax rate}) * \left(1 - \left(\frac{1}{(1+r)^n}\right)\right)$$

r= applicable long-term government bond yield, which may be negative

We typically use the yield to maturity on a government bond of a term that is the closest available to the mean term of the technical reserves. The applicable government bond yield is the one that we believe is most relevant given the currency of the technical reserves (this is not necessarily the reporting currency). Where it is material to our analysis, we may apply a weighted average government bond yield for technical reserves denominated in different currencies.

n = mean term of technical reserves in years

Non-life technical reserves are undiscounted reserves net of reinsurers' share of technical reserves and after any adjustment that we make for reserve surpluses and deficits and excluding other equitylike non-life reserves. It includes both outstanding claims and premium provisions (for example, unearned premium reserve) and is net of non-life deferred acquisition costs. We also typically deduct premium receivables.

**Life reserve adjustments**

**Life reserve valuation adjustment:** When there is a mismatch between the valuations of assets and liabilities, we apply an adjustment to the life reserves to determine ACE. This usually occurs when we have included in ACE the unrealized gains and losses on fixed-income assets and when some or all of the life liabilities are valued at fixed discount rates (i.e., they are not sensitive to current market interest rates).

When it is applicable, we include as an adjustment the difference between the reported life liabilities valued using nonfixed discount curves (i.e., reflecting current interest rates) and the reported life liabilities (we deduct the difference from equity, and the adjustment can be positive or negative). In the absence of credible information on the reported life liabilities valued using nonfixed discount curves, we typically use the unrealized gains or losses on bonds and derivatives backing life liabilities to adjust the value of reported life liabilities. Where we do so, we may adjust the value of unrealized gains or losses that we use for the valuation adjustment in situations such

**Criteria Insurance General: Insurer Risk-Based Capital Adequacy--Methodology And Assumptions**

as:

- If there is a material mismatch between the duration of assets and liabilities: For example, we may increase liabilities by more than the unrealized gains on bonds if the duration of assets is materially less than the duration of liabilities. Similarly, we may reduce liabilities by less than the unrealized losses on bonds if the duration of assets is materially higher than the duration of liabilities.
- If the market value of liabilities is insensitive to credit spread movements: For example, we may exclude the impact of unrealized losses from credit spread widening when adjusting liabilities (i.e., we may not reduce liabilities and therefore not add back these unrealized losses to determine ACE).

Where we have excluded from ACE the unrealized gains and losses on fixed-income assets backing life liabilities, we may also apply an adjustment to the value of life liabilities (if any) that are based on nonfixed discount curves, to be consistent with the valuation bases for the rest of the liabilities and the fixed-income assets.

We also include in the life reserve valuation adjustment the unrealized gains and losses on all investments backing participating policyholders' liabilities when we include them in the adjustment for unrealized gains and losses to determine ACE.

**Other equity-like life reserves:** We include in ACE other equity-like life reserves that we determine are available to absorb future unexpected life losses (see glossary for examples). We include these reserves when they are explicitly identified as reserve items in excess of best-estimate reserves in the reported financial statements that we use for our capital analysis. These explicit reserves are typically required to be established under the relevant regulatory rules or accounting standards.

When they are not explicitly identified, we may use information that is reported under different reporting standards (e.g., regulatory solvency statements) to determine the excess over the best estimate, but only to the extent that the excess does not result from future profits related to future fees or investment income, but rather from conservatism in other assumptions (e.g., mortality assumptions).

We include these reserves net of any associated on-balance-sheet tax impact (e.g., related deferred tax assets) or tax-adjust them otherwise. We do not typically tax-adjust equity-like reserves that are tax deductible. If the financial statements that are the primary basis for determining ACE do not allow these reserves under the relevant accounting standards but they are held under the relevant local accounting standards used for tax purposes, we also include in ACE the related deferred tax liability on equity-like reserves that are tax deductible.

**Off-balance-sheet value of in-force life business:** Where we determine there are material differences between the reported life reserves (after any life reserve valuation adjustment and excluding both other equity-like life reserves and on-balance-sheet life value-in-force) and their economic value (such as a best estimate), we will include in ACE up to 100% of the difference between the economic value and reported value (as adjusted).

We do not include an adjustment for off-balance-sheet life value-in-force (VIF) where we determine the financial statements are on an economic value basis. To make this assessment, we generally use information that is subject to an independent third-party review (such as by an auditor, regulator, or actuarial consultancy). The adjustment for VIF can be positive or negative. For example, we will assess VIF as negative if the reported reserves (as adjusted) are below the

## Criteria Insurance General: Insurer Risk-Based Capital Adequacy--Methodology And Assumptions

economic value. The adjustment for VIF can reflect values that are shown in other reports (e.g., using values from a supplementary embedded value report or regulatory statements). Where necessary, we make an adjustment to avoid any double counting of VIF. We view reported assets such as life DAC or life value of business acquired (VOBA) as on-balance-sheet life VIF.

We may include less than 100% of VIF when, for example, we determine the methodology or assumptions used to calculate VIF are aggressive, or where the information we use to determine VIF is not subject to an independent third-party review. For example, we may consider the methodology and assumptions aggressive when they are not based on market-consistent principles or where the insurer has a history of adverse experience relative to its assumptions.

### Hybrid capital and debt-funded capital

We include in TAC S&P Global Ratings-eligible hybrid capital instruments and debt-funded capital, subject to our tolerance limits (see table 2). Eligible hybrid capital instruments are high- and intermediate-equity-content hybrid capital instruments. We determine the equity content of hybrid capital instruments by applying our hybrid capital criteria (see "Related Criteria"). Eligible hybrid capital instruments may include hybrid instruments issued by a nonoperating holding company (NOHC), insurance operating entities (we explain in our hybrid capital criteria when we include operating company hybrids in our group analysis), or related financing entities.

We do not include in TAC any high- or intermediate-equity-content hybrids issued by noninsurance operating subsidiaries (or by any intermediate holding company of the noninsurance subgroup). This is because TAC represents capital available to absorb insurance losses.

Debt instruments that are issued by an NOHC (or a financing subsidiary of an NOHC) are eligible as debt-funded capital where, in addition to all the conditions in the following paragraph being met, either:

- There is high structural subordination of creditors of the NOHC relative to senior creditors of the regulated operating entities (we consider structural subordination high when potential regulatory restrictions to payment are high between regulated operating entities and the NOHC--typically this is when the NOHC is outside the regulatory perimeter); or
- If there is low structural subordination of creditors of the NOHC relative to senior creditors of the regulated operating entities, the NOHC debt instrument is available and able to absorb losses through coupon deferral or cancellation or through principal deferral, write-down, or conversion without causing an event of default.

Debt instruments are eligible as debt-funded capital only where all the following conditions are met:

- The regulator allows NOHC debt to fund operating company capital (we exclude amounts that exceed any regulatory tolerance limits);
- If the NOHC is inside the regulatory perimeter, the debt instrument is included as regulatory capital in group solvency calculations (we exclude any portion of the instrument that is not included as regulatory capital);
- The residual time until the effective maturity exceeds one year (we apply the definition of effective maturity from our hybrid capital criteria);
- The NOHC directly or indirectly owns the regulated operating entities and is not owned directly or indirectly by regulated insurance operating entities (and any financing subsidiary is not owned directly or indirectly by regulated insurance operating entities);

**Criteria Insurance General: Insurer Risk-Based Capital Adequacy--Methodology And Assumptions**

- None of the NOHC's (or financing subsidiary of the NOHC's) financial obligations are guaranteed by regulated operating entities;
- In our view, the proceeds from the debt instrument are available to the regulated operating entities to absorb losses on a going-concern basis (for example, debt raised to fund nonregulated activities or debt that we define as operational leverage is not eligible as debt-funded capital); and
- The debt instrument is not an eligible intermediate- or high-equity-content hybrid capital instrument.

We add S&P Global Ratings-eligible hybrid capital and debt-funded capital to ACE to determine TAC, subject to the tolerance limits listed in table 2. For capital models not based on consolidated financial statements, we may calculate ACE using consolidated GAAP or IFRS financial statements solely for the purpose of determining the hybrid capital and debt-funded capital tolerance limits.

Table 2

**Hybrid Capital And Debt-Funded Capital Tolerance Limits**

Category	Maximum tolerance
High-equity-content hybrids	Up to 40% of capital
Intermediate-equity-content hybrids	Up to 30% of capital*
No-equity-content hybrids	0% of capital§
Debt-funded capital	Up to 20% of capital*

Notes: Capital is defined as adjusted common equity (ACE) + high-equity-content hybrids + intermediate-equity-content hybrids + debt-funded capital. To determine the maximum tolerance, we use the higher of capital or 0. \*The limit for debt-funded capital is reduced by the higher of i) the amount of eligible intermediate-equity-content hybrids in excess of 10% of capital, and ii) the amount of eligible hybrids (intermediate and high) in excess of 20% of capital. For example, if eligible intermediate-equity-content hybrids total 22% of capital and eligible high-equity-content hybrids total 11% of capital, the tolerance limit for debt-funded capital is reduced to 7% (20% - 13%), 13% being the higher of i) the amount of intermediate-equity-content hybrids in excess of 10% of capital (22% - 10% = 12%), and ii) the amount of hybrids in excess of 20% of capital (22% + 11% - 20% = 13%). The limit for intermediate-equity-content hybrids is reduced by the amount of eligible high-equity-content hybrids in excess of 10% of capital. For example, if eligible high-equity-content hybrids total 15% of capital, the tolerance limit for intermediate-equity-content hybrids is reduced to 25% of capital (30% - 5%), 5% being the amount of high-equity-content hybrids in excess of 10% of capital (15% - 10%). This ensures the total amount of hybrid capital and debt-funded capital in total adjusted capital is not more than 40% of total capital. §Unless eligible as debt-funded capital.

A key factor in including the proceeds from NOHC debt issuances in TAC is our view that these resources are available to absorb losses in regulated operating entities. Cash and investments retained on the balance sheet of an NOHC indicate that the group's capital resources are not fully deployed in regulated operating entities. Where there is high structural subordination, we apply a 20% haircut to the value of these NOHC assets to determine the amount to include in our calculation of TAC.

We may apply a higher haircut if we have heightened doubts about the availability of the group's capital resources to absorb losses in operating entities--for example, we may apply a 50% haircut when the group stand-alone credit profile is 'bb+' or lower.

We may also adjust the value of NOHC assets that are subject to the haircut--for example, to exclude NOHC assets that i) are being held to pay an external dividend that we have already deducted from shareholders' equity, or ii) relate to debt that is not eligible as debt-funded capital. We limit the total value of the haircut to the amount of eligible debt-funded capital included in TAC, but only to the extent the debt-funded capital relates to debt issued by an NOHC where there is high structural subordination.

## Investments in unconsolidated insurance subsidiaries and noninsurance subsidiaries

**Unconsolidated insurance subsidiaries and joint ventures:** We typically consolidate material unconsolidated insurance entities that we determine are group members (i.e., entities that are controlled by the group). Where the data is otherwise unavailable or the entity is immaterial, we deduct the investment in the unconsolidated insurance entity from ACE to determine TAC. We may adjust for any under- or overcapitalization of the entity.

**Noninsurance subsidiaries:** We typically deconsolidate material noninsurance operating subsidiaries (and any intermediate holding company of the noninsurance subgroup) from the consolidated financial statements. Therefore, to calculate TAC when deconsolidating, we deduct from ACE the investment in noninsurance subsidiaries and exclude the relevant exposure amounts relating to the noninsurance operating subsidiary from the inputs that we use to determine capital requirements (for example, assets on the balance sheet of the noninsurance subsidiary). We do not deconsolidate or exclude exposure amounts relating to an entity established solely to hold an insurer's investment assets.

The deduction from ACE for investments in noninsurance subsidiaries (and any other entities we deconsolidate) includes capital that is issued by the subsidiary and held by the group parent or other group members, such as common equity, subordinated debt, and other instruments included in regulatory capital. We also deduct any noncontrolling interest in the noninsurance subsidiary.

We do not deduct subordinated debt and other instruments included in regulatory capital that are held by external investors, because these are not included in our measure of ACE or hybrid or debt-funded capital. We may adjust the amount we deduct to account for any additions or deductions that we have made to shareholders' equity (for instance, to avoid double-counting the deduction for goodwill).

The deduction for investments in noninsurance subsidiaries assumes the subsidiary is capitalized to the same level as the group. Where the subsidiary is material, we may adjust up or down the amount we deduct for such entities if we consider the subsidiary significantly weaker or more strongly capitalized, respectively, than the rest of the group. This quantitative adjustment could be informed by one or more of the following:

- A stand-alone capital analysis under the relevant criteria for the subsidiary;
- An analysis of relevant capital metrics, such as regulatory ratios, which may be informed by peer analysis; or
- Our expectation of material capital contributions to, or remittances from, the subsidiary.

If the subsidiary is immaterial, deconsolidation may not be necessary, such that we do not deduct the investment from ACE but apply the relevant capital charges on a fully consolidated basis.

**Other affiliates:** Where an entity is consolidated in the group's financial statements but we determine the group does not control the entity (i.e., it is not a group member under our group rating methodology), we may treat the entity as an associate in our capital analysis.

**Criteria Insurance General: Insurer Risk-Based Capital Adequacy--Methodology And Assumptions**

**Insulated subsidiaries:** Where a group member is an insulated subsidiary (including delinked subsidiaries) and we deconsolidate the entity to determine the group credit profile, we apply the methodology for noninsurance subsidiaries to determine TAC.

**Policyholder capital**

We include policyholder capital in TAC when, in our view, it meets all the following conditions:

- It relates to life insurance (or savings) business;
- It is available to absorb losses across the entity;
- It is not restricted to absorbing losses in a segregated, or ring-fenced, fund (see also the section on capital charges for participating life business in ring-fenced funds); and
- It does not relate to the expected value of future discretionary benefits included in technical provisions.

Policyholder capital that is restricted to absorbing losses in a single legal entity may still be included in TAC for group consolidated capital models if it meets all the above conditions. We capture limitations on the movement of capital resources around groups (so-called fungibility restrictions) in other areas of our insurance ratings framework.

We do not include in policyholder capital the expected value of future discretionary benefits included in technical provisions. This is because we typically capture the ability to reduce future discretionary bonuses and share losses with policyholders (also known as the loss-absorbing capacity of technical provisions) in our interest rate mismatch assumptions or in the capital charges for participating life business in ring-fenced funds.

Policyholder capital could include items such as the unallocated policyholder dividend liability in Japan, the provision pour participation aux excédents (PPE) in France, or freie Rückstellung für Beitragsrückerstattung (free RfB) and terminal bonus in Germany, subject to adjustments for differences in accounting standards. We may also use the value of policyholder capital that is included in regulatory capital, such as 50% of the policyholder dividend liability in the U.S. or surplus funds reported under the Solvency II directive, subject to meeting the conditions above.

We include policyholder capital net of any associated on-balance-sheet tax impact, but we do not otherwise apply tax-effect adjustments.

We exclude from policyholder capital items that are included elsewhere in our measure of capital, such as the present value of expected future shareholder transfers that are included in VIF.

**Unrealized gains on investments backing participating life business**

To determine TAC, we add to ACE unrealized gains on investments backing participating policyholders' liabilities where we conclude that they i) are available to absorb losses, ii) would not otherwise be recognized in TAC, and iii) do not relate to participating life business in ring-fenced funds. We do not typically add unrealized gains on bonds backing participating policyholders' liabilities because these are not generally available to absorb losses.

## Company-Specific Adjustments To ACE And TAC

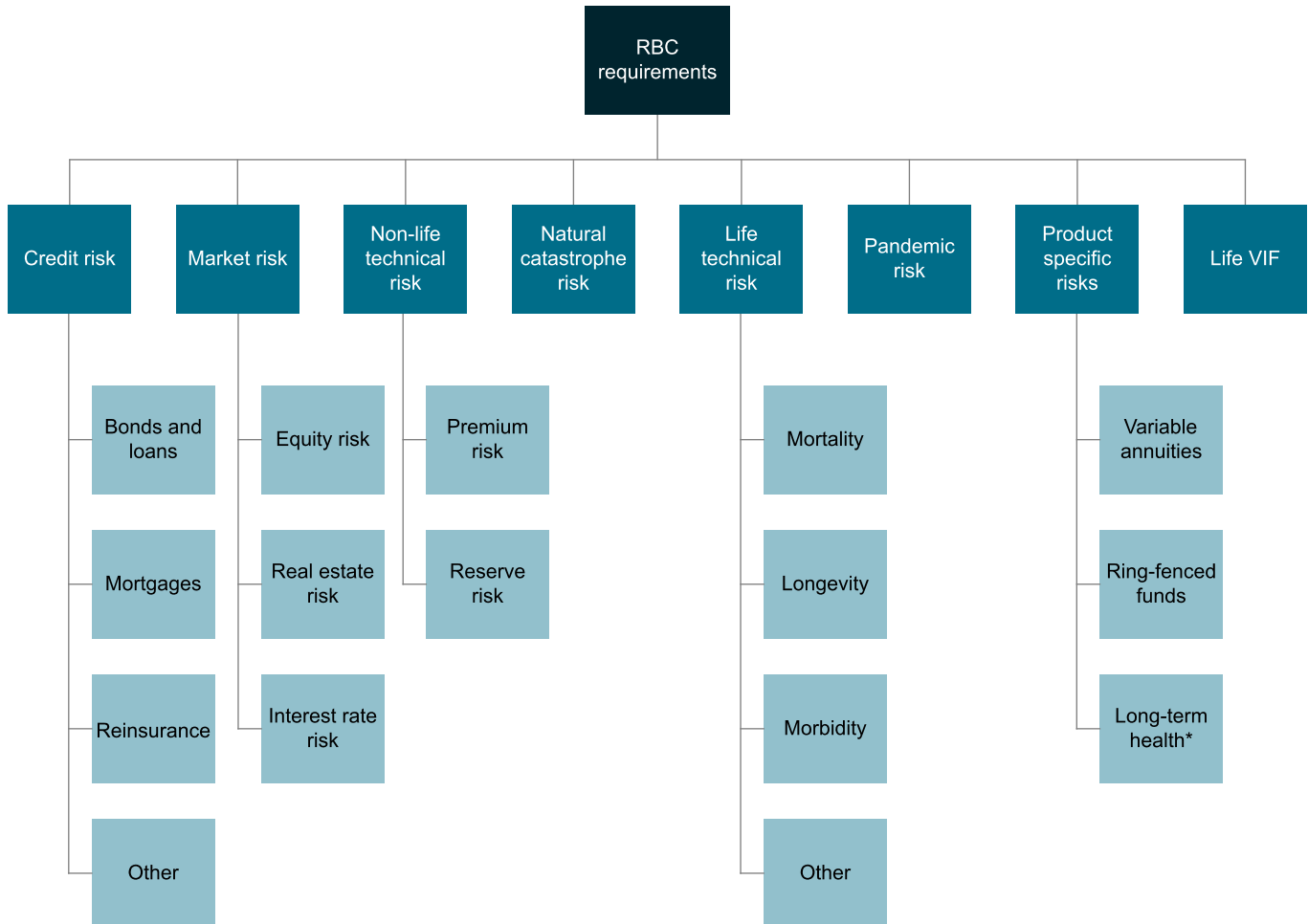
We aim to apply reasonably consistent definitions of ACE and TAC, but specific circumstances or reporting differences may require additional adjustments to common shareholders' equity or policyholders' surplus. Adjustments may apply when, for instance, we assess that some transactions artificially overstate or understate equity. The treatment by regulators and the materiality of the impact may guide the amount we add or deduct when adjusting.

### SECTION 3: RISK-BASED CAPITAL REQUIREMENTS

We determine an insurer's RBC requirements based on its exposure to different asset risks and liability risks (see chart 3).

Chart 3

**Risk-based capital requirements**



\*Long-term health business with aging reserves. Source: S&P Global Ratings.  
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We typically use the disclosures in reported financial statements as the starting point to determine the nature and risk classification of exposures, such as whether an exposure is an equity, bond, or mortgage loan. In our classification of exposures, we aim to differentiate risks on a globally consistent basis.

However, a sector or specific insurer may have risks that we choose to capture by reclassifying exposures in alternative risk categories. We do this to reflect our expectation of materially and consistently higher or lower losses for that set of exposures than likely would be the case for the typical exposures.

Where we reclassify an exposure, we treat the exposure consistently throughout the criteria. For example, if we reclassify an exposure from a non-life risk to a life risk in our liability risk charges, we include the exposure as a life liability in our interest rate risk charges.

Where an insurer has mitigated risk through use of reinsurance, we typically capture this by



**Criteria Insurance General: Insurer Risk-Based Capital Adequacy--Methodology And Assumptions**

applying charges to the exposure net of reinsurance.

We may make company-specific adjustments to RBC requirements, but only if we consider them material to our analysis and sustainable. Company-specific adjustments are intended to capture specific items, risks, or risk mitigants not explicitly addressed in our criteria, such as hedge programs or certain nonproportional reinsurance transactions (other than those relating to natural catastrophe risk). Company-specific adjustments could also apply to specific risks that are addressed in our criteria when a company's product structures present unique risks that differ from the assumptions underlying the calibration of our risk charges.

Where we make a company-specific adjustment to RBC requirements, it is typically an adjustment to the capital charge or an increase or decrease in the capital requirements for a specific risk. We typically consider a single adjustment material to our analysis if, for example:

- It could lead to a change in total RBC requirements of more than 5%; or
- We believe the adjustment could result in a change in our capital and earnings assessment.

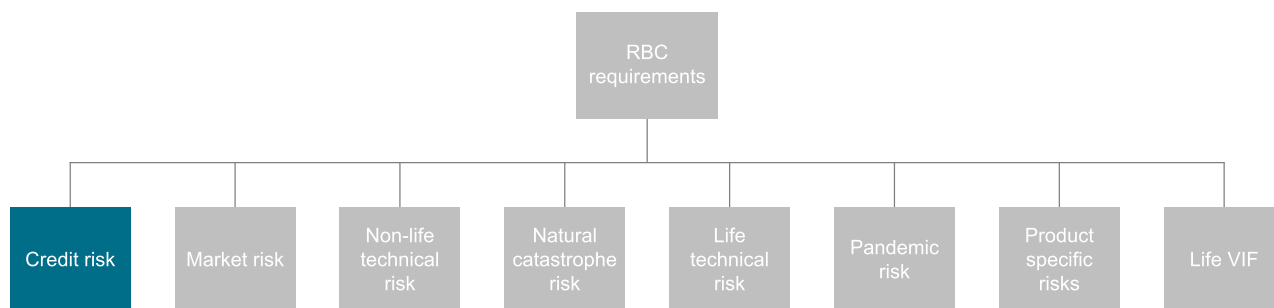
We may also adjust the relevant exposure measure where we determine that it does not adequately reflect the underlying risk. This could be due to factors such as accounting standards, one-off transactions, or nontraditional product structures. For example, if a one-off contract results in negative reported net written premiums, we may remove this distortion to ensure a positive value for the exposure. In all cases, our measure of exposure is never lower than zero.

We do not apply the sections on credit, market, and life technical risk charges to assets and liabilities that relate to certain ring-fenced life funds or separate account variable annuities when we apply the relevant product specific charges (see the relevant sections). We do, however, apply the sections on credit and market risk (other than interest rate risk) to general account assets backing variable annuity guarantees.

We also do not apply the sections on credit and market risk charges to assets and liabilities relating to unit-linked insurance contracts (also known as nonparticipating investment contracts) other than unit-linked insurance contracts with investment guarantees, where we apply the section on interest rate risk.

**Credit Risk**

## Criteria Insurance General: Insurer Risk-Based Capital Adequacy--Methodology And Assumptions



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Credit risk charges capture the potential losses resulting from credit defaults. We generally capture potential unexpected losses because we assume earnings and credit provisions are sufficient to cover expected losses. We apply capital charges to all the major sources of credit risk at insurance companies, including bonds and loans, credit derivatives, mortgages, and counterparty credit exposure relating to reinsurance contracts, deposits, and over-the-counter (OTC) derivative contracts.

## Bonds and loans

To calculate capital requirements for credit default risk, we apply a charge based on the tenor of the bond or loan, the rating, and the recovery category. We define the tenor of the security as the final maturity date unless it is an amortizing bond, in which case we use the weighted average life. We apply the charge to the market value of the bond or loan. Where we exclude from ACE the unrealized gains and losses on fixed-income assets, we may apply the charge to the amortized cost of the bond or loan.

To develop the capital charges for each rating category, we used a stochastic model to evaluate the performance of a hypothetical, well-diversified pool of assets. The assets were well diversified by issuer count and sector to reflect the typical insurer bond portfolio. We also based the mix by rating modifier within each rating category (for example, the proportions of 'A+', 'A', and 'A-' within the 'A' category) on our research of industry holdings.

The starting point for developing the charges was deriving scenario default rates for the asset pool for each rating category. This involved applying asset default rate assumptions that we calibrated based on observed corporate default rates and combining these with correlation assumptions between the assets.

To determine the loss given default, we applied our recovery assumptions, which were informed both by our research on observed recovery rates and assumptions used for other asset classes. The recovery assumptions we apply at the 99.5% confidence level are 65% in category 1, 35% in category 2, and 15% in category 3.

For structured finance exposures, our recovery assumptions vary based on the rating on the asset because we use the rating as an indicator for its level of subordination. Therefore, the lower the

**Criteria Insurance General: Insurer Risk-Based Capital Adequacy--Methodology And Assumptions**

rating on a structured finance exposure, the lower the assumed recovery.

To allocate assets to recovery categories, we considered historical recovery rates and chose the best fit across the four categories. See table 37 in Appendix II, "Market Variables," for details on the allocation of exposures to each recovery category.

To determine stressed losses for each tenor at the 99.5% confidence level, we applied rating quantiles specific to the tenor, which were calibrated based on observed corporate default rates, to the discounted post-recovery loss distribution. We converted the stressed losses to stressed loss rates and then deducted expected loss rates (other than for assets rated 'CCC+' or lower) to determine the unexpected loss rates that we use for our capital charges at the 99.5% confidence level. We assumed a log-normal distribution to generate the capital charges for the other confidence levels.

We applied this methodology to determine charges by rating category across five tenor groupings for the four recovery categories (see tables 3-6). We used the midpoint of each tenor grouping to calibrate our charges (and 25 years for the greater-than-20-year category). Where we do not have sufficient information on the split of exposures by recovery category, we apply table 4.

Table 3

**Credit Risk Charges For Bonds And Loans (Category 1)**

(%)	--Capital charges--			
	99.99%	99.95%	99.8%	99.5%
<b>1 year or less</b>				
AAA	0.07	0.06	0.05	0.04
AA	0.20	0.15	0.12	0.10
A	0.35	0.27	0.22	0.18
BBB	0.48	0.38	0.31	0.25
BB	1.26	1.00	0.80	0.66
B	3.50	2.76	2.21	1.84
CCC to C	27.77	21.92	17.54	14.61
D	44.00	41.00	38.00	35.00
<b>More than 1 but less than or equal to 5 years</b>				
AAA	0.18	0.15	0.12	0.10
AA	0.46	0.36	0.29	0.24
A	0.83	0.66	0.53	0.44
BBB	1.70	1.35	1.08	0.90
BB	4.71	3.72	2.97	2.48
B	9.25	7.30	5.84	4.87
CCC to C	44.00	36.03	28.82	24.02
D	44.00	41.00	38.00	35.00
<b>More than 5 but less than or equal to 10 years</b>				
AAA	0.37	0.29	0.23	0.19
AA	0.97	0.76	0.61	0.51
A	1.32	1.04	0.83	0.70

## Criteria Insurance General: Insurer Risk-Based Capital Adequacy--Methodology And Assumptions

Table 3

## Credit Risk Charges For Bonds And Loans (Category 1) (cont.)

(%)	--Capital charges--			
	99.99%	99.95%	99.8%	99.5%
BBB	2.70	2.13	1.71	1.42
BB	6.43	5.08	4.06	3.39
B	9.95	7.86	6.28	5.24
CCC to C	44.00	36.94	29.55	24.63
D	44.00	41.00	38.00	35.00
<b>More than 10 but less than or equal to 20 years</b>				
AAA	0.53	0.42	0.33	0.28
AA	1.19	0.94	0.75	0.62
A	1.76	1.39	1.11	0.93
BBB	3.16	2.49	1.99	1.66
BB	6.69	5.28	4.23	3.52
B	9.95	7.86	6.28	5.24
CCC to C	44.00	37.42	29.94	24.95
D	44.00	41.00	38.00	35.00
<b>Over 20 years</b>				
AAA	0.85	0.67	0.54	0.45
AA	1.37	1.09	0.87	0.72
A	1.92	1.52	1.21	1.01
BBB	3.16	2.49	1.99	1.66
BB	6.69	5.28	4.23	3.52
B	9.95	7.86	6.28	5.24
CCC to C	44.00	37.42	29.94	24.95
D	44.00	41.00	38.00	35.00

References to ratings include all rating modifiers within the rating category (e.g., 'A' includes bonds rated 'A+', 'A', and 'A-').

Table 4

## Credit Risk Charges For Bonds And Loans (Category 2)

(%)	--Capital charges--			
	99.99%	99.95%	99.8%	99.5%
<b>1 year or less</b>				
AAA	0.14	0.11	0.09	0.07
AA	0.36	0.29	0.23	0.19
A	0.64	0.51	0.41	0.34
BBB	0.90	0.71	0.57	0.47
BB	2.34	1.85	1.48	1.23
B	6.49	5.12	4.10	3.42

## Criteria Insurance General: Insurer Risk-Based Capital Adequacy--Methodology And Assumptions

Table 4

## Credit Risk Charges For Bonds And Loans (Category 2) (cont.)

(%)	--Capital charges--			
	99.99%	99.95%	99.8%	99.5%
CCC to C	51.57	40.71	32.57	27.14
D	72.00	70.00	67.00	65.00
<b>More than 1 but less than or equal to 5 years</b>				
AAA	0.34	0.27	0.22	0.18
AA	0.85	0.67	0.54	0.45
A	1.55	1.22	0.98	0.81
BBB	3.16	2.50	2.00	1.67
BB	8.74	6.90	5.52	4.60
B	17.18	13.56	10.85	9.04
CCC to C	72.00	66.91	53.53	44.61
D	72.00	70.00	67.00	65.00
<b>More than 5 but less than or equal to 10 years</b>				
AAA	0.68	0.54	0.43	0.36
AA	1.79	1.42	1.13	0.94
A	2.45	1.94	1.55	1.29
BBB	5.02	3.96	3.17	2.64
BB	11.95	9.43	7.55	6.29
B	18.48	14.59	11.67	9.73
CCC to C	72.00	68.61	54.89	45.74
D	72.00	70.00	67.00	65.00
<b>More than 10 but less than or equal to 20 years</b>				
AAA	0.98	0.78	0.62	0.52
AA	2.20	1.74	1.39	1.16
A	3.27	2.58	2.06	1.72
BBB	5.86	4.63	3.70	3.08
BB	12.43	9.81	7.85	6.54
B	18.48	14.59	11.67	9.73
CCC to C	72.00	69.50	55.60	46.33
D	72.00	70.00	67.00	65.00
<b>Over 20 years</b>				
AAA	1.58	1.25	1.00	0.83
AA	2.55	2.02	1.61	1.34
A	3.57	2.82	2.25	1.88
BBB	5.86	4.63	3.70	3.08
BB	12.43	9.81	7.85	6.54
B	18.48	14.59	11.67	9.73

## Criteria Insurance General: Insurer Risk-Based Capital Adequacy--Methodology And Assumptions

Table 4

## Credit Risk Charges For Bonds And Loans (Category 2) (cont.)

(%)	--Capital charges--			
	99.99%	99.95%	99.8%	99.5%
CCC to C	72.00	69.50	55.60	46.33
D	72.00	70.00	67.00	65.00

References to ratings include all rating modifiers within the rating category (e.g., 'A' includes bonds rated 'A+', 'A', and 'A-').

Table 5

## Credit Risk Charges For Bonds And Loans (Category 3)

(%)	--Capital charges--			
	99.99%	99.95%	99.8%	99.5%
<b>1 year or less</b>				
AAA	0.18	0.14	0.11	0.09
AA	0.48	0.38	0.30	0.25
A	0.84	0.66	0.53	0.44
BBB	1.17	0.93	0.74	0.62
BB	3.07	2.42	1.94	1.61
B	8.49	6.70	5.36	4.47
CCC to C	67.44	53.24	42.59	35.49
D	88.00	87.00	86.00	85.00
<b>More than 1 but less than or equal to 5 years</b>				
AAA	0.45	0.35	0.28	0.24
AA	1.12	0.88	0.71	0.59
A	2.02	1.60	1.28	1.07
BBB	4.14	3.27	2.61	2.18
BB	11.43	9.03	7.22	6.02
B	22.46	17.73	14.19	11.82
CCC to C	88.00	87.00	70.00	58.33
D	88.00	87.00	86.00	85.00
<b>More than 5 but less than or equal to 10 years</b>				
AAA	0.89	0.70	0.56	0.47
AA	2.35	1.85	1.48	1.24
A	3.21	2.53	2.03	1.69
BBB	6.56	5.18	4.14	3.45
BB	15.62	12.34	9.87	8.22
B	24.17	19.08	15.26	12.72
CCC to C	88.00	87.00	71.77	59.81
D	88.00	87.00	86.00	85.00

## Criteria Insurance General: Insurer Risk-Based Capital Adequacy--Methodology And Assumptions

Table 5

## Credit Risk Charges For Bonds And Loans (Category 3) (cont.)

(%)	--Capital charges--			
	99.99%	99.95%	99.8%	99.5%
<b>More than 10 but less than or equal to 20 years</b>				
AAA	1.29	1.02	0.81	0.68
AA	2.88	2.27	1.82	1.52
A	4.27	3.37	2.70	2.25
BBB	7.66	6.05	4.84	4.03
BB	16.25	12.83	10.27	8.55
B	24.17	19.08	15.26	12.72
CCC to C	88.00	87.00	72.71	60.59
D	88.00	87.00	86.00	85.00
<b>Over 20 years</b>				
AAA	2.06	1.63	1.30	1.09
AA	3.34	2.64	2.11	1.76
A	4.66	3.68	2.95	2.46
BBB	7.66	6.05	4.84	4.03
BB	16.25	12.83	10.27	8.55
B	24.17	19.08	15.26	12.72
CCC to C	88.00	87.00	72.71	60.59
D	88.00	87.00	86.00	85.00

References to ratings include all rating modifiers within the rating category (e.g., 'A' includes bonds rated 'A+', 'A', and 'A-').

Table 6

## Credit Risk Charges For Bonds And Loans (Category 4)

(%)	--Capital charges--			
	99.99%	99.95%	99.8%	99.5%
<b>1 year or less</b>				
AAA	0.08	0.06	0.05	0.04
AA	0.25	0.20	0.16	0.13
A	0.93	0.74	0.59	0.49
BBB	1.20	0.95	0.76	0.63
BB	4.15	3.28	2.62	2.19
B	12.25	9.67	7.74	6.45
CCC to C	83.30	65.77	52.61	43.84
D	100.00	100.00	100.00	100.00
<b>More than 1 but less than or equal to 5 years</b>				
AAA	0.19	0.15	0.12	0.10
AA	0.58	0.46	0.37	0.31

## Criteria Insurance General: Insurer Risk-Based Capital Adequacy--Methodology And Assumptions

Table 6

## Credit Risk Charges For Bonds And Loans (Category 4) (cont.)

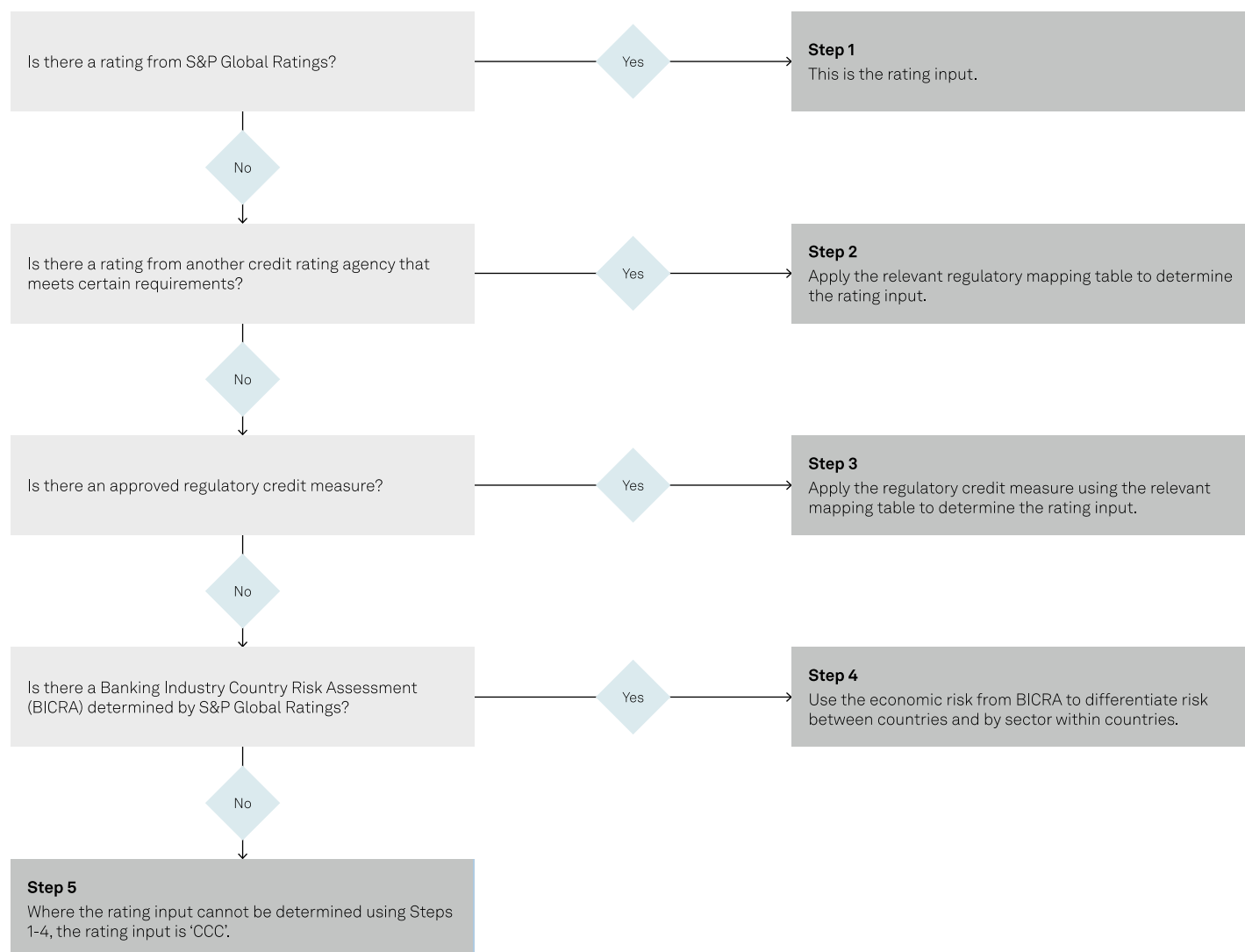
(%)	--Capital charges--			
	99.99%	99.95%	99.8%	99.5%
A	2.18	1.72	1.38	1.15
BBB	4.13	3.26	2.61	2.17
BB	15.58	12.30	9.84	8.20
B	32.85	25.94	20.75	17.29
CCC to C	100.00	100.00	86.47	72.06
D	100.00	100.00	100.00	100.00
<b>More than 5 but less than or equal to 10 years</b>				
AAA	0.39	0.31	0.25	0.21
AA	1.25	0.99	0.79	0.66
A	3.57	2.81	2.25	1.88
BBB	6.71	5.30	4.24	3.53
BB	22.29	17.60	14.08	11.73
B	36.61	28.90	23.12	19.27
CCC to C	100.00	100.00	88.66	73.88
D	100.00	100.00	100.00	100.00
<b>More than 10 but less than or equal to 20 years</b>				
AAA	0.57	0.45	0.36	0.30
AA	1.56	1.23	0.99	0.82
A	4.91	3.87	3.10	2.58
BBB	8.03	6.34	5.07	4.23
BB	24.03	18.97	15.17	12.65
B	36.61	28.90	23.12	19.27
CCC to C	100.00	100.00	89.81	74.85
D	100.00	100.00	100.00	100.00
<b>Over 20 years</b>				
AAA	0.92	0.73	0.58	0.49
AA	1.86	1.47	1.18	0.98
A	5.56	4.39	3.51	2.92
BBB	8.18	6.46	5.16	4.30
BB	24.03	18.97	15.17	12.65
B	36.61	28.90	23.12	19.27
CCC to C	100.00	100.00	89.81	74.85
D	100.00	100.00	100.00	100.00

References to ratings include all rating modifiers within the rating category (e.g., 'A' includes bonds rated 'A+', 'A', and 'A-').

To apply tables 3-6, we determine the rating input of bonds and loans using the steps in chart 4:



Chart 4

**Determining the rating input of bonds and loans**

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**Step 1: Assets Rated By S&P Global Ratings**

For bond and loan assets that have global scale ratings from S&P Global Ratings, the rating input is the S&P Global Ratings global scale rating. For assets that have regional or national scale ratings from S&P Global Ratings, we map to the equivalent S&P Global Ratings global scale rating. We typically map a regional or national scale rating that maps to more than one global scale rating to the lower outcome in the mapping table in the absence of further information.

## Step 2: Assets Rated By Other Credit Rating Agencies (CRAs)

For assets that are not rated by S&P Global Ratings but carry ratings from other CRAs, we base our rating input on the CRA's ratings, using a regulatory mapping table, without adjustment. If there is more than one CRA rating for an asset, the rating input is typically based on the lowest mapped CRA rating the issuer uses for regulatory reporting purposes.

For the purposes of this step, we include ratings from CRAs that are:

- Registered or certified in accordance with relevant CRA regulations;
- Included in a mapping table that is used by insurance regulators in establishing capital requirements for credit assets;
- Included in a regulatory mapping table that relates the CRA's rating scale to S&P Global Ratings' global rating scale; and
- Included in a mapping table that is publicly available.

We typically apply the mapping table used by an insurer's domestic regulator. Examples of mapping tables include, but are not limited to, those produced by the National Assn. of Insurance Commissioners (NAIC) and used by state insurance regulators in the U.S. or those determined by the European Supervisory Authorities for use under the Solvency II Directive.

In the absence of a mapping table used by the domestic regulator that meets the requirements above--or for a regulatory mapping table that does not include all CRAs--we may apply a regulatory mapping table used in one country or region that meets the requirements above to another to support global consistency. We use these regulatory mapping tables solely for the purpose of determining the rating input to apply capital charges.

## Step 3: Assets With Regulatory Credit Measures

For assets that are not included under steps 1 and 2 but carry credit measures approved by the insurer's domestic regulator, the rating input is based on the regulatory credit measures using the mapping tables from step 2. Examples of regulatory credit measures are NAIC designations assigned by the Securities Valuation Office in the U.S., as well as insurers' internal credit scores that are mapped to credit quality steps under Solvency II and accepted for the determination of capital requirements by the insurer's regulator.

### Step 4: Assets Not Included In Steps 1-3

For assets that are not included in steps 1-3, we determine the rating input based on the economic risk score from our Banking Industry Country Risk Assessment to differentiate risk between countries and by sector within countries. (See table 38 in Appendix II, "Market Variables," for the rating input assumptions by sector and economic risk group.) We determined the rating input assumptions for all sectors by considering factors such as the average rating and lowest average rating in each sector for all countries within each economic risk group and based on our analytical judgment.

The relevant economic risk group is based on the domicile of the issuer of the bond or loan, although we may assume it is in the same country as the insurer in the absence of additional information. Where we have not determined an economic risk group for a country, we may use estimates or proxies. Where we do not receive sufficient information on the split of exposures, we typically assume that structured finance exposures are the junior tranches and non-structured-finance exposures are nonfinancial corporates.

When we apply step 4, we may adjust up or down by at most one rating category the credit quality assumption for any given combination of economic risk group and sector. We make the adjustment when we have additional information that indicates the average credit quality assumption for assets included in step 4 is, in our view, materially higher or lower than our standard assumption. For example, this adjustment could apply if the sovereign credit rating is 'CCC+' or lower and the outcome from this step is 'B' or higher. We make the adjustment at the portfolio level, rather than on a security-by-security basis.

### Step 5: Assets Not Included In Steps 1-4

Where the rating input cannot be determined using steps 1-4, the rating input is 'CCC'. In all cases, the rating input is 'D' (default) for a bond that is rated 'D' or equivalent under steps 1, 2, or 3.

## Additional Considerations

Where a bond or loan is not rated but the issuer is rated by a CRA such that step 1 or step 2 would otherwise apply to the CRA's ratings, we may assume a rating input:

- at the same level as the issuer credit rating for senior unsecured and senior secured exposures; or
- one notch below the issuer credit rating for subordinated exposures.

Where the regulatory mapping table maps multiple ratings from S&P Global Ratings to a single regulatory credit measure or a single rating from another CRA, the rating input is typically based on the lowest mapped rating from S&P Global Ratings.

We typically limit rating inputs in any given jurisdiction to a level no higher than we typically assign (this limit reflects our criteria for ratings above the sovereign). We may perform additional analysis, such as applying our criteria for ratings above the sovereign, for rating inputs that exceed the sovereign rating (i.e., where a different rating input could have a material impact).

We may perform additional analysis to determine an alternative measure of credit quality, such as establishing credit estimates or determining credit opinions, where the additional analysis could result in a material impact.

## OTC derivative counterparties

Where we determine that the counterparty credit exposure relating to OTC derivative contracts is material, we apply the credit risk charges in table 4. We apply the charge, based on the average tenor of the exposure and the rating on the counterparty, to the related net unrealized gains of the derivative contract (unrealized gains and losses with the same counterparty are netted).

Where we determine exposures relating to OTC derivatives are immaterial, we apply a single charge from table 4 to the aggregate net unrealized gain assuming an 'A' rating and five-to-10-year tenor.

We may give credit for counterparty netting and risk mitigation techniques, such as collateralization provisions, but may reduce the value of collateral to reflect risk where this is material (for example, by applying the relevant asset risk charge to the collateral). We do not apply credit risk charges to exchange-traded or centrally cleared derivatives.

## Credit default swaps

Where we determine that credit exposures relating to credit default swaps are material, we will apply capital charges to the exposure. To determine the exposure when the insurer has "long" credit exposure, we will apply the credit risk factors in table 4, based on the tenor of the swap and the rating on the referenced party, to the notional amount of the swap. We will apply the methodology for OTC derivatives for exposures to counterparties resulting from "short" positions (purchased protection). Where companies purchase credit default swaps to mitigate other credit exposures, we may factor this into the credit risk capital requirements if material.

## Criteria Insurance General: Insurer Risk-Based Capital Adequacy--Methodology And Assumptions

## Mortgages

To calculate capital requirements for credit risk on mortgage loans, we apply a charge that differentiates risks for commercial and residential mortgage loans. For commercial mortgage loans, we differentiate risks for mortgages in good standing (i.e., performing mortgage loans) based on the loan-to-value (LTV) ratio and the debt service coverage ratio (DSCR). We also use LTV to differentiate capital requirements for higher-risk construction loans, delinquent (i.e., nonperforming) mortgages, and loans in foreclosure. For residential mortgage loans, we differentiate risks for performing mortgages based on LTV and apply separate capital charges for nonperforming mortgages.

The capital charges for commercial mortgages are informed by our analysis of the performance and underwriting quality of mortgage loans held by U.S. life insurers. To develop the capital charges, we determined the stressed principal loss factor and the probability of foreclosure for each confidence level, assuming a normal distribution. We then adjusted for the loan characteristics, including LTV and the DSCR. For residential mortgages, the capital charges are informed by our analysis of the performance of mortgage insurers.

Where we determine the exposure to commercial mortgage loans is material, we apply the charges in table 7. If the split by LTV and DSCR is not available, we typically assume the exposures are high risk and apply the charges for LTV greater than 80% and a DSCR less than 1.1x. If the split by LTV is available, but not the split by DSCR, we apply the charges for a DSCR of less than 1.1x based on the LTV. If we determine the exposure to commercial mortgage loans is immaterial, we usually apply the charges for LTV of 60%-80% and a DSCR of 1.1x-1.4x to all exposures.

Table 7

## Credit Risk Charges For Commercial Mortgage Loans

		--Capital charges--					
		--In good standing--			Construction loans	Delinquent loans	In process of foreclosure
Loan to value (%)	Loan to value	--Debt service coverage ratios--					
		> 1.4x	1.1x to 1.4x	< 1.1x			
<b>99.5%</b>							
	<60	2.1	3.0	4.3	12.9	22.0	43.9
	60-80	2.9	4.1	5.9	17.6	30.1	60.2
	>80	3.5	4.8	6.9	20.7	35.4	70.8
<b>99.8%</b>							
	<60	2.7	3.8	5.5	16.4	25.4	50.8
	60-80	3.5	5.0	7.1	21.2	32.8	65.6
	>80	4.1	5.7	8.1	24.3	37.6	75.2
<b>99.95%</b>							
	<60	3.7	5.1	7.3	22.0	30.1	60.2
	60-80	4.4	6.2	8.9	26.7	36.5	73.0
	>80	5.0	6.9	9.9	29.7	40.6	81.3

## Criteria Insurance General: Insurer Risk-Based Capital Adequacy--Methodology And Assumptions

Table 7

## Credit Risk Charges For Commercial Mortgage Loans (cont.)

(%)	Loan to value	--Capital charges--					
		--In good standing--			Construction loans	Delinquent loans	In process of foreclosure
		--Debt service coverage ratios--					
		> 1.4x	1.1x to 1.4x	< 1.1x			
<b>99.99%</b>							
	<60	4.8	6.7	9.5	28.6	34.9	69.9
	60-80	5.5	7.7	11.0	33.0	40.3	80.6
	>80	6.0	8.4	11.9	35.8	43.8	87.6

Where we determine the exposure to residential mortgage loans is material, we apply the charges in table 8. If the split by LTV is not available, we typically assume the exposures are high risk and apply the charges for LTV greater than 80%. If we determine the exposure to residential mortgage loans is immaterial, we usually apply the charges for LTV of 60%-80% to all exposures.

Table 8

## Credit Risk Charges For Residential Mortgage Loans

(%)	Loan to value	--Capital charges--	
		Performing loans	Nonperforming loans
<b>99.5%</b>			
	<60	1.5	
	60-80	2.0	
	>80	2.4	
			20.0
<b>99.8%</b>			
	<60	1.9	
	60-80	2.5	
	>80	2.8	
			25.0
<b>99.95%</b>			
	<60	2.6	
	60-80	3.1	
	>80	3.4	
			30.0
<b>99.99%</b>			
	<60	3.3	
	60-80	3.8	
	>80	4.2	

## Criteria Insurance General: Insurer Risk-Based Capital Adequacy--Methodology And Assumptions

Table 8

### Credit Risk Charges For Residential Mortgage Loans (cont.)

(%)	Loan to value	--Capital charges--	
		Performing loans	Nonperforming loans
			35.0

The residential mortgage risk charges assume the exposures are standard-repayment or interest-only residential mortgage loans for the purpose of financing a borrower's primary residential property (i.e., owner-occupied property). We include exposures to higher-risk residential mortgage loans as commercial mortgage loans where these exposures are material and we determine this better captures the credit risk (for example, for agricultural mortgages, residential mortgages that depend on income generated on the property, reverse mortgages, and equity release mortgages). We typically assume these higher-risk residential mortgages are high-risk commercial mortgage loans and apply the charges for a DSCR of less than 1.1x and LTV greater than 80%.

### Reinsurance counterparties

To calculate capital requirements for reinsurance counterparty default risk, we apply a charge based on the assumed tenor of the exposure and the rating on the reinsurer. To develop the capital charges, we applied the same scenario default rates we use for credit risk on bonds and loans but assumed a recovery rate of 50%. We assume the tenor of the exposures is five to 10 years (other than for catastrophe-related exposures, where we assume one to five years).

We apply the charges in table 9 to reinsurers' share of outstanding loss reserves (including the reinsurers' share of the net present value of future claims payments under longevity swaps) and reinsurance receivables. We apply the charges in table 10 to reinsurers' share of stressed catastrophe losses (contingent reinsurance credit risk), and we include both natural catastrophe losses and mortality catastrophe losses (e.g., pandemic losses).

We apply the capital charges in table 10 to the uncollateralized reinsurance recoveries expected at each stress scenario. For pandemic risk, the uncollateralized reinsurance recoveries are calculated as the pandemic risk charge (see table 29) multiplied by the reinsurer's share of the gross amount at risk (or gross sums assured). We include the credit risk capital requirements for contingent reinsurance counterparty risk in the relevant natural catastrophe and pandemic risk capital requirements.

Table 9

### Credit Risk Charges For Reinsurance Counterparty Risks

(%)	--Capital charges--			
	99.99%	99.95%	99.8%	99.5%
AAA	0.52	0.41	0.33	0.28
AA	1.38	1.09	0.87	0.73
A	1.89	1.49	1.19	0.99
BBB	3.86	3.05	2.44	2.03
BB	9.19	7.26	5.80	4.84

## Criteria Insurance General: Insurer Risk-Based Capital Adequacy--Methodology And Assumptions

Table 9

### Credit Risk Charges For Reinsurance Counterparty Risks (cont.)

(%)	--Capital charges--			
	99.99%	99.95%	99.8%	99.5%
B	14.21	11.22	8.98	7.48
CCC	58.00	52.77	42.22	35.18
D	58.00	55.00	53.00	50.00

The capital charges apply to reinsurers' share of outstanding loss reserves and reinsurance receivables.

Table 10

### Credit Risk Charges For Contingent Reinsurance Counterparty Risks

(%)	--Capital charges--			
	99.99%	99.95%	99.8%	99.5%
Reinsurers' share of stressed catastrophe losses	1.19	0.94	0.75	0.63

To determine the rating input for reinsurance counterparties, we apply steps 1-3 in chart 4 using the financial strength rating or equivalent. For any reinsurance counterparties for which we cannot determine the rating input based on steps 1-3, we assume a 'B' rating input. We may adjust this assumption down to 'CCC' if we believe payments from a reinsurer are vulnerable to nonpayment.

If letters of credit from a financially secure financial institution, reinsurance deposits, or suitable trust assets are available to offset the counterparty credit risk relating to reinsurers, we include credit for up to 100% of the collateral to offset the reinsurance counterparty credit risk charge. We may reduce the value of collateral to reflect risk where this is material (for example, by applying the relevant asset risk charge to the collateral).

### Deposits with credit institutions

We apply a charge to cash and bank deposits to reflect the counterparty risk associated with these assets. We assume that the deposits are uninsured and that there is no general depositor preference for corporate deposits. Because bank deposits are usually short-term assets, the capital charges are informed by the credit risk charges for bonds and loans with a tenor of less than one year and recoveries aligned with category 2.

We use the sovereign credit rating as a proxy for the credit risk associated with bank deposits. The charges we apply to cash and bank deposits in table 11 are based on the relevant local currency sovereign rating for the bank's domicile. To determine the relevant local currency sovereign rating, we apply steps 1-5 in chart 4.



Table 11

**Credit Risk Charges For Bank Deposits**

(% )	--Capital charges--			
	99.99%	99.95%	99.8%	99.5%
<b>Sovereign local currency rating</b>				
A- or higher	0.30	0.24	0.19	0.16
BBB	0.78	0.62	0.49	0.41
BB or B	2.16	1.71	1.37	1.14
CCC+ or lower	17.19	13.57	10.86	9.05

References to ratings include all ratings in the relevant category (e.g., 'BBB' includes 'BBB+', 'BBB', and 'BBB-').

**Deposits with cedents**

We apply the charges in table 12 to deposits with cedents. The capital charges are informed by the credit risk charges for bonds and loans with a tenor of less than one year, a 50% recovery assumption, and 'BBB' assumed credit quality.

Table 12

**Credit Risk Charges For Deposits With Cedents**

(% )	--Capital charges--			
	99.99%	99.95%	99.8%	99.5%
Deposits with cedents	0.69	0.54	0.44	0.36

**Corporate-owned life insurance (COLI)**

We apply the credit risk charges in table 4 to COLI assets. We apply the charge based on the rating on the insurance counterparty and assume the tenor is over 20 years. This is based on the assumption that the insurer has the willingness and ability to hold the COLI asset until maturity and that volatility in the carrying value of the COLI asset does not represent a material risk.

To determine the rating input for insurance counterparties, we apply steps 1-3 in chart 4, using the financial strength rating or equivalent. For any insurance counterparties for which we cannot determine the rating input based on steps 1-3, we assume a 'B' rating input. We may adjust this assumption to 'CCC' if we believe payments from an insurer are vulnerable to nonpayment.

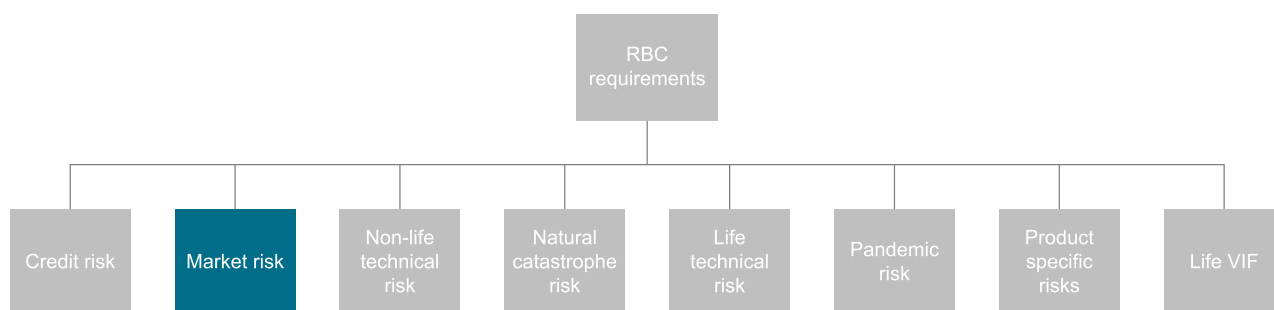
**Other chargeable assets**

We apply the credit risk charges in table 13 to assets such as insurance premium receivables, leases, low-income housing tax credits, prepaid expenses, third-party administrator fees, and receivables under administrative services only (ASO) and administrative services contracts (ASCs). The capital charges are informed by the credit risk charges for bonds and loans with a tenor of less than one year and zero recovery.

Table 13

**Credit Risk Charges For Other Chargeable Assets**

(%)	--Capital charges--			
	99.99%	99.95%	99.8%	99.5%
Other chargeable assets	9.5	7.5	6.0	5.0

**Market Risk**

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Market risk charges capture the potential losses in stress scenarios from movements in equity and real estate markets, as well as interest rates and systemic credit spreads.

**Equity risk**

We apply capital charges to the fair value of equity investments to capture the potential losses in stress scenarios on the assumption of a buy-and-hold strategy. We apply capital charges to three different types of equity investments: listed securities, unlisted securities, and infrastructure equities with specific low-risk attributes ("eligible infrastructure equities"; see glossary). We differentiate risk typically based on the domicile of the equity investment (see table 14). We may also apply the equity risk charge to other assets where we consider the asset value to be exposed to equity market volatility.

To determine the capital charges for listed equities, we analyzed the volatility of stock market indices in various countries over the past 30 years. For eligible infrastructure equities, we analyzed the volatility of infrastructure equity market indices and considered regulatory capital charges. We calibrated this volatility to our stress scenarios and applied factors based on log-normal assumptions to determine the charges at each confidence level. Our capital charges assume a highly diverse listed equity portfolio or eligible infrastructure equity portfolio.

We classify listed equity investments into four equity market groups by country based on several factors, such as the volatility we have observed in that country's main stock market index over the

**Criteria Insurance General: Insurer Risk-Based Capital Adequacy--Methodology And Assumptions**

past 30 years, the level of stress in the economy experienced in the worst one-year performance of the domestic index, our assessment of the depth and breadth of the domestic capital markets, the foreign currency sovereign credit rating, and the inclusion of the country in one of the MSCI world indices. See table 39 in Appendix II, "Market Variables," for the allocation of countries to equity market groups.

We apply higher charges to unlisted equities in each of the four equity market groups, based on our view of the higher average risk of unlisted stocks, owing to their generally higher leverage, valuation risk, and illiquidity.

We classify eligible infrastructure equities into two categories by country based on several factors, such as our view on country risk and the predictability of regulation and government policy. See table 39 in Appendix II, "Market Variables," for the allocation of countries to infrastructure equity categories. For infrastructure equity investments that are not eligible infrastructure equities (see glossary), we apply the listed or unlisted equity capital charges for the relevant equity market group.

We apply the capital charges for group 1 to investments in hedge funds (listed or unlisted, as applicable). For investments in mutual funds and other collective investments, we apply the capital charge for the most relevant equity market group, based on the predominant country or countries of the underlying investment holdings, when the underlying exposures are primarily equities. Where the underlying exposures in a fund are primarily bonds, we may treat the investment as a bond if we have sufficient information on the underlying investments (e.g., rating and tenor) and there are no additional risks (e.g., leverage).

Table 14

**Market Risk Charges For Equities**

Equity market group		--Capital charges--			
		99.99%	99.95%	99.8%	99.5%
1	Listed	55	50	45	40
	Unlisted	66	60	54	48
2	Listed	66	60	54	48
	Unlisted	77	70	63	56
3	Listed	77	70	63	56
	Unlisted	88	80	72	64
4	Listed	88	80	72	64
	Unlisted	99	90	81	72
Infrastructure - category 1*		48	44	39	35
Infrastructure - category 2*		69	63	56	50

Note: See table 39 in Appendix II, "Market Variables," for the allocation of countries to equity market groups. \*Eligible infrastructure equities (see glossary).

**Real estate risk**

We apply capital charges to the fair value of direct real estate (or property) investments to capture the potential losses in stress scenarios. Where the fair value is not available (and therefore not captured in TAC), we use the reported value. We apply capital charges to two different types of real

**Criteria Insurance General: Insurer Risk-Based Capital Adequacy--Methodology And Assumptions**

estate investments: investment real estate and owner-occupied property. We differentiate risk based on the domicile of the real estate investment (see table 15). We typically apply equity risk charges to investments in REITs and real estate companies.

To determine the capital charges, we analyzed the annual volatility of both commercial and residential real estate indices in various countries over at least the past 15 years. We calibrated this volatility to our stress scenarios based on a log-normal distribution to determine the charges at each confidence level. Our capital charges assume a highly diverse real estate portfolio.

We classify real estate investments into four groups by country, based primarily on the annual volatility we have observed in that country's real estate index over at least the past 15 years. We also applied analytical judgment where the index data for a country was more heavily weighted toward residential real estate. This is based on our view that insurers tend to have higher exposure to commercial real estate, which we believe is a more volatile sector than residential real estate. See table 40 in Appendix II, "Market Variables," for the allocation of countries to real estate groups.

Table 15

**Market Risk Charges For Real Estate**

Real estate group		--Capital charges--			
		99.99%	99.95%	99.8%	99.5%
1	Investment	15	13	11	9
	Owner occupied	23	20	17	14
2	Investment	20	18	15	12
	Owner occupied	28	25	21	17
3	Investment	30	27	24	20
	Owner occupied	38	34	30	25
4	Investment	35	31	27	24
	Owner occupied	43	38	33	29

See table 40 in Appendix II, "Market Variables," for the allocation of countries to real estate groups.

We apply higher charges to owner-occupied property in each of the four real estate groups, based on our view of the higher risk to the value of the property in a stress scenario where the insurer is both the owner and tenant of the property (see table 15).

**Interest rate risk**

We apply capital charges to capture the potential economic losses in stress scenarios from movements in interest rates and systemic credit spreads due to net exposure mismatches. We measure interest rate risk using two elements: a yield stress and the net exposure to interest rate risk. For our yield stresses, we assume permanent parallel shifts in observable yields that vary by country.

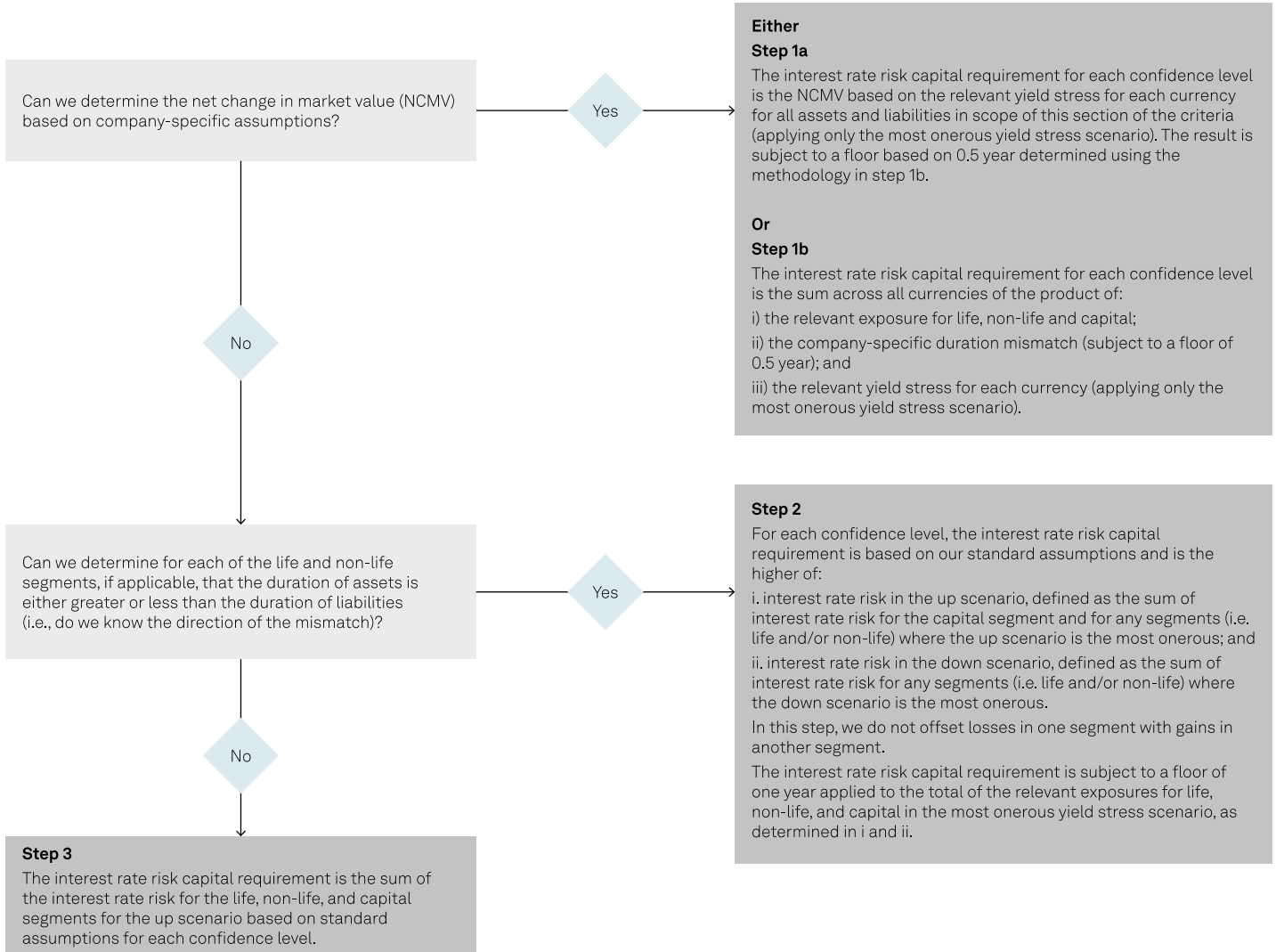
We define the potential economic losses as the net change in market value (NCMV), which we determine for each confidence level. The NCMV captures the net impact of changes in interest rates and systemic credit spreads on the market value of assets and proxy market value of liabilities, factoring in risk mitigants such as hedge instruments and the ability to share losses with policyholders (by adjusting crediting rates, policyholder dividends, or bonuses).

**Criteria Insurance General: Insurer Risk-Based Capital Adequacy--Methodology And Assumptions**

We apply one of three steps to determine the NCMV and therefore the interest rate risk capital requirements (see chart 5). We apply either company-specific assumptions (step 1) or standard assumptions (steps 2 and 3), in all cases using our defined yield stresses.

Chart 5

**Determining the interest rate risk capital requirement**



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## Step 1

To determine the NCMV based on company-specific assumptions (step 1), we either directly derive the NCMV based on our defined yield stresses (step 1a) or estimate the NCMV based on a company-specific duration mismatch and our defined yield stresses (step 1b). Where we use duration mismatch to capture the net exposure to interest rate risk, it measures the net percentage change in the market value or proxy market value for a 100-basis-point change in yields. We typically use a volume-weighted measure of duration (we don't deduct the duration in years of the liabilities from the duration in years of the assets).

Where we apply step 1, we analyze information (including the underlying assumptions) from, or based on, risk-based regulatory frameworks, an insurer's internal model, or an insurer's own risk reporting. We may also assess other information, such as alternative interest rate risk metrics (e.g., DVO1s), an insurer's interest rate risk limits, an insurer's duration mismatch (over time and relative to risk limits), and an insurer's strategy for managing interest rate risk. For example, we may apply a higher NCMV or duration mismatch than the current position if there is historical volatility in the NCMV or duration mismatch over time, or we may use the maximum NCMV or duration mismatch implied by risk limits.

The company-specific assumptions may, therefore, differ from an insurer's view of its risk and can be higher or lower than our standard assumptions. We also apply a floor based on a mismatch assumption of 0.5 year when we apply company-specific assumptions (the value of the floor in step 1a and step 1b is determined using the duration mismatch methodology under step 1b).

Where we apply step 1, the company-specific assumptions capture the group balance sheet in full. We expect the company-specific assumptions to reflect the magnitude of our yield stress, but they may also incorporate a company-specific view on the extent of the stress at the long end of the yield curve where market data may not be available.

We do not apply step 1 for an insurer that does not measure interest rate risk or where we are unable to determine company-specific assumptions that we believe adequately capture an insurer's net exposure to interest rate risk. We may also not apply step 1 for an insurer that has no interest rate risk limits or where we determine an insurer's interest rate risk is immaterial.

## Steps 2 & 3

For step 2, where we determine that an insurer manages interest rate risk across different segments (life, non-life, and capital) such that it reduces its overall interest rate risk, we capture this in our analysis, but only when we believe the risk reduction is material and sustainable. For example, if the direction of the mismatch for one of the segments fluctuates from one year to the next (or we believe the mismatch is close to zero), we may determine the risk reduction is not sustainable and apply step 3.

**Criteria Insurance General: Insurer Risk-Based Capital Adequacy--Methodology And Assumptions**

To determine our yield stresses, we analyzed the annual volatility of investment-grade corporate bond yields in various countries, using a methodology consistent with the Hull-White interest rate framework. We used relevant S&P Dow Jones investment-grade corporate bond indices to measure the volatility of yields at different points along the yield curve. We selected the 10-year point on the yield curve to calibrate our stresses, based on our assumption of a 10-year duration for the liabilities of a typical life insurer. We used investment-grade corporate bond yields to reflect the typical investment-grade fixed-income portfolio of insurers.

We calibrated both up and down yield stresses and captured potential negative yields because we do not apply a floor. We grouped countries with similar volatility into five categories, calculated the average yield shock within each category, and rounded the result to determine our yield stresses (see table 16).

Table 16

**Yield Stress Assumptions**

(Basis points)	--Yield stress scenario--							
	--99.99%--		--99.95%--		--99.8%--		--99.5%--	
	Up	Down	Up	Down	Up	Down	Up	Down
Category 1	130	120	115	105	105	95	95	85
Category 2	180	170	160	150	145	135	135	120
Category 3	275	255	250	225	220	195	205	175
Category 4	365	330	330	290	295	250	270	225
Category 5	490	470	450	410	400	350	370	320

See table 41 in Appendix II, "Market Variables," for the full list of countries in each category.

For countries where there was insufficient data to calibrate yield volatility using a methodology consistent with the Hull-White interest rate framework, we used alternative methods to assess volatility, such as the historical VaR of investment-grade corporate bond index yields, and alternative data, such as the volatility of 10-year government bond yields. We used these alternative methods and data to benchmark relative volatility and assign countries to the risk categories (see table 41 in Appendix II, "Market Variables," for the full list of countries in each category).

To determine our standard duration mismatch assumptions for life insurers, we used analytical judgment informed by industry and regulatory data. We assign countries to one of six risk groups (see table 17) based on our analysis at a country level of duration mismatch, the level of guarantees in the liabilities, and the ability to share losses with policyholders (also known as the loss-absorbing capacity of technical provisions). See table 42 in Appendix II, "Market Variables," for the allocation of countries to duration mismatch groups.

Table 17

**Duration Mismatch Assumptions (Life)**

Group	Mismatch assumption (years)*
Group A	1
Group B	2
Group C	3
Group D	4

## Criteria Insurance General: Insurer Risk-Based Capital Adequacy--Methodology And Assumptions

Table 17

**Duration Mismatch Assumptions (Life) (cont.)**

Group	Mismatch assumption (years)*
Group E	5
Group F	7

Note: See table 42 in Appendix II, "Market Variables," for the allocation of countries to duration mismatch groups. \*For the purposes of these assumptions, we use years as a proxy for the duration after rounding to whole numbers. For example, we assume the duration for group b is 2%.

For non-life insurers, our standard assumption is that the duration mismatch is one-third of the mean term of an insurer's liabilities, subject to a floor of one year (for example, if the mean term of the non-life liabilities is 2.4 years, we apply a floor of one year, but if the mean term is 4.5 years, we assume a mismatch of 1.5 years).

The relevant category (for yield stress) is based on the currency of the liabilities. The group (for life duration mismatch) is usually the country or countries where the insurer writes a material amount of business. We may also allocate immaterial exposures to a category or group where the insurer writes a material amount of business. We use the currency of the liabilities for the yield stress, based on an assumption that assets and liabilities are currency matched (we capture foreign exchange risk in our insurance ratings framework; see "Related Criteria").

When we apply our standard assumptions for insurers writing foreign currency or cross-border business, we determine the relevant group as follows:

- If an insurer sells foreign currency products to domestic policyholders, we apply the duration mismatch assumption for the domestic market. For example, we apply the yield stress for the U.S. and duration mismatch assumption for Japan to the U.S. dollar-denominated domestic liabilities of an insurer based in Japan.
- If an insurer writes cross-border business, we apply the duration mismatch assumption based on the location of the risk. This assumes that the interest rate risk exposure is consistent with the location of the risk (that is, the insured). For example, we apply the yield stress for Polish zloty and duration mismatch assumption for Poland to the Polish zloty-denominated liabilities written in Poland by a German insurer.
- If an insurer is domiciled in a financial center, we typically apply the approach for cross-border business.

Where we determine the NCMV using duration mismatch, we determine the relevant exposure amount as follows:

**Relevant non-life liabilities:** The exposure amount reflects the reported non-life technical reserves by country and any non-life reserve adjustment we make in TAC (we may apply the adjustment proportionally). The exposure amount includes both outstanding claims and premium provisions (e.g., unearned premium reserve) and is net of non-life deferred acquisition costs. We also typically deduct premium receivables. Further, we adjust reported non-life technical reserves for any products that we have reclassified either from, or to, a life product risk.

**Relevant life liabilities:** The exposure amount reflects reported life technical reserves by country and any life reserve adjustment we make in TAC (we may apply the adjustment proportionally). We also exclude from the exposure amount any policyholder capital and unrealized gains on investments backing participating life business that we include in TAC, and the liabilities for



## Criteria Insurance General: Insurer Risk-Based Capital Adequacy--Methodology And Assumptions

products that are not in scope of this section of the criteria. We also adjust reported life technical reserves for any products that we have reclassified either from, or to, a non-life product risk.

**Capital:** To determine interest rate risk, we define capital as the excess, if any, of interest-sensitive assets over the sum of relevant life and non-life insurance liabilities (excluding, for the purposes of this calculation, any unit-linked assets and liabilities). This is based on either the amount of interest-sensitive assets that we determine are not backing relevant insurance liabilities or an estimate based on the assumption that interest-sensitive assets are held to back relevant insurance liabilities. We use the value of this excess as the relevant exposure amount. We include bonds, loans, and mortgages in interest-sensitive assets.

Where we determine the NCMV using duration mismatch, we assess the interest rate risk for three separate segments: life, non-life, and capital. For each segment, we calculate the interest rate risk for the relevant yield stress scenario, as follows:

- The interest rate risk for the life segment is the sum across all countries of the product of i) the relevant life liabilities, ii) the relevant yield stress for each country (we consider both up and down scenarios), and iii) the relevant duration mismatch assumption for each country (where we apply step 1 in chart 5, we apply the company-specific duration mismatch).
- The interest rate risk for the non-life segment is the sum across all currencies of the product of i) the relevant non-life liabilities, ii) the relevant yield stress for each currency (we consider both up and down scenarios), and iii) the duration mismatch assumption.
- The interest rate risk for the capital segment is the product of i) capital, if any; ii) the duration of the assets (or weighted average maturity of all bonds and loans, in the absence of duration) subject to a floor of one year, unless we are applying a company-specific duration mismatch under step 1 in chart 5; and iii) the relevant yield stress for the currency (we use only an up stress, unless we are applying a company-specific duration mismatch under step 1 in chart 5), which is typically the currency of the country of domicile. Where an insurer operates in a financial center, the relevant currency for the yield stress is the one we believe is most relevant for its operations (for example, where it writes most business).

We assume that yields in all currencies move in the same direction, either up or down. If the duration of assets is less than the duration of liabilities for the respective segment, we define the down yield stress as the most onerous for each of the life or non-life segments. Otherwise, the up yield stress is the most onerous.

## Other Asset Risks

### Exempt assets

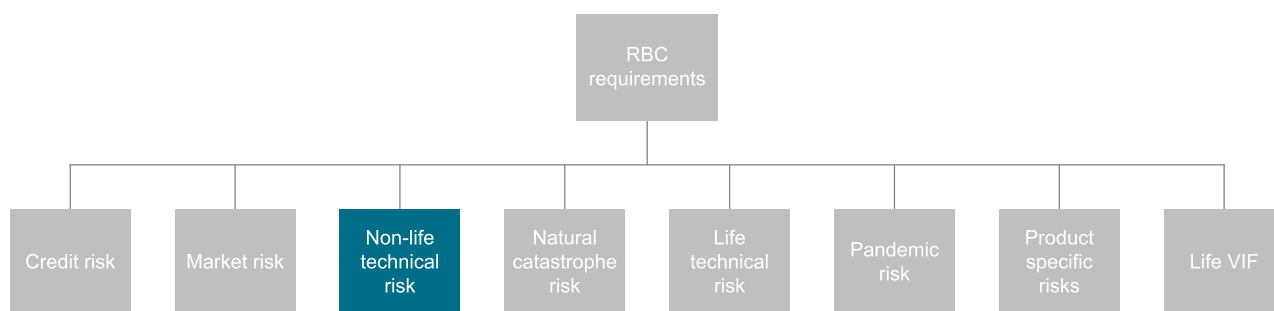
The following assets are exempt from credit, market, and other asset risk charges: non-life deferred acquisition costs, deferred tax assets, policy loans, investment income due, and accrued interest. We also typically consider exposures under repurchase agreements to be exempt assets, unless the collateral margin is insufficient, in our view, to mitigate risk in our stress scenarios.

### Other assets

Other reported assets not captured in the credit or market risk charges or for which treatment is

**Criteria Insurance General: Insurer Risk-Based Capital Adequacy--Methodology And Assumptions**

otherwise not defined elsewhere in these criteria are typically subject to a 100% charge at each confidence level. The 100% risk charge recognizes the significant uncertainty over the realizable value of the asset in stress scenarios. This applies, for example, to fixed assets.

**Non-Life Technical Risks**

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The fundamental risk associated with underwriting and reserving is that in setting both the premium and reserve levels, the emergence of a claim and its actual cost will vary from the expected cost. These unexpected losses could result from higher-than-expected frequency and severity of claims, including the impact of changes in economic, legal, and social conditions. We apply capital charges to premiums and reserves to capture potential losses in stress scenarios from these non-life technical risks.

When an insurance line of business as reported by the industry is not explicitly addressed in our charges, we typically map to a line of business that is most representative of the insured exposure. If we determine this approach does not appropriately capture the risk, we may reclassify to an alternative line of business that is most representative of the risk.

**Premium risk**

We generally apply capital charges to non-life net written premiums (net of business ceded to reinsurers) to capture potential unexpected losses from higher-than-expected claims on business written in stress scenarios. We typically exclude the natural catastrophe premium from net written premiums when determining capital requirements for premium risk (see the section on natural catastrophe risk for more details).

We may use the net unearned premium reserve (or an equivalent) as the exposure base if this is higher than net written premiums (such as for insurers writing multiyear contracts).

The premium risk charge is a measure of pricing risk. We differentiate risk by product line and country or region, generally based on the location of the insured risk.

To determine the capital charges for primary insurance and proportional reinsurance business, we

**Criteria Insurance General: Insurer Risk-Based Capital Adequacy--Methodology And Assumptions**

measured the volatility of loss ratios to determine stressed loss ratios at the 99.5% confidence level. We deducted the expected loss ratios to determine the unexpected loss ratios. We assume that premiums cover expected losses and that capital is needed to cover unexpected losses (as measured by the unexpected loss ratios).

We removed natural catastrophe losses from the data to avoid double-counting risk that is captured in our natural catastrophe risk charge.

We applied factors of 1.2x, 1.4x, and 1.65x relative to the results at the 99.5% confidence level to determine capital charges for each of the other confidence levels.

We used various data sources to measure the volatility of loss ratios in different jurisdictions. We also applied analytical judgment and rounding to determine the capital charges in 12 risk categories. We allocate each line of business in each country or region to one of these 12 risk categories based on our statistical analysis of loss ratio volatility, industry data, and regulatory capital charges (see table 18; also see the section on mortgage insurance).

We capture operational risks through our premium risk charges. For nonunderwritten U.S. health and disability ASO and ASCs, we apply a premium risk charge to capture these operational risks.

Table 18

**Non-Life Premium Risk Charges (Primary And Proportional Reinsurance)**

Category	--Capital charges--				
	99.99%	99.95%	99.80%	99.50%	
(%)					
<b>EMEA risks</b>					
General liability	Liability	57.8	49.0	42.0	35.0
Workers' compensation	Liability	33.0	28.0	24.0	20.0
Fire and other damage to property	Property	33.0	28.0	24.0	20.0
Motor vehicle liability	Motor	33.0	28.0	24.0	20.0
Other motor	Motor	24.8	21.0	18.0	15.0
Credit and suretyship	Financial	49.5	42.0	36.0	30.0
Miscellaneous financial loss	Financial	57.8	49.0	42.0	35.0
Health and medical expense insurance	Health	16.5	14.0	12.0	10.0
Marine, aviation, and transport	MAT	66.0	56.0	48.0	40.0
Marine protection and indemnity§	MAT	49.5	42.0	36.0	30.0
Assistance	Other	41.3	35.0	30.0	25.0
Income protection	Other	33.0	28.0	24.0	20.0
Legal expense	Other	33.0	28.0	24.0	20.0
Other	Other	99.0	84.0	72.0	60.0
<b>U.S. risks</b>					
Excess workers' compensation	Liability	82.5	70.0	60.0	50.0
Medical malpractice - claims made	Liability	57.8	49.0	42.0	35.0
Medical malpractice - occurrence	Liability	82.5	70.0	60.0	50.0
Other liability - claims made	Liability	16.5	14.0	12.0	10.0
Other liability - occurrence	Liability	24.8	21.0	18.0	15.0
Product liability - claims made	Liability	57.8	49.0	42.0	35.0

## Criteria Insurance General: Insurer Risk-Based Capital Adequacy--Methodology And Assumptions

Table 18

## Non-Life Premium Risk Charges (Primary And Proportional Reinsurance) (cont.)

(%)	Category	--Capital charges--			
		99.99%	99.95%	99.80%	99.50%
Product liability - occurrence	Liability	33.0	28.0	24.0	20.0
Workers' compensation	Liability	24.8	21.0	18.0	15.0
Boiler and machinery	Property	41.3	35.0	30.0	25.0
Commercial multiperil	Property	24.8	21.0	18.0	15.0
Homeowner/farmowner multiperil	Property	41.3	35.0	30.0	25.0
Special property (fire, allied lines, inland marine, earthquake, burglary and theft)	Property	41.3	35.0	30.0	25.0
Auto physical damage	Motor	24.8	21.0	18.0	15.0
Commercial auto liability	Motor	24.8	21.0	18.0	15.0
Private passenger auto liability	Motor	24.8	21.0	18.0	15.0
Credit	Financial	49.5	42.0	36.0	30.0
Fidelity/surety	Financial	24.8	21.0	18.0	15.0
Financial guaranty	Financial	99.0	84.0	72.0	60.0
A&H stop-loss reinsurance	Health	41.3	35.0	30.0	25.0
Accident and health	Health	33.0	28.0	24.0	20.0
Administrative services only/administrative services contract*	Health	8.3	7.0	6.0	5.0
Full risk and experience rated group and individual health	Health	12.4	10.5	9.0	7.5
Dental and vision	Health	8.3	7.0	6.0	5.0
Federal employee health benefit program	Health	4.1	3.5	3.0	2.5
Hospital indemnity, accidental death and dismemberment, specified disease, and other limited benefits	Health	12.4	10.5	9.0	7.5
Medicare and Medicaid	Health	12.4	10.5	9.0	7.5
Medicare Part D (all other)	Health	16.5	14.0	12.0	10.0
Medicare Part D (risk corridor only)	Health	12.4	10.5	9.0	7.5
Medicare Part D (risk corridor and reinsurance)	Health	8.3	7.0	6.0	5.0
Medicare supplemental	Health	12.4	10.5	9.0	7.5
Other health	Health	16.5	14.0	12.0	10.0
Aircraft	MAT	66.0	56.0	48.0	40.0
Marine protection and indemnity§	MAT	49.5	42.0	36.0	30.0
Ocean marine	MAT	33.0	28.0	24.0	20.0
Title	Other	24.8	21.0	18.0	15.0
Warranty	Other	33.0	28.0	24.0	20.0
Other	Other	99.0	84.0	72.0	60.0

## Criteria Insurance General: Insurer Risk-Based Capital Adequacy--Methodology And Assumptions

Table 18

## Non-Life Premium Risk Charges (Primary And Proportional Reinsurance) (cont.)

(%)	Category	--Capital charges--			
		99.99%	99.95%	99.80%	99.50%
<b>Canadian risks</b>					
Liability	Liability	49.5	42.0	36.0	30.0
Boiler and machinery	Property	33.0	28.0	24.0	20.0
Commercial property	Property	33.0	28.0	24.0	20.0
Hail	Property	41.3	35.0	30.0	25.0
Personal property	Property	33.0	28.0	24.0	20.0
Auto - liability	Motor	33.0	28.0	24.0	20.0
Auto - other	Motor	33.0	28.0	24.0	20.0
Auto - personal accident	Motor	33.0	28.0	24.0	20.0
Credit	Financial	49.5	42.0	36.0	30.0
Credit protection	Financial	49.5	42.0	36.0	30.0
Fidelity	Financial	41.3	35.0	30.0	25.0
Surety	Financial	41.3	35.0	30.0	25.0
Accident and sickness (excluding supplementary health, disability income)†	Health	33.0	28.0	24.0	20.0
Supplementary health	Health	24.8	21.0	18.0	15.0
Aircraft	MAT	49.5	42.0	36.0	30.0
Marine	MAT	33.0	28.0	24.0	20.0
Marine protection and indemnity§	MAT	49.5	42.0	36.0	30.0
Legal expense	Other	49.5	42.0	36.0	30.0
Other approved products	Other	41.3	35.0	30.0	25.0
Title	Other	24.8	21.0	18.0	15.0
Warranty	Other	33.0	28.0	24.0	20.0
Other	Other	99.0	84.0	72.0	60.0
<b>Asia-Pacific risks</b>					
Employers' liability	Liability	24.8	21.0	18.0	15.0
General liability	Liability	33.0	28.0	24.0	20.0
Professional indemnity	Liability	33.0	28.0	24.0	20.0
Public and product liability	Liability	41.3	35.0	30.0	25.0
Commercial property	Property	33.0	28.0	24.0	20.0
Domestic property	Property	33.0	28.0	24.0	20.0
Engineering	Property	49.5	42.0	36.0	30.0
Commercial motor - Australia and New Zealand	Motor	16.5	14.0	12.0	10.0
Domestic motor - Australia and New Zealand	Motor	12.4	10.5	9.0	7.5
Motor - all inclusive	Motor	33.0	28.0	24.0	20.0
Motor - Japan and Taiwan	Motor	16.5	14.0	12.0	10.0

## Criteria Insurance General: Insurer Risk-Based Capital Adequacy--Methodology And Assumptions

Table 18

## Non-Life Premium Risk Charges (Primary And Proportional Reinsurance) (cont.)

(%)	Category	--Capital charges--			
		99.99%	99.95%	99.80%	99.50%
Third-party liability motor	Motor	33.0	28.0	24.0	20.0
Consumer credit	Financial	24.8	21.0	18.0	15.0
Credit	Financial	82.5	70.0	60.0	50.0
Accident and health	Health	16.5	14.0	12.0	10.0
Health	Health	12.4	10.5	9.0	7.5
Marine, aviation - cargo	MAT	33.0	28.0	24.0	20.0
Marine, aviation - hull	MAT	66.0	56.0	48.0	40.0
Marine protection and indemnity§	MAT	49.5	42.0	36.0	30.0
Travel	Other	24.8	21.0	18.0	15.0
Other	Other	99.0	84.0	72.0	60.0
<b>Latin American risks</b>					
Employers' liability	Liability	33.0	28.0	24.0	20.0
General liability	Liability	33.0	28.0	24.0	20.0
Professional indemnity	Liability	49.5	42.0	36.0	30.0
Commercial property	Property	99.0	84.0	72.0	60.0
Domestic property	Property	41.3	35.0	30.0	25.0
Mexico farm and ranch	Property	99.0	84.0	72.0	60.0
Property all inclusive	Property	41.3	35.0	30.0	25.0
Motor all inclusive	Motor	16.5	14.0	12.0	10.0
Credit	Financial	82.5	70.0	60.0	50.0
Fidelity	Financial	66.0	56.0	48.0	40.0
Surety	Financial	82.5	70.0	60.0	50.0
Accident and health	Health	33.0	28.0	24.0	20.0
Health and medical exp	Health	12.4	10.5	9.0	7.5
Marine, aviation - all inclusive	MAT	99.0	84.0	72.0	60.0
Marine, aviation - cargo	MAT	33.0	28.0	24.0	20.0
Marine protection and indemnity§	MAT	49.5	42.0	36.0	30.0
Travel	Other	41.3	35.0	30.0	25.0
Warranty	Other	8.3	7.0	6.0	5.0
Other	Other	99.0	84.0	72.0	60.0

Notes: We typically apply the capital charges to net written premiums. We may use the net unearned premium reserve (UPR) (or equivalent) if this is higher. Where we do not have a split of the UPR by line of business, we may use the breakdown by premiums and apply these proportions to the UPR. The category is used to group lines of business in the diversification calculation. \*Applied to administrative expenses for health and disability ASO/ASC arrangements. §Applicable when this business line with a globally consistent charge is material, as is typically the case for members of marine mutual clubs. †Disability income is included in the relevant life disability product category. MAT--Marine, aviation, and transport.

We apply 1.25x the charges in table 18 (rounded to one decimal place) to determine capital

**Criteria Insurance General: Insurer Risk-Based Capital Adequacy--Methodology And Assumptions**

requirements for nonproportional reinsurance business in all lines and all countries and regions. We apply this surcharge to capture the higher volatility of unexpected losses that we observe for nonproportional reinsurance business.

**Reserve risk**

We apply capital charges to adjusted non-life net loss reserves (see glossary) to capture potential unexpected losses from higher-than-expected incurred claims in stress scenarios. The reserve risk charge is a measure of the risk that balance-sheet loss reserves will become deficient due to unexpected variability in estimating frequency and severity trends, as well as due to changes in economic, legal, and social conditions that can add variability to claim costs. The reserve risk charge is not a measure of the adequacy of current loss reserves. We differentiate risk by product line and country or region, generally based on the location of the insured risk.

To determine the capital charges, we used accepted actuarial techniques to measure the potential volatility in the development of incurred claims over one year at the 99.5% confidence level. We assume that expected incurred claims are covered by loss reserves and that capital is needed to cover unexpected incurred claims. We applied factors of 1.2x, 1.4x, and 1.65x relative to the results at the 99.5% confidence level to determine capital charges for each of the other confidence levels.

We used U.S. statutory data as a starting point, given its public availability on an accident year basis. We applied an adjustment to the results based on the proportion of reserves relating to the latest accident year to avoid any double counting with our premium risk charges. Finally, we applied analytical judgment, incorporating our analysis of industry data and regulatory capital charges, and rounding to determine the capital charges by line of business for each country or region (see table 19).

Table 19

**Non-Life Reserve Risk Charges (Primary And Proportional Reinsurance)**

(%)	Category	--Capital charges--			
		99.99%	99.95%	99.80%	99.50%
<b>EMEA risks</b>					
General liability	Liability	33.0	28.0	24.0	20.0
Workers' compensation	Liability	33.0	28.0	24.0	20.0
Fire and other damage to property	Property	33.0	28.0	24.0	20.0
Motor vehicle liability	Motor	33.0	28.0	24.0	20.0
Other motor	Motor	24.8	21.0	18.0	15.0
Credit and suretyship	Financial	66.0	56.0	48.0	40.0
Miscellaneous financial loss	Financial	66.0	56.0	48.0	40.0
Health and medical expense insurance	Health	16.5	14.0	12.0	10.0
Marine, aviation, and transport	MAT	41.3	35.0	30.0	25.0
Marine protection and indemnity†	MAT	41.3	35.0	30.0	25.0
Assistance	Other	66.0	56.0	48.0	40.0
Income protection	Other	41.3	35.0	30.0	25.0
Legal expense	Other	41.3	35.0	30.0	25.0

## Criteria Insurance General: Insurer Risk-Based Capital Adequacy--Methodology And Assumptions

Table 19

## Non-Life Reserve Risk Charges (Primary And Proportional Reinsurance) (cont.)

(%)	Category	--Capital charges--			
		99.99%	99.95%	99.80%	99.50%
Other	Other	66.0	56.0	48.0	40.0
<b>U.S. risks</b>					
Medical malpractice - claims made	Liability	49.5	42.0	36.0	30.0
Medical malpractice - occurrence	Liability	57.8	49.0	42.0	35.0
Other liability - claims made	Liability	41.3	35.0	30.0	25.0
Other liability - occurrence*	Liability	49.5	42.0	36.0	30.0
Product liability - claims made	Liability	41.3	35.0	30.0	25.0
Product liability - occurrence	Liability	49.5	42.0	36.0	30.0
Workers' compensation	Liability	24.8	21.0	18.0	15.0
Boiler and machinery	Property	49.5	42.0	36.0	30.0
Commercial multiperil	Property	41.3	35.0	30.0	25.0
Homeowner/farmowner multiperil	Property	33.0	28.0	24.0	20.0
Special property (fire, allied lines, inland marine, earthquake, burglary and theft)	Property	41.3	35.0	30.0	25.0
Auto physical damage	Motor	24.8	21.0	18.0	15.0
Commercial auto liability	Motor	33.0	28.0	24.0	20.0
Private passenger auto liability	Motor	24.8	21.0	18.0	15.0
Credit	Financial	41.3	35.0	30.0	25.0
Fidelity/surety	Financial	41.3	35.0	30.0	25.0
Financial guaranty	Financial	41.3	35.0	30.0	25.0
Accident and health§	Health	41.3	35.0	30.0	25.0
U.S. health reserves	Health	8.3	7.0	6.0	5.0
Aircraft	MAT	49.5	42.0	36.0	30.0
Marine protection and indemnity†	MAT	41.3	35.0	30.0	25.0
Ocean marine	MAT	49.5	42.0	36.0	30.0
Title	Other	33.0	28.0	24.0	20.0
Warranty	Other	41.3	35.0	30.0	25.0
Other	Other	66.0	56.0	48.0	40.0
<b>Canadian risks</b>					
Liability	Liability	57.8	49.0	42.0	35.0
Boiler and machinery	Property	33.0	28.0	24.0	20.0
Commercial property	Property	41.3	35.0	30.0	25.0
Hail	Property	41.3	35.0	30.0	25.0
Personal property	Property	33.0	28.0	24.0	20.0
Auto - liability	Motor	24.8	21.0	18.0	15.0
Auto - other	Motor	24.8	21.0	18.0	15.0



## Criteria Insurance General: Insurer Risk-Based Capital Adequacy--Methodology And Assumptions

Table 19

## Non-Life Reserve Risk Charges (Primary And Proportional Reinsurance) (cont.)

(%)	Category	--Capital charges--			
		99.99%	99.95%	99.80%	99.50%
Auto - personal accident	Motor	24.8	21.0	18.0	15.0
Credit	Financial	33.0	28.0	24.0	20.0
Credit protection	Financial	33.0	28.0	24.0	20.0
Fidelity	Financial	41.3	35.0	30.0	25.0
Surety	Financial	41.3	35.0	30.0	25.0
Accident and sickness (excluding supplementary health, disability income)**	Health	41.3	35.0	30.0	25.0
Supplementary health	Health	8.3	7.0	6.0	5.0
Aircraft	MAT	49.5	42.0	36.0	30.0
Marine	MAT	49.5	42.0	36.0	30.0
Marine protection and indemnity†	MAT	41.3	35.0	30.0	25.0
Legal expense	Other	57.8	49.0	42.0	35.0
Other approved products	Other	41.3	35.0	30.0	25.0
Title	Other	33.0	28.0	24.0	20.0
Warranty	Other	41.3	35.0	30.0	25.0
Other	Other	66.0	56.0	48.0	40.0
<b>Asia-Pacific risks</b>					
Employers' liability	Liability	33.0	28.0	24.0	20.0
General liability	Liability	33.0	28.0	24.0	20.0
Professional indemnity	Liability	33.0	28.0	24.0	20.0
Public and product liability	Liability	41.3	35.0	30.0	25.0
Commercial property	Property	33.0	28.0	24.0	20.0
Domestic property	Property	33.0	28.0	24.0	20.0
Engineering	Property	49.5	42.0	36.0	30.0
Commercial motor – Australia and New Zealand	Motor	16.5	14.0	12.0	10.0
Domestic motor - Australia and New Zealand	Motor	16.5	14.0	12.0	10.0
Motor - all inclusive	Motor	24.8	21.0	18.0	15.0
Motor - Japan and Taiwan	Motor	16.5	14.0	12.0	10.0
Third-party liability motor	Motor	33.0	28.0	24.0	20.0
Consumer credit	Financial	24.8	21.0	18.0	15.0
Credit	Financial	49.5	42.0	36.0	30.0
Accident and health	Health	16.5	14.0	12.0	10.0
Health	Health	12.4	10.5	9.0	7.5
Marine, aviation - cargo	MAT	33.0	28.0	24.0	20.0
Marine, aviation - hull	MAT	49.5	42.0	36.0	30.0
Marine protection and indemnity†	MAT	41.3	35.0	30.0	25.0

## Criteria Insurance General: Insurer Risk-Based Capital Adequacy--Methodology And Assumptions

Table 19

## Non-Life Reserve Risk Charges (Primary And Proportional Reinsurance) (cont.)

(%)	Category	--Capital charges--			
		99.99%	99.95%	99.80%	99.50%
Travel	Other	24.8	21.0	18.0	15.0
Other	Other	66.0	56.0	48.0	40.0
<b>Latin American risks</b>					
Employers' liability	Liability	33.0	28.0	24.0	20.0
General liability	Liability	33.0	28.0	24.0	20.0
Professional indemnity	Liability	49.5	42.0	36.0	30.0
Commercial property	Property	41.3	35.0	30.0	25.0
Domestic property	Property	33.0	28.0	24.0	20.0
Mexico farm and ranch	Property	66.0	56.0	48.0	40.0
Property all inclusive	Property	41.3	35.0	30.0	25.0
Motor all inclusive	Motor	24.8	21.0	18.0	15.0
Credit	Financial	49.5	42.0	36.0	30.0
Fidelity	Financial	49.5	42.0	36.0	30.0
Surety	Financial	49.5	42.0	36.0	30.0
Accident and health	Health	33.0	28.0	24.0	20.0
Health and medical exp	Health	12.4	10.5	9.0	7.5
Marine aviation - all inclusive	MAT	41.3	35.0	30.0	25.0
Marine aviation - cargo	MAT	41.3	35.0	30.0	25.0
Marine protection and indemnity†	MAT	41.3	35.0	30.0	25.0
Travel	Other	33.0	28.0	24.0	20.0
Warranty	Other	41.3	35.0	30.0	25.0
Other	Other	66.0	56.0	48.0	40.0

Notes: The capital charges are applied to adjusted net loss reserves (see glossary). The category is used to group lines of business in the diversification calculation. \*Includes excess workers' compensation. §Includes A&H stop-loss reinsurance. †Applicable when this business line with a globally consistent charge is material, as is typically the case for members of marine mutual clubs. \*\*Disability income is included in the relevant life disability product category. MAT--Marine, aviation, and transport.

We apply 1.25x the charges in table 19 (rounded to one decimal place) to determine capital requirements for nonproportional reinsurance business in all lines and all countries and regions. This reflects our opinion that reserve volatility is higher for nonproportional reinsurance business owing to factors such as delays in receiving timely claims information to estimate reserves.

## Mortgage insurance

Where we determine that mortgage insurance is material, we apply the capital charges in this section to determine mortgage insurance capital requirements.

We apply capital charges to net written premiums and/or net unearned premium reserves (or an equivalent), depending on premium payment frequency, to capture potential unexpected losses

**Criteria Insurance General: Insurer Risk-Based Capital Adequacy--Methodology And Assumptions**

from higher-than-expected default frequency in stress scenarios. For these purposes, net unearned premium reserve is the unearned premiums less outward reinsurance expense, and the liability for remaining coverage is treated the same as unearned premium reserve.

Our capital charges are informed by potential unexpected losses that could emerge over three years to capture the full impact of the stress. Our capital charges assume a highly diverse portfolio.

To determine the capital charges, we measured the volatility of default frequency and loss severity (based on house price declines) under economic stresses to determine loss rates at the different confidence levels. We then converted this into a percentage of premiums, incorporating the benefit of reinsurance. We primarily used U.S. mortgage market data, specifically the government-sponsored enterprises loan data, to measure default frequency, and the Federal Housing Finance Agency's Purchase Only House Price Index to measure house price volatility. We applied analytical judgment and rounding to determine the capital charges.

We also apply capital charges to reserves to capture potential unexpected losses from higher-than-expected incurred claims in stress scenarios. We use the same methodology for reserve risk that we applied to other non-life business lines.

### Determining Mortgage Insurance Capital Requirements

To determine capital requirements, we apply the following steps:

- The premium risk capital requirement is the product of i) the premium risk factor in table 20 and ii) the sum of net written premiums for recurring premium business (typically for monthly payments) and 20% of the net unearned premium reserve (or similar exposure measure) for single or upfront premium business. In the absence of net written premiums and the net unearned premium reserve (or an equivalent), we may use 100% of net earned premium as our measure of exposure where we consider this appropriate.
- The reserve risk capital requirement is the product of net loss reserves and the capital charges in table 20.
- We apply a factor of 1.25x to the charges in table 20 for nonproportional business (rounded to one decimal place).

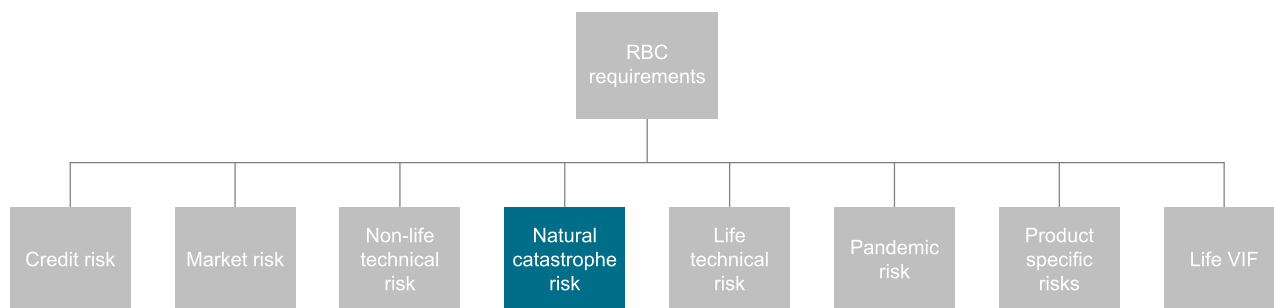
Table 20

#### Mortgage Insurance Capital Charges (Primary And Proportional Reinsurance)

(%)	--Capital charges--			
	99.99%	99.95%	99.8%	99.5%
Premium risk factor	425.0	310.0	217.0	125.0
Reserve risk	41.3	35.0	30.0	25.0

### Natural Catastrophe Risk

## Criteria Insurance General: Insurer Risk-Based Capital Adequacy--Methodology And Assumptions



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Where we determine that natural catastrophe risk for non-life exposures is material, we include capital charges to capture potential unexpected losses from natural catastrophes. The capital charge at the 99.5% confidence level is based on the pretax aggregate one-in-200-year loss estimate from natural disasters across all lines of business.

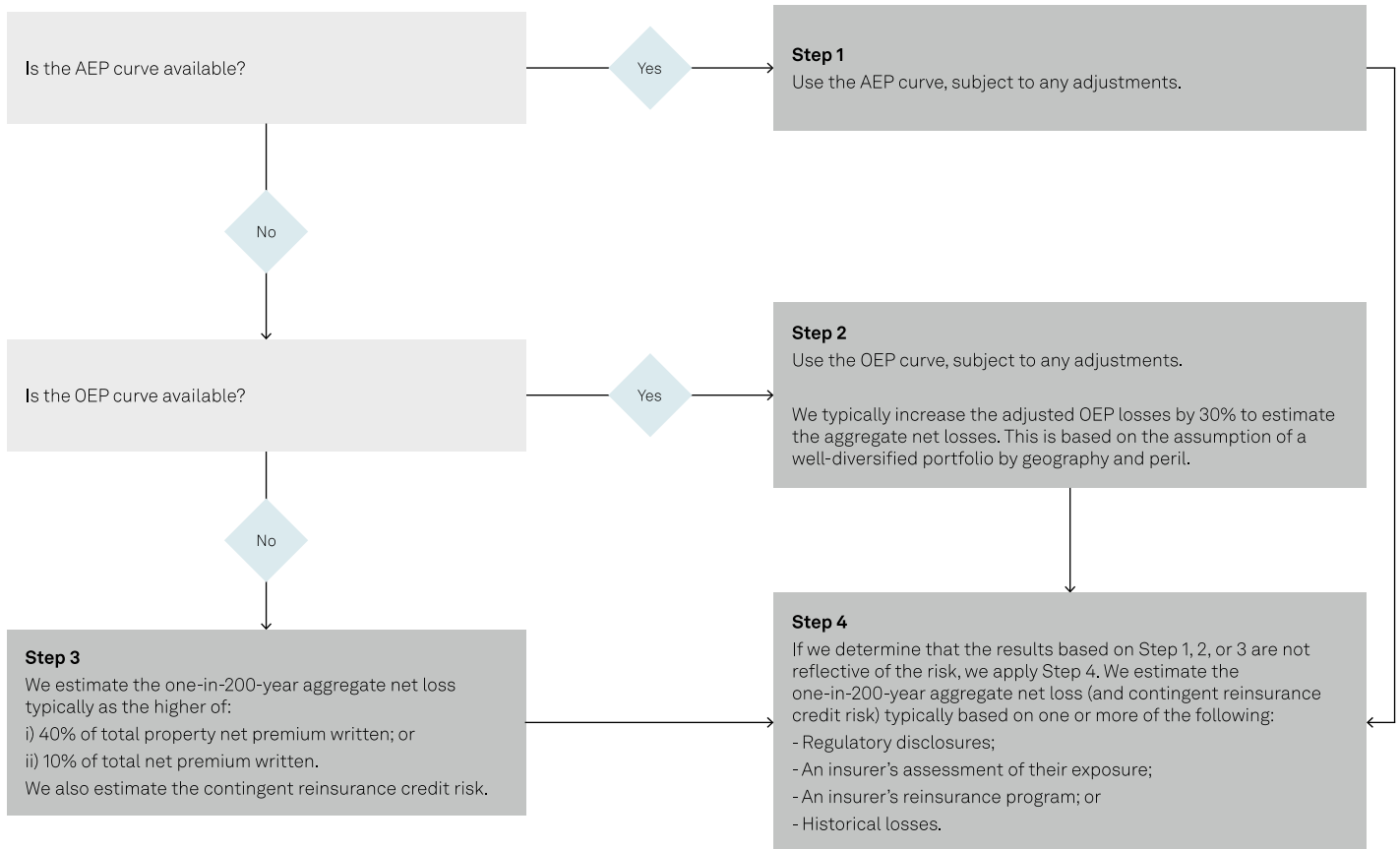
The loss estimate is calculated net of reinsurance and other forms of mitigation, such as catastrophe bonds, and captures inward and outward reinstatement premiums. We expect the loss estimate to include demand surge, fire following (attached to earthquake and fire policies), sprinkler leakage, storm surge, and secondary uncertainty losses.

The capital charge covers exposures to global natural disasters including hurricanes (wind), flood, earthquake, tornadoes, winter storms (extratropical cyclones), wildfire, and hail. We expect the loss estimate to capture an insurer's expected exposure over the next year. We include in the loss estimate all investments and exposures to natural catastrophe risk, such as investments by the insurer in catastrophe bonds.

We determine the net aggregate loss estimate based on the steps in chart 6:

Chart 6

**Determining the net aggregate loss estimate**



AEP--Aggregate exceedance probability. OEP--Occurrence exceedance probability.  
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### Determining The Natural Catastrophe Risk Charge

We use the results from catastrophe models to derive the AEP or OEP curves. Where an insurer includes a loading on top of the output from catastrophe models, we include the loading to determine the loss estimate. Where we determine that the output from catastrophe models, including any loadings, does not adequately capture the risk (for example, relating to demand surge, secondary uncertainty, or climate change), we apply adjustments to determine the relevant loss estimate.

For steps 1 and 2, we deduct catastrophe-related premium from the loss estimate to determine the stressed natural catastrophe underwriting losses. The premium we deduct is equivalent to the premium related to catastrophe business excluding the amount relating to expenses. We define catastrophe-related premium as follows, although we may adjust our calculation when there is catastrophe-related premium information that is subject to an independent third-party review (such as by an auditor or regulator):

$$(1 - \text{industry average expense ratio}) * \left( \frac{\text{Aggregate annual average loss}}{\text{Industry average catastrophe loss ratio}} \right)$$

The net aggregate annual average loss is specific to the insurer's exposure and typically based on the output from catastrophe models. Our assumptions for the industry average catastrophe loss and expense ratios are based on our analysis of market data (see Appendix II, "Market Variables," for the industry average catastrophe loss and expense ratio assumptions). For step 3, the catastrophe-related premium is implicitly captured in our assumptions. For step 4, we assume the catastrophe-related premium is captured.

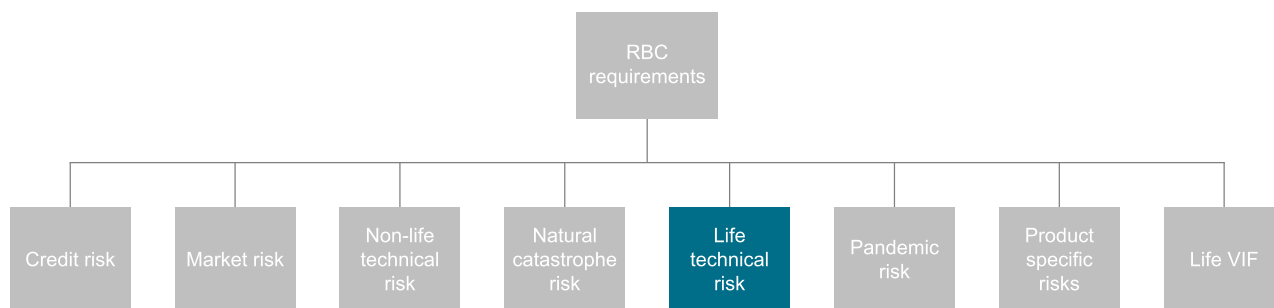
When we apply step 1 or step 2, we usually exclude the natural catastrophe premium (before the expense adjustment) from net written premiums when determining capital requirements for premium risk.

Where we apply step 1 or step 2, the capital charge at the 99.99% confidence level is based on the net aggregate one-in-500-year loss estimate. Similarly, the 99.8% and 99.95% confidence levels are based on the one-in-250-year and one-in-333-year net loss estimates. When the one-in-250-year and/or one-in-333-year net loss estimates are not available, we use interpolation to determine the capital charges at the 99.8% and/or 99.95% confidence levels. The interpolation is based on relative distances between the relevant scaling factors--namely, 1.0x, 1.2x, 1.4x, and 1.65x for each of the confidence levels. Where we apply step 3 or step 4, we apply these same scaling factors directly to the one-in-200-year net aggregate loss to determine the capital charges at the 99.8%, 99.95%, and 99.99% confidence levels, respectively.

If we determine that natural catastrophe risk is immaterial such that any residual risk is sufficiently captured in our premium risk charges, we may exclude the natural catastrophe risk from our capital requirements and apply our premium risk charges to total net written premiums (that is, with no deduction for the natural catastrophe premium).

## Life Technical Risks

## Criteria Insurance General: Insurer Risk-Based Capital Adequacy--Methodology And Assumptions



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A fundamental risk in pricing life insurance products is that the experience relating to mortality, morbidity, longevity, expense, and lapse could be worse than the assumptions built into the products. We apply capital charges to the relevant exposures to capture potential losses in stress scenarios from these life technical risks.

## Mortality

We apply capital charges to the net amount at risk (NAR, or net sums at risk, which is net of amounts ceded to reinsurers) on life products to capture the potential losses from higher-than-expected mortality in stress scenarios. These unexpected losses could stem from volatility in the level of mortality rates, volatility around the trend, and misestimation of mortality at policy inception. We differentiate risk based on the size of the NAR and the extent of development of the life insurance market where the insurer writes business.

To determine the capital charges, we measured the volatility of actual mortality relative to expected mortality (the actual-to-expected-mortality ratio) since 1996 for the top 200 U.S. life companies and translated that into a percentage of the NAR. The actual-to-expected ratios were much less volatile for companies with larger NARs, reflecting the benefits of risk diversification.

We segmented the insurers into three NAR groups where we observed significant differences in volatility, to explicitly capture this diversification. We calibrated this volatility to our stress scenarios based on a normal distribution to determine the charges at each confidence level for the three NAR groups.

For the purposes of the mortality and morbidity risk charges in these criteria, we classify life markets as highly developed or less developed based on several factors, such as life insurance penetration, annual life premiums, income group, and life expectancy (see Appendix II, "Market Variables," for the classification of life markets). Table 21 shows the capital charges we apply in highly developed life markets. We apply the charges in table 22 to less developed life markets. These charges are about 25% higher than the charges we apply in highly developed life markets.

Table 21

**Mortality Risk Capital Charges (Highly Developed Life Markets)**

Net amount at risk	--Capital charges--			
	99.99%	99.95%	99.8%	99.5%
First \$50 billion	0.251	0.222	0.194	0.174
Next \$200 billion	0.154	0.136	0.119	0.107
Amount in excess of \$250 billion	0.057	0.050	0.044	0.039

Table 22

**Mortality Risk Capital Charges (Less Developed Life Markets)**

Net amount at risk	--Capital charges--			
	99.99%	99.95%	99.8%	99.5%
First \$50 billion	0.313	0.277	0.242	0.217
Next \$200 billion	0.193	0.171	0.149	0.133
Amount in excess of \$250 billion	0.071	0.063	0.055	0.049

**Morbidity risk--critical illness**

We apply capital charges to the NAR on critical illness products with predetermined and fixed payments upon incident (e.g., lump sum payments) to capture the potential losses from higher-than-expected morbidity inception rates in stress scenarios. These unexpected losses could stem from volatility in the level of morbidity rates, volatility around the trend, and misestimation of morbidity at policy inception.

We differentiate risk based on the size of the NAR and the extent of development of the life insurance market where the insurer writes business. We apply the relevant non-life charges to critical illness products with variable payments upon incident (e.g., indemnity or reimbursement critical illness insurance).

To determine the capital charges, we applied stress factors to the inception rates of critical illness claims. Our analysis indicated that stressed critical illness losses exceeded the stressed mortality losses by a factor of just over 2x. Therefore, we apply this factor to the mortality capital charges based on the same NAR groupings and segmentation of the development of the life insurance market.

In addition to applying the charges to stand-alone critical illness products, where critical illness coverage is offered as a rider to a base life insurance policy (for example, where it provides for an acceleration in the payment of the life insurance benefit), we apply the critical illness charges to these products, given it is the dominant risk and should incorporate the mortality-related volatility (see tables 23 and 24). However, if the critical illness and life insurance benefit amounts in a single policy are different--and we can split the NAR--we may apply separate mortality and morbidity charges to the respective NAR.



## Criteria Insurance General: Insurer Risk-Based Capital Adequacy--Methodology And Assumptions

Table 23

**Morbidity Risk Capital Charges - Critical Illness (Highly Developed Life Markets)**

(%)	--Capital charges--			
Net amount at risk	99.99%	99.95%	99.8%	99.5%
First \$50 billion	0.54	0.47	0.42	0.37
Next \$200 billion	0.33	0.29	0.26	0.23
Amount in excess of \$250 billion	0.12	0.11	0.09	0.08

Table 24

**Morbidity Risk Capital Charges - Critical Illness (Less Developed Life Markets)**

(%)	--Capital charges--			
Net amount at risk	99.99%	99.95%	99.8%	99.5%
First \$50 billion	0.67	0.59	0.52	0.46
Next \$200 billion	0.41	0.37	0.32	0.29
Amount in excess of \$250 billion	0.15	0.13	0.12	0.11

**Morbidity risk--disability**

We apply capital charges to long-term disability products (also known as income protection or permanent health insurance) to capture the potential losses from higher-than-expected morbidity inception rates and lower-than-expected recovery rates in stress scenarios. These unexpected losses could stem from volatility in the level of morbidity rates, volatility around the trend, and misestimation of morbidity at policy inception.

We differentiate risk based on product type and premium size. We apply premium-based charges to capture pricing risk relating to inception and recovery rate volatility. We also apply reserve-based charges to capture recovery rate volatility or claims termination risk (see table 25). We do not apply these charges to long-term care products or long-term health business with aging reserves (see the relevant sections for the charges on these products).

The U.S. regulatory RBC factors, together with our analysis of loss ratio volatility, inform our capital charges. We increase the RBC factors by 40%-67%, based on our analysis of potential losses in stress scenarios. We assume a normal distribution to determine the charges at each confidence level. Our analysis indicates loss ratios are much less volatile for companies with larger premium volumes. We reflect this risk diversification benefit by segmenting capital charges based on premium size.

## Criteria Insurance General: Insurer Risk-Based Capital Adequacy--Methodology And Assumptions

Table 25

## Morbidity Risk Capital Charges - Disability

(%)	--Capital charges--			
	99.99%	99.95%	99.8%	99.5%
<b>PREMIUM RISK CHARGES*</b>				
<b>Noncancelable disability income</b>				
First \$50 million	72.0	64.0	56.0	50.0
Amount in excess of \$50 million	30.2	26.9	23.5	21.0
<b>Other individual income</b>				
First \$50 million	50.4	44.8	39.2	35.0
Amount in excess of \$50 million	14.4	12.8	11.2	10.0
<b>Group long-term</b>				
First \$50 million	30.2	26.9	23.5	21.0
Amount in excess of \$50 million	7.2	6.4	5.6	5.0
<b>Group short-term</b>				
First \$50 million	10.1	9.0	7.8	7.0
Amount in excess of \$50 million	7.2	6.4	5.6	5.0
<b>Credit monthly outstanding balance</b>				
First \$50 million	40.3	35.8	31.4	28.0
Amount in excess of \$50 million	7.2	6.4	5.6	5.0
<b>Credit single premium with UPR</b>				
First \$50 million	25.9	23.0	20.2	18.0
Amount in excess of \$50 million	7.2	6.4	5.6	5.0
<b>Credit single premium without UPR</b>				
First \$50 million	25.9	23.0	20.2	18.0
Amount in excess of \$50 million	7.2	6.4	5.6	5.0
<b>Other disability income</b>				
First \$50 million	50.4	44.8	39.2	35.0
Amount in excess of \$50 million	14.4	12.8	11.2	10.0
<b>RESERVE RISK CHARGE§</b>				
Total disability claims reserves	13.7	12.2	10.7	9.6

Note: Where we do not have a split by product, we typically assume products are noncancelable disability income. \*Applied to net earned premiums (or net written premiums in the absence of earned premium). §Applied to claims reserves. UPR--Unearned premium reserve.

## Morbidity risk--long-term care

We apply capital charges to long-term care products to capture the potential losses from higher-than-expected morbidity inception rates and lower-than-expected claims termination rates in stress scenarios. These unexpected losses could stem from volatility in the level of morbidity rates, volatility around the trend, misestimation of morbidity at policy inception, and lower-than-expected mortality.

**Criteria Insurance General: Insurer Risk-Based Capital Adequacy--Methodology And Assumptions**

In the U.S., we apply premium- and claims-based charges to capture pricing risk relating to inception and claims termination rate volatility. We also apply reserve-based charges to capture claims termination risk, in addition to expense and operational risks (see table 26). In other countries, we capture all these risks through a single liability-based charge.

The U.S. regulatory RBC factors, together with our analysis of loss ratio volatility, inform our capital charges. We increase the average premium and claims-based RBC factors, after scaling to our confidence level, by a factor of about 2.5x based on our analysis of potential losses in stress scenarios. We increase the reserve-based RBC factors by about 60% to align with our confidence level. We assume a normal distribution to determine the charges at each confidence level.

Table 26

**Morbidity Risk - Long-Term Care**

(%)	--Capital charges--			
	99.99%	99.95%	99.8%	99.5%
<b>U.S.</b>				
Earned premiums	46	41	36	32
Claims*	118	105	91	82
Claims reserves§	14	13	11	10
<b>Non-U.S.</b>				
Liabilities	25	22	19	17

\*Claims are calculated by taking an average of the current- and prior-year loss ratios (incurred claims divided by earned premiums) and multiplying that ratio by the current year's earned premium. In situations where there is no positive earned premium or one of the loss ratios is negative, actual incurred claims for the current year are used. Incurred claims are defined as paid claims plus the change in claim reserves during a calendar year. §Reserves for policyholders currently collecting benefits.

**Longevity risk**

We apply capital charges to the net present value of future claims payments (e.g., reported reserves) on life products that are exposed to longevity risk to capture the potential losses from lower-than-expected mortality in stress scenarios (see table 27). These unexpected losses could stem from volatility in the level of mortality rates, volatility around the trend, and misestimation of mortality at policy inception. We differentiate risk based on our assumptions about the extent of the longevity risk embedded in different annuity-type products.

To determine the capital charges, we measured the volatility of mortality improvements in various countries where there was sufficient long-term mortality data and where longevity risk represents a significant exposure for insurers. The primary source we used for long-term mortality data was the Human Mortality Database (see "Related Research"). We also applied analytical judgment in determining the final charges, including benchmarking with regulatory capital charges. We assumed a normal distribution to determine the charges at each confidence level.

Where we determine that reported reserves for products exposed to longevity risk are significantly in excess of the best estimate, we reduce the charges in table 27. The assessment of reserve adequacy is typically based on the stated minimum reserving level under the relevant accounting or regulatory standards but may also reflect our determination based on a company's reserving policy and independent audit reports. The reduction we apply varies based on the confidence level of the reported reserves:

- 90% or higher--45% reduction in charges

**Criteria Insurance General: Insurer Risk-Based Capital Adequacy--Methodology And Assumptions**

- At least 80% but less than 90%--35% reduction in charges
- At least 70% but less than 80%--25% reduction in charges
- Less than 70%: 0% reduction in charges

The allocation of products to categories 1, 2, or 3 is based on the longevity risk embedded within the product:

- We include products with the highest longevity risk in category 1. These are usually products with no or limited lump-sum optionality for policyholders (for example, immediate payout annuities).
- We include in category 3 products for which we determine there is immaterial longevity risk. These are usually products with limited and economically unattractive annuitization options for policyholders.
- We include all other products in category 2. Products in category 2 typically offer economically attractive annuitization options for policyholders even though a material proportion of policyholders do not annuitize. To develop the capital charges for products in category 2, we assume 30% of policyholders annuitize (equivalent to applying the full longevity risk charge from category 1 to 30% of the liabilities in category 2).

Table 27

**Longevity Risk Capital Charges**

(%)	--Capital charges--			
	99.99%	99.95%	99.8%	99.5%
Category 1	7.9	7.0	6.1	5.5
Category 2	2.4	2.1	1.8	1.7
Category 3	0.0	0.0	0.0	0.0

We apply the capital charges to the net present value of future claims payments. The exposure is net of the reinsurers' share of the net present value of future claims payments. For life contingent products where the premium is paid upfront, we typically use the reserve (or liability) as our measure of exposure. For products where the premium is not paid upfront (e.g., longevity swaps), we typically use the floating leg benefit payments as our measure of exposure.

**Other life technical risks**

We apply capital charges to life liabilities to capture potential losses from a permanent change in lapse rate assumptions, a mass lapse event, a permanent change in expense assumptions, and potential operational risk losses (see table 28). We differentiate risk based on our assumptions about the extent of lapse risk in different products.

To develop the capital charges, we applied analytical judgment informed by regulatory calibrations and industry data. We assumed a log-normal distribution to determine the charges at each confidence level.

We include in category 3 products with no lapse option (such as immediate payout annuities), products with no surrender value (such as term life insurance or disability), and products with no risk of investment losses for the insurer on lapse (such as unit-linked contracts where the policyholder bears all the investment risk).

Products in categories 1 and 2 typically have a surrender value and expose the insurer to potential

**Criteria Insurance General: Insurer Risk-Based Capital Adequacy--Methodology And Assumptions**

investment losses on lapse. We include in category 1 products that have investment guarantees. We include all other products in category 2. All references in this section to lapses include surrender and withdrawals.

We may reallocate exposures by at most one risk category where there are material risk-mitigating features embedded in the products that significantly reduce the financial impact of lapses for the insurer. For example, we may reallocate products to category 2 from category 1 where we believe the insurer has the willingness and ability to apply surrender charges or market-value adjustments to significantly reduce its potential investment losses on lapse.

We may also split the exposure on products that we include in category 1 or 2 where a proportion of the exposure is not exposed to lapse risk. We allocate this proportion of the exposure to category 3.

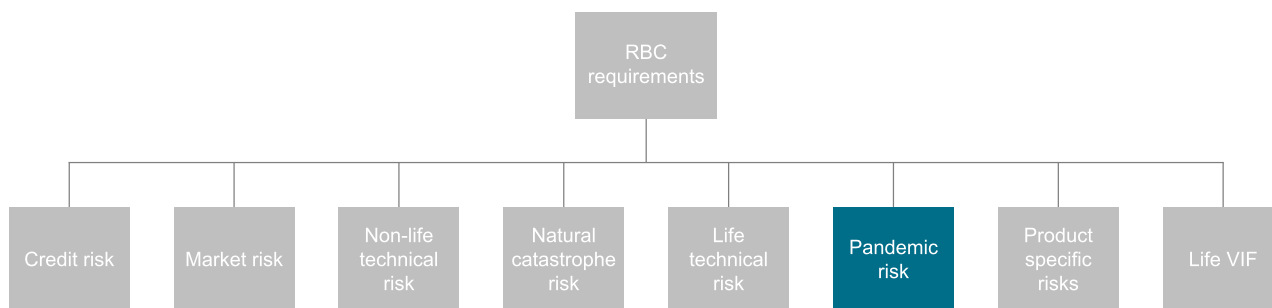
Table 28

**Other Life Technical Risk Capital Charges**

(%)	--Capital charges--			
	99.99%	99.95%	99.8%	99.5%
Category 1	2.3	2.0	1.7	1.4
Category 2	1.2	1.0	0.9	0.7
Category 3	0.7	0.6	0.5	0.4

We apply the capital charges to reported life liabilities after any applicable adjustments. Where we include in TAC a life reserve adjustment, policyholder capital, or unrealized gains on investments backing participating life business, we typically adjust the reported liabilities to determine the relevant exposure measure. We may adjust the reported life liabilities where we determine they do not capture the relevant exposure measure for other life technical risks (e.g., longevity swaps). We exclude liabilities relating to long-term care and long-term health business with aging reserves from the exposure measure because the charges for these products separately capture the other life technical risks.

**Pandemic Risk**



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We apply capital charges to the NAR to capture potential mortality losses in a pandemic. This capital charge is in addition to our mortality charges and is designed to capture event risk. To

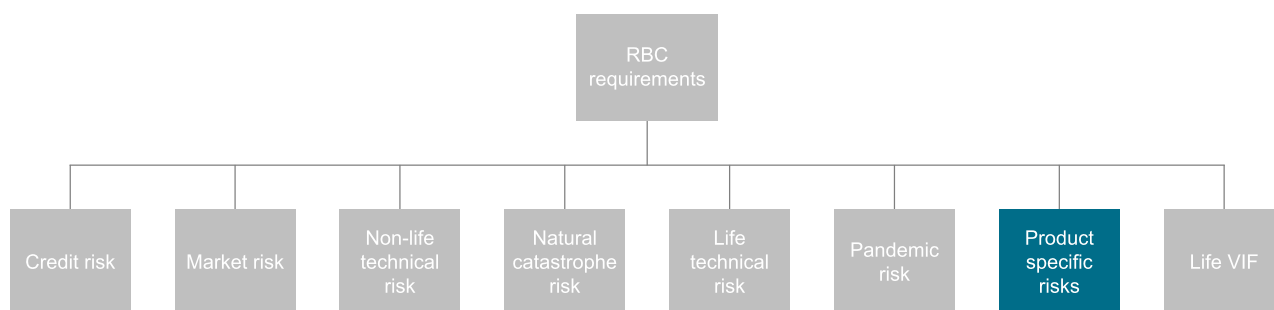
**Criteria Insurance General: Insurer Risk-Based Capital Adequacy--Methodology And Assumptions**

determine the capital charge, we assume 1.5 excess deaths per 1,000 of the insured population at the 99.5% confidence level. We apply this assumption to the same cohort of life insurers used to calibrate our mortality risk charges to determine the amount of excess claims payments. We compare this amount with the NAR and apply factors based on our assumption of a normal distribution to determine the capital charges at each confidence level (see table 29).

Table 29

**Pandemic Risk Capital Charges**

(%)	--Capital charges--			
	99.99%	99.95%	99.8%	99.5%
Net amount at risk	0.084	0.074	0.065	0.058

**Product-Specific Capital Charges**

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**Variable annuities**

We apply capital charges to capture the risks of writing variable annuity (VA) products. Where we determine VAs are material to an insurer's risk profile and the insurer calculates its reserves and regulatory capital requirements using stochastic modeling, we typically use the results of the stochastic modeling, calibrated to our stress scenarios, to determine the capital requirement for VAs. Where an insurer uses conditional tail expectation (CTE) to measure the risk associated with VAs, we use the following CTE levels for our four stress scenarios: 99.75%, 98.75%, 96.5%, and 92%.

Where companies write VAs with living benefit guarantees (usually via riders on top of the base VA policy), we expect the stochastic modeling to calculate the net present value (NPV) of incoming and outgoing cash flows in multiple scenarios that vary in multiple metrics, including:

- Type of rider benefits (such as guaranteed minimum withdrawal benefit and guaranteed minimum income benefit);

**Criteria Insurance General: Insurer Risk-Based Capital Adequacy--Methodology And Assumptions**

- Equity and bond market returns;
- Interest rates;
- Policyholder behavior and mortality;
- Rider fee pricing;
- Hedging policies; and
- Hedging effectiveness.

**Determining Variable Annuity Capital Requirements**

To apply the results from the stochastic modeling, we expect the insurer to run two sets of scenarios to account for hedge effectiveness. The first is a best-effort set of scenarios that assume a fully functioning dynamic hedging program throughout the length of the simulation (which can be very long). The second set is an adjusted set of scenarios that are identical to the best-effort set except for the hedging. The second set assumes the insurer can make use of the hedging contracts and securities on its balance sheet at the start of the simulation but does not allow for future management actions.

The capital charge is the difference between the stressed NPV of cash flows (at the four different stress levels) and the reserves. The stressed NPVs for each stress level are the pretax values from the stochastic simulations. We blend the best-effort and adjusted runs to give up to 80% credit for hedging. For example, if we give 80% credit to hedging and use CTE values to determine stressed losses, the 99.99% charge is:

$$VA_{99.99} = \text{MAX}((0.80 * \text{best-effort@CTE}_{99.75} + 0.20 * \text{adjusted@CTE}_{99.75}) - \text{reserve}, 0)$$

We typically give 80% credit for hedging unless the insurer uses a lower value for regulatory capital purposes. In the U.S., for example, we expect insurers to provide their pretax CTE values for their best-effort and adjusted runs, their statutory reserve, and the E factor, which reflects the accuracy of their modeling. We use the E factor to determine the amount of hedge credit (e.g., if the E factor is 0.3, we typically give 70% hedge credit).

**Capital charges for participating life business in ring-fenced funds**

Where we determine participating life business is written in a ring-fenced fund within a legal entity, we typically exclude the related policyholder capital from TAC and exclude the related assets and liabilities from the inputs we use to determine the risk-category-specific capital requirements. Instead, we assess the residual risk posed by the ring-fenced participating life business to the insurer in stress scenarios.

We usually measure the residual risk as the amount of capital that the insurer may be required to provide to the ring-fenced fund in stress scenarios to ensure liabilities in the ring-fenced fund are met. For insurers that operate more than one ring-fenced fund, we make this assessment for each fund and sum the results at each confidence level.

We generally use regulatory definitions of ring-fenced funds to determine whether participating life business is written in a ring-fenced fund. In the absence of a regulatory definition, we may assess factors such as any relevant legal arrangements, contractual terms, and the organizational structure of an insurer to make our own determination of ring-fencing. Typically, the assets in a ring-fenced fund are restricted and the capital in the fund is available only to absorb losses in the fund.

**Criteria Insurance General: Insurer Risk-Based Capital Adequacy--Methodology And Assumptions**

To determine the residual risk to the insurer from participating life business in ring-fenced funds, we may use regulatory information on the capital adequacy of the fund or equivalent issuer information based on regulatory methodologies. Where we use regulatory information on the capital adequacy of the fund or issuer information based on regulatory methodologies, we expect the regulatory methodology to include the expected value of future discretionary benefits in technical reserves, to capture the value of options and guarantees, to be risk-based, and to be applied at the ring-fenced fund level. We also typically expect the methodology to allow for the impact of management actions in stress scenarios.

Alternatively, we may assess the fund's capital adequacy by comparing our assessment of TAC for the fund (including in this TAC the policyholder capital and up to 50% of the expected value of future discretionary benefits where this is included in regulatory capital) with capital requirements based on our standard risk charges.

The capital requirement for participating life business in ring-fenced funds is the total of any deficiency of capital resources in ring-fenced funds relative to capital requirements at each confidence level.

Where we use regulatory information on the capital adequacy of the fund or issuer information based on regulatory methodologies, we adjust the regulatory capital requirements to align the calibration with our confidence levels, assuming a log-normal distribution. Once we have determined the capital requirements at the 99.5% confidence level, we apply factors of 1.3x, 1.7x, and 2.2x to determine the capital requirements at the 99.8%, 99.95%, and 99.99% confidence levels, respectively. We assume that the ability to apply management actions and share losses with policyholders diminishes as the severity of the stress increases.

Where we determine participating life business in a ring-fenced fund is immaterial, we may include policyholder capital in TAC and include the related assets and liabilities in the inputs we use to determine the risk-category-specific capital requirements. We may also apply this consolidated approach where we determine a ring-fenced fund has insufficient capital resources in the fund relative to capital requirements at all confidence levels.

**Long-term health business with aging reserves**

We apply capital charges to the net aging reserves to capture the potential losses on long-term health insurance products from higher-than-expected morbidity inception rates and lower-than-expected claims termination rates in stress scenarios (see table 30). These unexpected losses could stem from volatility in the level of morbidity rates, volatility around the trend, misestimation of morbidity at policy inception, and lower-than-expected mortality. The capital charges also capture potential losses from lapse, expense, and operational risks.

To develop the capital charges, we applied analytical judgment informed by regulatory calibrations and industry data. We implicitly capture in the capital charges the significant risk-mitigating benefits of the premium adjustment mechanism and diversification within life technical risks. We assume a log-normal distribution to determine the charges at each confidence level.

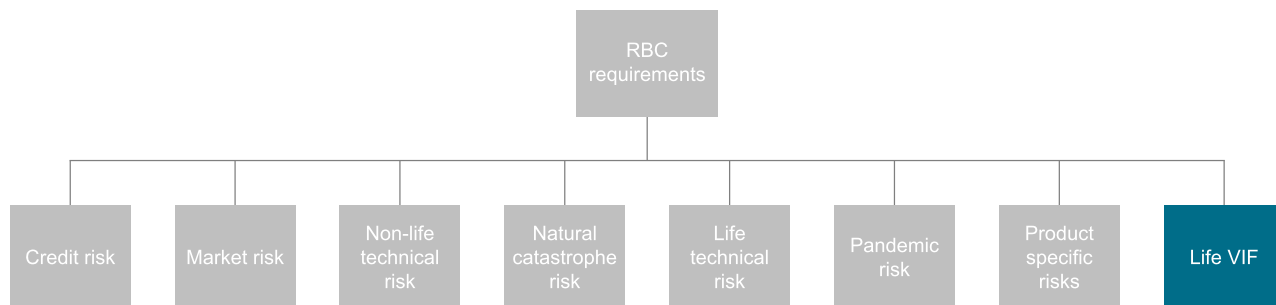
Table 30

**Long-Term Health Business With Aging Reserves Capital Charges**

(%)	--Capital charges--			
	99.99%	99.95%	99.8%	99.5%
Net aging reserves	4.1	3.5	3.0	2.5



## Life Value-In-Force Capital Charge



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We apply capital charges to posttax VIF to capture the potential change in VIF in stress scenarios. The capital requirement is a measure of the potential reduction in the present value of future profits in each of the four stress scenarios.

To determine the capital charges, we primarily analyzed embedded value securitizations to assess advance rates at different stress levels. We also applied analytical judgment, as well as rounding and scaling factors consistent with the general calibration of our capital charges.

We apply the capital charges in table 31 to the elements of VIF that we include in TAC. This includes on- and off-balance-sheet VIF, including the value of life business acquired (or purchased life VIF) and life DAC.

Table 31

### Life Value-In-Force Capital Charges

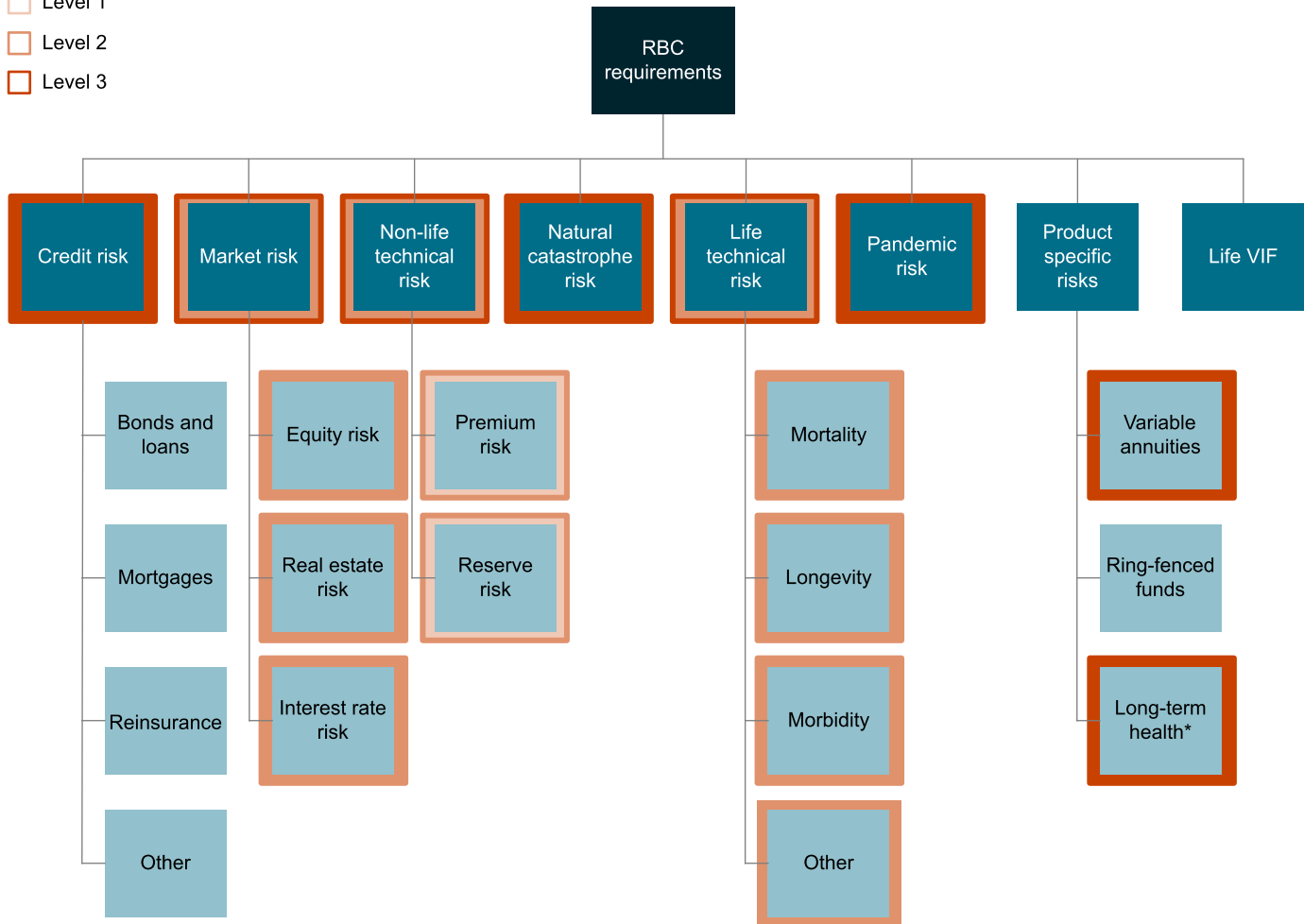
(%)	--Capital charges--			
	99.99%	99.95%	99.8%	99.5%
Value of in-force life business	65	55	45	35

If the elements of VIF that we include in TAC total less than zero, the life VIF capital charge is zero.

## SECTION 4: DIVERSIFICATION

**Diversification: levels 1-3**

- Level 1
- Level 2
- Level 3



\*Long-term health business with aging reserves. Source: S&P Global Ratings.  
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To determine the total RBC requirements, we assess risk dependencies using correlation assumptions between various risk pairings. This explicit diversification credit brings the sum of the capital requirements across each risk to a level commensurate with the defined stress scenarios. We apply correlation assumptions at three levels:

- Level 1 diversification: Within business lines
- Level 2 diversification: Within risk categories
- Level 3 diversification: Between risk categories

To determine the correlation assumptions, we analyzed correlations between risk pairings based on various data sources. The assumptions reflect a combination of our statistical analysis and analytical judgment informed by the assumptions used in different regulatory frameworks. We use a variance-covariance approach that assumes linear correlations.

In setting our assumptions, we assume a diversified risk profile with no significant

**Criteria Insurance General: Insurer Risk-Based Capital Adequacy--Methodology And Assumptions**

concentrations--for example, with respect to correlated sector exposures in assets and liabilities. We do not apply correlation assumptions to capture geographic diversification in the capital model. We apply the same correlation assumptions for all confidence levels but apply haircuts to the absolute amount of diversification at the substantial, severe, and extreme stress scenarios of 10%, 20%, and 30%, respectively. These haircuts reflect our view of uncertainties around tail correlations.

**Level 1 Diversification**

We apply the correlation assumptions in table 32 to capture diversification between non-life premium risk and reserve risk. We group all lines of business on a global basis into seven broad product categories:

- Liability;
- Property;
- Motor;
- Financial;
- Health;
- Marine, aviation, and transport (MAT); and
- Other.

We include mortgage insurance in the financial product category.

We apply the correlation assumptions to the non-life premium and reserve risk capital requirements for each of the seven product categories to determine the diversified capital requirements within each business line (i.e., the sum of premium and reserve risk after diversification).

Table 32

**Non-Life Premium And Reserve Correlation Assumptions At Line Of Business Level**

(%)	Premium	Reserve
Premium	100	75
Reserve	75	100

**Level 2 Diversification**

We apply the correlation assumptions in tables 33-35 to capture product or risk type diversification within the following risk categories:

- Non-life technical risk;
- Life technical risk; and
- Market risk.

We apply the assumptions in table 33 to the diversified capital requirements determined in level 1 for the seven product categories to determine the diversified non-life technical risk capital

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requirements.

Table 33

**Non-Life Technical Risk Correlation Assumptions**

(%)	Liability	Property	Motor	Financial	Health	MAT	Other
Liability	100	50	50	25	50	50	50
Property	50	100	75	25	50	50	50
Motor	50	75	100	25	50	50	50
Financial	25	25	25	100	25	25	50
Health	50	50	50	25	100	50	50
MAT	50	50	50	25	50	100	50
Other	50	50	50	50	50	50	100

MAT--Marine, aviation, transport.

We apply the correlation assumptions in table 34 to the capital requirements for mortality, morbidity, longevity, and other life technical risks. We then add this total to the capital requirements for long-term health business with aging reserves and variable annuities to determine the diversified life technical risk capital requirements.

Table 34

**Life Technical Risk Correlation Assumptions**

(%)	Mortality	Morbidity	Longevity	Other life	Pandemic*
Mortality	100	50	(25)	25	25
Morbidity	50	100	25	25	50
Longevity	(25)	25	100	25	0
Other life	25	25	25	100	25
Pandemic*	25	50	0	25	100

\*Used only to calculate the implied correlation between pandemic and life technical risk capital requirements as applied in table 36.

We apply the correlation assumptions in table 35 to the capital requirements for equity, real estate, and interest rate risk to determine the diversified market risk capital requirements.

Table 35

**Market Risk Correlation Assumptions**

(%)	Equity	Real estate	Interest rate
Equity	100	75	50
Real estate	75	100	50
Interest rate	50	50	100

### Level 3 Diversification

We apply the correlation assumptions in table 36 to capture diversification between risk categories. We apply the assumptions to the capital requirements for credit, natural catastrophe, and pandemic risks (including contingent reinsurance credit risk for both catastrophe and pandemic) and the diversified capital requirements determined in level 2 for market, non-life technical, and life technical risks.

We then add this total to the capital requirements for ring-fenced life funds, life VIF, and other assets to determine diversified capital requirements. We also make the following adjustments to determine total diversified capital requirements:

- We do not give diversification credit for financial lines against credit and market risks.
- We do not give diversification credit for variable annuities against credit and market risks.

Table 36

#### Correlation Assumptions Between Risk Categories

(%)	Market	Credit	Natural catastrophe§	Non-life technical	Life technical	Pandemic§
Market	100	75	25	25	25	75
Credit	75	100	25	25	25	75
Natural catastrophe§	25	25	100	0	0	0
Non-life technical	25	25	0	100	0	25
Life technical	25	25	0	0	100	N/A*
Pandemic§	75	75	0	25	N/A*	100

\*We calculate the implied correlation (IC) between pandemic and life technical risk capital requirement based on the diversified life technical risk capital requirements including pandemic risk. This is calculated by applying the correlation assumptions in table 34 to the capital requirements for mortality, morbidity, longevity, other life technical, and pandemic risks and adding the capital requirements for long-term health business with aging reserves and variable annuities. §Natural catastrophe and pandemic risks are inclusive of contingent reinsurance counterparty risk.

## SECTION 5: APPENDICES

### I. Glossary

Term	Definition
Adjusted non-life net loss reserves	Reported net loss reserves plus or minus related non-life reserve adjustments made in TAC. We assume the adjustment applies proportionally across all lines of business in all countries and regions and exclude adjustments made in TAC related to premium provisions.
Affiliate	An entity that is either a subsidiary or an associate.

## Criteria Insurance General: Insurer Risk-Based Capital Adequacy--Methodology And Assumptions

Term	Definition
Aggregate exceedance probability (AEP) curve	Output from a model that details losses from multiple events and the related attachment probability.
Associate	An entity over which the group parent has significant influence but not control.
<b>Disability product definitions:</b>	
Noncancelable disability income	An individual policy designed to compensate insured individuals for a portion of the income they lose because of a (partial) disabling injury or illness. Benefits are usually paid out as an annuity (monthly or weekly income benefit) and not as a lump sum. There is a fixed end date for the annuity payments in the contract. The policy premiums cannot be changed by the insurer.
Other individual income	Individual policies that provide a weekly or monthly income benefit for up to two years for full or partial disability arising from an accident and/or sickness. Policies other than noncancelable are included in this category.
Group long term	Policies offered through employers or organizations that provide a weekly or monthly income benefit for more than one year for full or partial disability arising from accident and/or sickness.
Group short term	Policies provided through employers or organizations that provide a weekly or monthly income benefit for up to one year for full or partial disability arising from accident and/or sickness.
Credit monthly outstanding balance	Covers the monthly loan or credit payments to the creditor upon the disablement of an insured debtor. Monthly premiums are paid based on the balance of the debt amount.
Credit single premium	Covers the monthly loan or credit payments to the creditor upon the disablement of an insured debtor. A single premium is added to the initial debt balance.
Other disability income	Policies that do not fit into the other categories.
Eligible infrastructure equities	Equity exposures to infrastructure assets that are i) in the operational phase; ii) regulated or contractually protected so that they generate predictable operational cash flows; and iii) part of a diverse infrastructure equity portfolio.
Occurrence exceedance probability (OEP) curve	Output from a model that details losses from individual events and the related attachment probability.
Other equity-like reserves	Other equity-like reserves include the following: <ul style="list-style-type: none"> <li>Contractual service margin (IFRS 17);</li> <li>Risk adjustment (IFRS 17);</li> <li>Excess XXX/AXXX reserves (U.S. statutory);</li> <li>Provision for adverse deviations (PfADs);</li> <li>Excess liability reserves (Japanese GAAP);</li> <li>Equalization reserves;</li> <li>Catastrophe reserves;</li> <li>Contingency reserves;</li> <li>Asset valuation reserves (U.S. statutory); and</li> <li>Interest maintenance reserves (U.S. statutory).</li> </ul>
Regulated operating entities	Entities that are subject to prudential regulation that includes an assessment of the adequacy of their capitalization. We generally regard banks and insurers as entities that are subject to prudential regulation.
Subsidiary	An entity that we determine is controlled by the group parent. Control may be present even if the group owns less than 50% of the entity.

## II. Market Variables

### Overview And Scope

Here S&P Global Ratings provides additional information on the market variables derived from the application of these criteria and used in determining capital requirements. We will periodically update these variables as market conditions warrant.

### Market Variables

#### Credit risk recovery categories

Table 37 lists the typical assets that we include in each recovery category. We use these categories to determine the credit risk capital requirements for bonds and loans in tables 3-6 (for example, we apply table 3 for assets in category 1).

Table 37

#### Credit Risk Recovery Categories

Category	Typical assets
Category 1	Sovereign, local and regional governments (LRGs), and U.S. municipal debt (including multilateral lending institutions)
	Government-related entities (GREs) with an almost certain likelihood of extraordinary government support where we equalize the rating with the relevant sovereign
	Senior secured bonds and loans (corporates, financials, and non-LRG public-sector obligors)
	Infrastructure corporates and project finance (other than subordinated exposures)
	Covered bonds
Category 2	Senior unsecured bonds and loans (corporates, financials, and non-LRG public-sector obligors)
Category 3	Subordinated bonds and loans and preferred stock (corporates, financials, non-LRG public-sector obligors, and infrastructure)
Category 4	Structured finance, including non-agency RMBS, non-agency CMBS, CLO, CDO, ABS, agency RMBS, and agency CMBS

#### Rating input assumptions by sector and economic risk group

We use the rating input assumptions by sector and economic risk group in table 38 for step 4 in chart 4.

Table 38

#### Rating Input Assumptions By Sector And Economic Risk Group For Step 4

Sector	--Economic risk group--									
	1	2	3	4	5	6	7	8	9	10
Sovereign/public finance	A	A	A	A	BBB	BBB	BB	B	B	CCC
Financials	BBB	BBB	BBB	BBB	BBB	BB	BB	B	B	CCC

## Criteria Insurance General: Insurer Risk-Based Capital Adequacy--Methodology And Assumptions

Table 38

## Rating Input Assumptions By Sector And Economic Risk Group For Step 4 (cont.)

Sector	--Economic risk group--									
	1	2	3	4	5	6	7	8	9	10
Nonfinancial corporates	BB	BB	BB	BB	BB	BB	BB	B	B	CCC
Structured finance - senior*	BBB	BBB	BBB	BBB	BBB	BBB	BB	B	B	CCC
Structured finance - mezzanine§	BB	BB	BB	BB	BB	BB	B	CCC	CCC	CCC
Structured finance - junior†	CCC	CCC	CCC	CCC	CCC	CCC	CCC	CCC	CCC	CCC

Notes: We use these portfolio-level credit quality assumptions solely for the purpose of determining the rating input to apply capital charges. See the sector definitions below. \*Includes the seniormost tranche of a securitization. §Includes all tranches between the senior and junior tranches. †Includes the juniormost debt tranche of a securitization (and any equity tranche). We typically include all tranches of resecuritizations, such as CLO combo notes, in this category.

We use the following sector definitions:

**Sovereigns and public finance.** This sector includes sovereign governments, international public finance (IPF), and U.S. public finance (USPF). The IPF sector includes local and regional governments (LRGs), such as states, provinces, regions, cities, towns, or oblasts, and non-LRGs, such as non-U.S. universities, hospital systems, transportation systems, and housing providers. USPF includes state government general obligations, local government, utilities, housing, higher education, health care, transportation, and charter schools.

**Financials.** This sector includes banks, nonbank financial institutions (NBFIs), and insurers. Banks includes savings and loans and credit unions. NBFIs include broker-dealers, asset managers, finance companies, financial market infrastructure companies, and other financial entities that share some common features. Insurers includes life insurers, health insurers, non-life insurers, reinsurers, bond insurers, mortgage insurers, and title insurers. We also include covered bonds in financials.

**Nonfinancial corporate.** This sector includes aerospace/automotive/capital goods/metals, consumer/service, energy and natural resources, forest and building products/homebuilders, health care/chemicals, high technology/computers/office equipment, leisure time/media, real estate, telecommunications, transportation, and utilities. We also include infrastructure (both corporate and project finance).

**Structured finance.** This sector includes residential mortgage-backed securities (RMBS), commercial mortgage-backed securities (CMBS), asset backed securities (ABS), structured credit, and single-name synthetics. RMBS includes transactions backed by subprime mortgage loans, as well as home equity loan transactions and real estate mortgage investment conduits (re-REMICS). CMBS also includes re-REMICS, as well as some collateralized debt obligations (CDOs) primarily collateralized by commercial real estate loans. ABS includes underlying collateral types such as credit card receivables, student loans, auto loans and leases, manufactured housing, franchise loans, 12b-1 transactions, and corporate securitizations. Structured credit includes collateralized loan obligations, both cash and synthetic CDOs backed by exposures to corporate credit or other structured finance securities, and market-value CDOs and other leveraged funds. We also include transactions backed by loans to small and midsize enterprises in the structured credit sector. Single-name synthetic transactions are also referred to as repackaged transactions (or "repacks"), especially in Europe. The definition of a repack in this instance is an issue backed by a



**Criteria Insurance General: Insurer Risk-Based Capital Adequacy--Methodology And Assumptions**

single credit, where the rating on the note is directly linked to that on the underlying credit.

**Equity market groups by country**

We use the allocation of countries by equity market group in table 39 for the purposes of determining the equity risk capital requirements (see table 14).

Table 39

**Equity Market Groups By Country**

Equity market group	Countries
1	Switzerland, U.K., U.S.
2	Australia, Austria, Belgium, Canada, Chile, Colombia, Denmark, France, Germany, Hong Kong, Israel, Italy, Japan, Mexico, Netherlands, New Zealand, Norway, Portugal, Singapore, South Korea, Spain, Sweden
3	Bahrain, Brazil, China, Czech Republic, Finland, Hungary, India, Ireland, Kuwait, Latvia, Lithuania, Luxembourg, Malaysia, Malta, Poland, Qatar, Saudi Arabia, Slovakia, Slovenia, South Africa, Taiwan, Turkey, UAE
4	Other world
Infrastructure - category 1*	Australia, Canada, Chile, EU, Hong Kong, Israel, Japan, Malaysia, New Zealand, Norway, Switzerland, Singapore, South Korea, Taiwan, U.K., U.S.
Infrastructure - category 2*	Other world

\*Eligible infrastructure equities (see glossary).

**Real estate groups by country**

We use the allocation of countries by real estate group in table 40 for the purposes of determining the real estate risk capital requirements (see table 15).

Table 40

**Real Estate Groups By Country**

Real estate group	Countries
1	Germany, Japan, Switzerland
2	Australia, New Zealand, Taiwan, other Europe
3	Canada, China, U.S.
4	Spain, U.K., other world

**Interest rate risk categories by country**

We use the allocation of countries by interest rate risk category in table 41 for the purposes of determining the relevant yield stress assumption for each currency (see table 16).

**Criteria Insurance General: Insurer Risk-Based Capital Adequacy--Methodology And Assumptions**

Table 41

**Yield Stress Categories By Country**

Category	Countries
Category 1	Japan
Category 2	N/A*
Category 3	Canada, China, Hong Kong, Norway, Singapore, Sweden, Switzerland, Taiwan
Category 4	Australia, Chile, Czech Republic, Denmark, Eurozone, GCC states, India, Israel, Malaysia, Mexico, New Zealand, South Africa, South Korea, Thailand, U.K., U.S.
Category 5	Brazil, Colombia, Kazakhstan, Poland, Russia

Notes: For any country not listed, we typically use the sovereign foreign currency rating to determine the relevant category. If the sovereign foreign currency rating is 'BBB-' or higher, we typically include the country in category 4. If the sovereign foreign currency rating is 'BB+' or lower (or unrated), we typically include the country in category 5. \*No countries are currently assigned to this category.

**Duration mismatch assumption grouping by country (life insurers)**

For life insurers, we use the allocation of countries by duration mismatch group in table 42 for the purposes of determining the relevant duration mismatch assumption for each country (see table 17).

Table 42

**Duration Mismatch Assumption Groups By Country (Life)**

Group	Countries
Group A*	Australia, Canada, New Zealand, Portugal, Spain, U.K., U.S.
Group B	Belgium, France, Italy, Kazakhstan, South Africa, Switzerland
Group C	Czech Republic, Gulf Cooperation Council states, Hong Kong, Mexico, Netherlands, Singapore
Group D	Austria, Brazil, Chile, Colombia, Germany, Israel, Malaysia, Nordics, Poland, Slovenia
Group E	Japan, South Korea, Taiwan
Group F§	China, India, Thailand

Note: Any country not listed is typically included in group F. \*We include long-term health business with aging reserves and unit-linked products with investment guarantees in group A. §We include U.S. long-term care in group F.

**Natural catastrophe risk: industry average catastrophe loss and expense ratios**

For the purposes of determining the catastrophe-related premium under steps 1 and 2, we use an industry average catastrophe loss ratio of 50% and an industry average expense ratio of 30%.

**Mortality/morbidity risk: highly developed life markets**

For the purposes of determining capital requirements for mortality and morbidity risk, we define highly developed life markets as: Australia, Austria, Belgium, Canada, Chile, Cyprus, Czech Republic, Denmark, Finland, France, Germany, Greece, Hong Kong, Hungary, Ireland, Israel, Italy,

**Criteria Insurance General: Insurer Risk-Based Capital Adequacy--Methodology And Assumptions**

Japan, Liechtenstein, Luxembourg, Macao, Malta, the Netherlands, New Zealand, Norway, Poland, Portugal, Singapore, Slovakia, Slovenia, South Korea, Spain, Sweden, Switzerland, Taiwan, the U.K., and the U.S. We define the life insurance market in all other countries as less developed.

**CHANGES FROM PREVIOUS CRITERIA**

The criteria incorporate changes that improve our ability to differentiate risk, enhance the global consistency of our methodology, and improve the transparency and usability of our methodology. These criteria supersede 10 criteria articles that we used to assess an insurer's capital adequacy. We maintain separate capital adequacy criteria only for assessing bond insurers. However, these changes affect the assessment of TAC and asset-related risks for bond insurers.

More specifically, the changes to TAC relative to our previous criteria are:

- Revising our calculation of TAC to reduce complexity and align with changes to our measure of an insurer's RBC requirements, including i) removing various haircuts to liability adjustments (such as non-life reserve surpluses and allowing for up to 100% credit for life value-in-force), ii) not deducting non-life deferred acquisition costs, iii) updating our approach to non-life reserve discounting, and iv) updating, simplifying, and clarifying the approach to unconsolidated insurance subsidiaries, noninsurance subsidiaries, associates, and other affiliates;
- Revising our methodology for including hybrid capital and debt-funded capital in TAC--although there are no changes to our hybrid capital criteria--by i) updating the principles for determining the eligibility of debt-funded capital in TAC, ii) aligning globally the hybrid capital and debt-funded capital tolerance limits, and iii) introducing a new metric (adjusted common equity, or ACE) to be used in determining the amount of hybrid capital and debt-funded capital that is eligible for inclusion in TAC;
- Clarifying how we adjust equity for life insurers when there is a mismatch between the balance-sheet valuation of assets and liabilities;
- Updating our treatment of certain equity-like reserves to enhance global consistency;
- Using a narrower definition of policyholder capital that is eligible for inclusion in TAC, clarifying our treatment of unrealized investment gains on participating business, and making enhancements to our criteria for assessing risks relating to ring-fenced participating business;
- Consolidating the separate criteria articles, as well as updating the analytical principles, relating to property/casualty loss reserves and U.S. life insurance reserves; and
- Clarifying that adjustments to determine TAC are net of the related tax impact (unless otherwise stated), and all capital requirements are pretax.

The changes to RBC requirements relative to our previous criteria are:

- More explicitly capturing the benefits of risk diversification in RBC requirements by revising the confidence levels that we use to calibrate risk charges to 99.5%, 99.8%, 99.95%, and 99.99% from 97.2%, 99.4%, 99.7%, and 99.9%, respectively, and updating correlation assumptions and adding risk pairings;
- Updating capital charges for almost all risks based on the revised confidence levels and incorporating recent data and experience;
- Using a single set of charges for each risk with country- or region-specific charges as warranted to reduce complexity and enhance global consistency in the treatment of similar

**Criteria Insurance General: Insurer Risk-Based Capital Adequacy--Methodology And Assumptions**

risks;

- Removing the potential adjustment to the capital model output resulting from our review of insurers' economic capital models (the "M factor") because of changes to these criteria, such as the update to our approach to assessing interest rate risk to better capture an insurer's risk exposures;
- Changing our methodology for determining credit risk charges on bonds (and certain other credit assets) to capture only unexpected losses, rather than total losses;
- Increasing risk differentiation in our credit risk capital requirements for bonds and loans to capture i) variations in loss given default based on sector, creditor ranking, and collateral features and ii) differences in potential losses for structured finance assets, compared with assets in other sectors based on our correlation and recovery assumptions;
- Introducing globally consistent assumptions for determining the rating input for bonds and loans to better differentiate risk;
- Enhancing global consistency in assessing capital requirements for residential and commercial mortgage-backed securities and mortgage loans;
- Updating our methodology for assessing interest rate risk to enhance global consistency, better capture an insurer's risk exposures, and increase risk differentiation in our interest rate stress assumptions by country, as well as i) use liabilities as the exposure measure for life and non-life liabilities in all countries, ii) enable use of company-specific inputs under certain conditions, iii) apply an assumption based on the mean term of non-life liabilities to measure the duration mismatch for non-life business, and iv) reduce the risk of understating capital requirements by introducing floors in our mismatch assumptions and limiting the ability to offset losses in one business segment with gains in another segment;
- Increasing risk differentiation in our equity risk capital requirements by introducing explicit risk charges for exposures to eligible infrastructure equities;
- Aligning our methodology for life technical risks (in particular, longevity, lapse, expense, and operational risks) across all countries, along with introducing additional risk differentiation for assessing the extent of longevity risk embedded in certain products;
- Introducing explicit capital requirements to capture morbidity risks on disability and long-term care products outside the U.S.;
- Revising the conditional tail expectation (CTE) levels we use to determine capital requirements for variable annuities (VAs), consistent with the updates to our confidence levels, and increasing the amount of credit we include for VA hedging to up to 80% from 50%;
- Introducing capital charges to capture pandemic risk and contingent counterparty credit risk relating to reinsured catastrophe exposures;
- Replacing the flat one-in-250-year posttax property catastrophe capital charge with a pretax natural catastrophe (i.e., across all non-life business lines) capital requirement that varies from one-in-200 to one-in-500 years at different stress scenarios;
- Enhancing consistency in assessing liability-related risks by aligning the treatment of mortgage insurance, trade credit insurance, and title insurance with other non-life business lines;
- Introducing a scaled risk charge on life value-in-force (VIF) to capture the potential change in VIF in stress scenarios (this change is related to including up to 100% of life VIF in TAC);

**Criteria Insurance General: Insurer Risk-Based Capital Adequacy--Methodology And Assumptions**

- Removing explicit capital charges for convexity risk and regulatory closed blocks in the U.S.;
- Removing capital charges for assets under management and deducting the investment in asset management businesses to determine TAC to increase the consistency of our approach to noninsurance businesses; and
- Clarifying that we make company-specific adjustments only where they are material to our analysis.

**IMPACT ON OUTSTANDING RATINGS**

We believe that, based on our testing and assuming entities in scope of these criteria maintain their credit risk characteristics, the criteria could lead to credit rating actions on about 10% of ratings in the insurance sector. The potential ratings impact is based on our testing assumptions. We estimate the majority of rating changes would be by one notch, with more upgrades than downgrades.

We expect these criteria to have a more material impact on our capital and earnings assessment, with changes in this key rating factor for up to 30% of insurers. These score changes could affect up to 20% of stand-alone credit profiles. The lower potential impact on ratings compared with components of our ratings reflects the application of the insurance ratings framework, our group rating methodology, and sovereign rating constraints.

We anticipate potential improvements in capital adequacy for some insurers, primarily due to capturing diversification benefits more explicitly and due to increases in TAC, owing to the removal of various haircuts to liability adjustments and not deducting non-life deferred acquisition costs (DAC).

On the other hand, some insurers could face declines in capital adequacy because of factors including changes to our methodology for including hybrid capital and debt-funded capital in TAC, as well as the recalibration of our capital charges to higher confidence levels.

We expect the criteria to have limited, if any, impact on issuer credit ratings or issue credit ratings on banks that own insurance companies. The criteria will likely lead to changes in the risk-adjusted capital (RAC) ratios for some of these banks, due to expected changes in the capital adequacy of their insurance subsidiaries.

**RELATED PUBLICATIONS****Fully Superseded Criteria**

- Methodology: Treatment Of U.S. Life Insurance Reserves And Reserve Financing Transactions, March 12, 2015
- Methodology: Mortgage Insurer Capital Adequacy, March 2, 2015
- Methodology For Assessing Capital Charges For U.S. RMBS And CMBS Securities Held By Insurance Companies, Aug. 29, 2014
- Trade Credit Insurance Capital Requirements Under S&P Global Ratings' Capital Adequacy Model, Dec. 6, 2013
- Assessing Property/Casualty Insurers' Loss Reserves, Nov. 26, 2013

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- Methodology: Capital Charges For Regulatory Closed Blocks Under S&P Global Ratings' Capital Model Framework, Oct. 31, 2013
- Methodology For Assessing Capital Charges For Commercial Mortgage Loans Held By U.S. Insurance Companies, May 31, 2012
- Methodology For Calculating The Convexity Risk In U.S. Insurance Risk-Based Capital Model, April 27, 2011
- A New Level Of Enterprise Risk Management Analysis: Methodology For Assessing Insurers' Economic Capital Models, Jan. 24, 2011
- Refined Methodology And Assumptions For Analyzing Insurer Capital Adequacy Using The Risk-Based Insurance Capital Model, June 7, 2010

**Retired Guidance**

- Guidance: Methodology For Calculating The Convexity Risk In U.S. Insurance Risk-Based Capital Model, March 2, 2018

**Related Criteria**

- Hybrid Capital: Methodology And Assumptions, March 2, 2022
- Banking Industry Country Risk Assessment Methodology And Assumptions, Dec. 9, 2021
- Group Rating Methodology, July 1, 2019
- Insurers Rating Methodology, July 1, 2019
- Methodology And Assumptions For Analyzing Bond Insurance Capital Adequacy, July 1, 2019
- Principles Of Credit Ratings, Feb. 16, 2011

**Related Guidance**

- Guidance: Insurers Rating Methodology, July 1, 2019

**Related Sector And Industry Variables Reports**

- Sector And Industry Variables: Banking Industry Country Risk Assessment (see "Table of Contents: S&P Global Ratings Financial Institutions Criteria" for the current version)

**Other Related Publications**

- Insurer Risk-Based Capital Adequacy Criteria Published, Nov. 15, 2023
- RFC Process Summary: Insurer Risk-Based Capital Adequacy--Methodology And Assumptions, Nov. 15, 2023
- Human Mortality Database (University of California, Berkeley), <https://www.mortality.org>

**Criteria Insurance General: Insurer Risk-Based Capital Adequacy--Methodology And Assumptions**

- Max Planck Institute for Demographic Research (Germany), <https://www.humanmortality.de>

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This report does not constitute a rating action.

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## GEOGRAPHIC CONCENTRATION AD HOC SUBGROUP

February 14, 2024

Agenda

- Hear Feedback from the Members Regarding Previous Presentations
- Discuss Next Steps—*Wanchin Chou (CT)*
- Discuss Any Other Matters—*Wanchin Chou (CT)*

Chou said the Ad Hoc Subgroup heard different presentations on how the states and the rating agencies monitor and measure the geographic concentration risks. He said he likes to: 1) hear feedback from the Ad Hoc Subgroup members; and 2) discuss how to report back to the risk evaluation ad hoc group.

Virginia Christy (FL) said the AM Best presentation was thorough and answered some of the state insurance regulators' questions. Tom Botsko (OH) said he would like to hear thoughts from the groups on the following: 1) how to address the geographic concentration issue on single-line and single-state companies; 2) whether to make adjustments in the risk-based capital (RBC) formula for a concentration load; and 3) whether to pass this issue on to the Financial Analysis (E) Workingoup.

David Traugott (Academy) asked what special treatment monoline or single-state insurers need in RBC that is not already covered by the Rcat component. Botsko said that is part of the data review he plans to do to determine if it goes beyond the catastrophe component. Chou said the Ad Hoc Subgroup should consider asking the American Academy of Actuaries (Academy) for assistance on the data analysis.

Stewart Guerin (LA) said companies in Louisiana that went into receivership were licensed in multiple states. He also thought that the geographic concentration risk was a data issue. There is nothing in the annual statement about the geographic concentration risk within a particular state. For instance, there is nothing in the Louisiana companies' annual statement to indicate that companies are writing a predominant part of their business in the New Orleans area. Guerin also suggested data gathering, such as adding a question in the RBC formula, which will provide state insurance regulators with a better understanding of the company's geographic concentration risk and the ability to take proactive measures if necessary.

Traugott said the company's catastrophe model could be underestimated. Christy said she would share Florida Quasar Data, which is Florida reinsurance data call information, with the state insurance regulators regarding not only the data collected from domestic companies but also any insurers writing business in Florida. Edward Toy (Risk & Regulatory Consulting, LLC) said if any information from AM Best would be helpful to this discussion, he could pass that along to Paul Brown (AM Best).

Chou said the Ad Hoc Subgroup plans to complete the following items before passing them along to the risk evaluation ad hoc group: 1) performing data analysis to determine whether this issue goes beyond the catastrophe component in RBC; 2) reviewing the Florida and Louisiana monitoring tools to gain a better

## GEOGRAPHIC CONCENTRATION AD HOC SUBGROUP

understanding of how to address this issue properly; and 3) reviewing AM Best's information to determine whether additional information is needed for further discussion.

DRAFT

## GEOGRAPHIC CONCENTRATION AD HOC SUBGROUP

**March 6, 2024**

**Agenda**

- Receive a Recap from its Last Meeting—*Wanchin Chou (CT)*
- Discuss its Next Steps—*Wanchin Chou (CT)*
- Discuss Any Other Matters—*Wanchin Chou (CT)*

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Chou said that in the past few months, the Ad Hoc Subgroup heard several presentations from different rating agencies as well as the Florida and Louisiana Departments of Insurance (DOIs) on how they measure the geographic concentration issue. He stated that the Ad Hoc Subgroup received valuable feedback on these presentations.

Chou said he believed that the Ad Hoc Subgroup completed the initial step, which was gathering the needed information for further review. He said he plans to share the findings with the Capital Adequacy (E) Task Force at the Spring National Meeting. Botsko agreed that this item will be discussed by the Capital Adequacy (E) Task Force during the Spring National Meeting. He said any outstanding issues will be forwarded to the Catastrophe Risk (E) Subgroup for further investigation. Botsko also anticipated that the Geographic Concentration Ad Hoc Subgroup and the Risk-Based Capital (RBC) Purposes and Guidelines Ad Hoc Subgroup will be disbanded at the Spring National Meeting. The Asset Concentration Ad Hoc Subgroup will likely disband shortly after the Spring National Meeting. In addition, Botsko stated that all outstanding issues will be prioritized and forwarded to different Working Groups or Subgroups for further discussion.

## Capital Adequacy (E) Task Force

### RBC Proposal Form

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|---|---|---|
| <input type="checkbox"/> Capital Adequacy (E) Task Force                      | <input type="checkbox"/> Health RBC (E) Working Group         | <input type="checkbox"/> Life RBC (E) Working Group                         |
| <input checked="" type="checkbox"/> Catastrophe Risk (E) Subgroup             | <input checked="" type="checkbox"/> P/C RBC (E) Working Group | <input type="checkbox"/> Longevity Risk (A/E) Subgroup                      |
| <input type="checkbox"/> Variable Annuities Capital. & Reserve (E/A) Subgroup | <input type="checkbox"/> Economic Scenarios (E/A) Subgroup    | <input type="checkbox"/> RBC Investment Risk & Evaluation (E) Working Group |

	<b>DATE: <u>September 20, 2023</u></b>																																				
<b>CONTACT PERSON:</b> <u>Jake Stultz</u> <b>TELEPHONE:</b> _____ <b>EMAIL ADDRESS:</b> <u>jstultz@naic.org</u> <b>ON BEHALF OF:</b> <u>Reinsurance (E) Task Force</u> <b>NAME:</b> <u>John Rehagen (Chair)</u> <b>TITLE:</b> <u>Director, Insurance Company Regulation</u> <b>AFFILIATION:</b> <u>Missouri DCI</u> <b>ADDRESS:</b> <u>P.O. Box 690</u> <u>Jefferson City, MO 65102</u>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th colspan="2" style="text-align: center;">FOR NAIC USE ONLY</th> </tr> <tr> <td>Agenda Item #</td> <td><u>2023-13-CR</u></td> </tr> <tr> <td>Year</td> <td><u>2024</u></td> </tr> <tr> <th colspan="2" style="text-align: center;">DISPOSITION</th> </tr> <tr> <td colspan="2"><b>ADOPTED:</b></td> </tr> <tr> <td><input type="checkbox"/> TASK FORCE (TF)</td> <td>_____</td> </tr> <tr> <td><input type="checkbox"/> WORKING GROUP (WG)</td> <td>_____</td> </tr> <tr> <td><input type="checkbox"/> SUBGROUP (SG)</td> <td>_____</td> </tr> <tr> <td colspan="2"><b>EXPOSED:</b></td> </tr> <tr> <td><input type="checkbox"/> TASK FORCE (TF)</td> <td>_____</td> </tr> <tr> <td><input checked="" type="checkbox"/> WORKING GROUP (WG)</td> <td><u>12/02/2023</u></td> </tr> <tr> <td><input checked="" type="checkbox"/> SUBGROUP (SG)</td> <td><u>12/02/2023</u></td> </tr> <tr> <td colspan="2"><b>REJECTED:</b></td> </tr> <tr> <td><input type="checkbox"/> TF <input type="checkbox"/> WG <input type="checkbox"/> SG</td> <td>_____</td> </tr> <tr> <td colspan="2"><b>OTHER:</b></td> </tr> <tr> <td><input type="checkbox"/> DEFERRED TO</td> <td>_____</td> </tr> <tr> <td><input type="checkbox"/> REFERRED TO OTHER NAIC GROUP</td> <td>_____</td> </tr> <tr> <td><input type="checkbox"/> (SPECIFY)</td> <td>_____</td> </tr> </table>	FOR NAIC USE ONLY		Agenda Item #	<u>2023-13-CR</u>	Year	<u>2024</u>	DISPOSITION		<b>ADOPTED:</b>		<input type="checkbox"/> TASK FORCE (TF)	_____	<input type="checkbox"/> WORKING GROUP (WG)	_____	<input type="checkbox"/> SUBGROUP (SG)	_____	<b>EXPOSED:</b>		<input type="checkbox"/> TASK FORCE (TF)	_____	<input checked="" type="checkbox"/> WORKING GROUP (WG)	<u>12/02/2023</u>	<input checked="" type="checkbox"/> SUBGROUP (SG)	<u>12/02/2023</u>	<b>REJECTED:</b>		<input type="checkbox"/> TF <input type="checkbox"/> WG <input type="checkbox"/> SG	_____	<b>OTHER:</b>		<input type="checkbox"/> DEFERRED TO	_____	<input type="checkbox"/> REFERRED TO OTHER NAIC GROUP	_____	<input type="checkbox"/> (SPECIFY)	_____
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#### IDENTIFICATION OF SOURCE AND FORM(S)/INSTRUCTIONS TO BE CHANGED

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| <input type="checkbox"/> OTHER _____             |  |  |

#### DESCRIPTION/REASON OR JUSTIFICATION OF CHANGE(S)

Given the recent catastrophe-related insolvencies and increasing cost of CAT reinsurance coverage, state insurance regulators have identified a need to collect additional detail from insurers on the structure of their catastrophe reinsurance program on an annual basis. As such information could be viewed as confidential and proprietary, and as it is closely related to the existing PR027 RCAT charge in Property/Casualty RBC, the collection of additional information on an insurer's catastrophe reinsurance program is being proposed through a series of questions added to the PR027 Catastrophe Risk Interrogatories included in the RBC Blanks.

#### Additional Staff Comments:

The RBC Blanks proposal has been developed, exposed for public comment and discussed in detail through the meetings of the Reinsurance (E) Task Force to ensure that it meets regulatory needs and is fit for purpose.

**\*\* This section must be completed on all forms.**

**Revised 2-2023**

**INTERROGATORY ON CATASTROPHE RISK REINSURANCE PROGRAM PR027 (This interrogatory is for all natural catastrophe perils, and is not limited to earthquake, hurricane and wildfire.)**

(1) Provide a narrative description of the natural catastrophe reinsurance program in place at the insurer, by peril where appropriate, including but not limited to:

(1a) Traditional reinsurance coverage in place (e.g., aggregate excess of loss, aggregate stop loss) and layers thereof, attachment points, participating reinsurers (affiliated/not affiliated), exhaustion limits, capacity for each category of risk transfer, information on existing quota share and related attachment points, reinstatement provisions, etc.

[Redacted]

(1b) Non-traditional alternatives to reinsurance (e.g., catastrophe bonds and other insurance-linked securities, sidecars, parametric coverage, weather derivatives, etc.)

[Redacted]

(2) Provide a graphical representation of the catastrophe reinsurance program (i.e., structure chart or reinsurance tower) in place at the insurer, by peril where appropriate. Please include any relevant data that is requested in Question (1a) above.

[Redacted]

(3)  
Y/N

(3) Have there been any significant changes in the reinsurance program structure from the prior year (Y/N)

[Redacted]

(3a) Describe any significant changes from the prior year:

[Redacted]

(4) Provide the annual program renewal date(s):

	(4a) Reinsurance Treaty	(4b) Begin Date	(4c) End Date
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TO: Tom Botsko, Chair of the Property and Casualty Risk-Based Capital (E) Working Group

FROM: John Rehagen, Acting Chair of the Reinsurance (E) Task Force

RE: 2023 Due Diligence Review of Qualified Jurisdictions & Reciprocal Jurisdictions

DATE: November 16, 2023

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### **Executive Summary & Recommendation**

At the 2023 Summer National Meeting call of the Reinsurance (E) Task Force, it was noted that a project had been started by NAIC staff to create a new disclosure to collect more information of insurers catastrophe reinsurance programs. For background, with the recent catastrophe-related insolvencies in the market and increasing cost of CAT reinsurance coverage, state insurance regulators have identified a need to collect additional detail from insurers on the structure of their catastrophe reinsurance program and any changes from the prior year on an annual basis. As such information could be viewed as confidential and proprietary, and as it is closely related to the existing PR027 RCAT charge in Property/Casualty RBC, the collection of additional information on an insurer's catastrophe reinsurance program is being proposed through a series of questions added to the PR027 Catastrophe Risk Interrogatories included in the RBC Blanks.

The first draft of the proposed new disclosure was exposed for comments on Sept. 21, and two comment letters were received. As a result of the comment letters, NAIC staff made changes to their draft document, which is included in this referral, and recommend that the Property and Casualty Risk-Based Capital (E) Working Group use that as their working document going forward. All these documents are included as attachments to this referral.

We recommend that the Property and Casualty Risk-Based Capital (E) Working Group expose the updated working copy of the proposal at its during the Fall National Meeting. Reinsurance (E) Task Force members and staff support will be available to assist with any questions during this process.





January 30, 2024

Mr. Wanchin Chou, Chair  
Catastrophe Risk (E) Subgroup  
National Association of Insurance Commissioners  
c/o Eva Yeung  
Via email: [EYeung@naic.org](mailto:EYeung@naic.org)

**Re: Joint Trades Comments Regarding RBC Reinsurance Program Interrogatory**

Dear Mr. Chou:

Thank you for the opportunity to comment on the proposed P&C Risk-Based Capital Interrogatory (the proposal), which is intended to collect additional detail from insurers on the structure of their natural catastrophe reinsurance program, including any changes from the prior year. This letter is submitted on behalf of the American Property Casualty Insurance Association (APCIA), the National Association of Mutual Insurance Companies (NAMIC) and the Reinsurance Association of America (RAA).

APCIA is the primary national trade association for home, auto, and business insurers. APCIA promotes and protects the viability of private competition for the benefit of consumers and insurers, with a legacy dating back 150 years. APCIA members represent all sizes, structures, and regions – protecting families, communities, and businesses in the U.S. and across the globe.

NAMIC consists of more than 1,500 member companies, including seven of the top ten property/casualty insurers in the United States. The association supports local and regional mutual insurance companies on main streets across America as well as many of the country's largest national insurers. NAMIC member companies write \$357 billion in annual premiums and represent 69 percent of homeowners, 56 percent of automobile, and 31 percent of the business insurance markets. Through its advocacy programs NAMIC promotes public policy solutions that benefit member companies and the policyholders they serve and fosters greater understanding and recognition of the unique alignment of interests between management and policyholders of mutual companies.

The RAA is a national trade association representing reinsurance companies doing business in the United States. RAA membership is diverse, including reinsurance underwriters and intermediaries licensed in the U.S. and those that conduct business on a cross-border basis. The RAA also has life reinsurance affiliates and insurance-linked securities (ILS) fund managers and market participants that are engaged in the assumption of property/casualty risks. The RAA represents its members before state, federal and international bodies.

We appreciate and support insurance regulators' need to understand insurers' natural catastrophe risk exposure and the reinsurance programs designed to mitigate these risks. We also appreciate that the proposal is designed as an RBC interrogatory to ensure its confidentiality. Finally, we welcome the changes made to the original proposal by the Reinsurance (E) Task Force upon its referral to the Catastrophe Risk (E) Subgroup. In response to our attached original comment letter, the Reinsurance (E) Task Force allowed reporting at the group level, conditioned the mandatory reinsurance tower graphic, clarified the scope to include any insurer with material natural catastrophe risk, and eliminated some detail in the mandatory disclosures.

We do note however that the NAIC has not adopted all of our recommendations and we respectfully request that these be considered prior to final adoption of the proposal. We believe the following additional amendments to the proposal will enhance state regulators' ability to identify insurers with significant catastrophe risk exposure or over-reliance on reinsurance, will focus industry disclosures on material risks and will eliminate unnecessary compliance costs. As a result, we believe our recommendations will enhance regulatory efficiency and improve solvency regulation.

#### Material Perils:

The revised proposal still applies to all natural catastrophe perils with no mention of materiality. As noted in our original comments, the proposal is inconsistent with the Reinsurance Task Force's aim to obtain information similar to what public companies report for these exposures. Consistent with GAAP and SEC reporting rules, public entities report only on material perils. Recognizing that insurance regulators' purposes are different than users of public company financial statements, we continue to believe that not limiting the disclosure to material perils will unnecessarily increase compliance costs and will not provide useful information to state insurance regulators.

#### Redefining the Scope:

In accord with our recommendations last year, the Reinsurance Task Force expanded the scope beyond only entities subject to RCat. However, the Task Force did not address our recommendation to limit the scope to insurers or insurance groups with significant catastrophe risk net of reinsurance. We continue to believe that a more focused, objective, and available scope criteria would better direct this requirement toward insurers facing increased solvency risk as a result of exposure to natural catastrophe perils or of over-reliance on reinsurance of those perils. In our attached original comments, we proposed two alternative scoping methods for the NAIC to consider. The scope criteria is available in the existing Annual Statement and RBC filings and would both limit unnecessary compliance costs for the industry and would focus state regulators' limited resources where they are most needed.

Thank you again for the opportunity to provide these comments. We look forward to further engagement on this proposal.

Sincerely,

Joseph B. Sieverling, SVP and Director of Financial Services  
Reinsurance Association of America

Matthew Vece, Director, Financial & Tax Counsel  
American Property Casualty Insurance Association

Colleen W. Scheele, Public Policy Counsel and Director of Financial and Tax Policy  
National Association of Mutual Insurance Companies

Attachment



November 7, 2023

John Rehagen, Chair  
Reinsurance (E) Task Force  
National Association of Insurance Commissioners  
c/o Jake Stultz and Dan Schelp  
Via email: [jstultz@naic.org](mailto:jstultz@naic.org) and [dschelp@naic.org](mailto:dschelp@naic.org)

**Re: Joint Trades Comments Regarding RBC Reinsurance Program Interrogatory**

Dear Mr. Rehagen:

Thank you for the opportunity to comment on the proposed P&C Risk-Based Capital Interrogatory (the proposal), which is intended to collect additional detail from insurers on the structure of their natural catastrophe reinsurance program, including any changes from the prior year. This letter is submitted on behalf of the American Property Casualty Insurance Association (APCIA), the National Association of Mutual Insurance Companies (NAMIC) and the Reinsurance Association of America (RAA).

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The RBC proposal form provided the following justification for the proposal:

*Given the recent catastrophe-related insolvencies and increasing cost of CAT reinsurance coverage, state insurance regulators have identified a need to collect additional detail from insurers on the structure of their catastrophe reinsurance program on an annual basis.*

We fully appreciate and support insurance regulators' need to understand insurers' natural catastrophe risk exposure and the reinsurance programs designed to mitigate these risks. We also appreciate that the proposal is designed as an RBC interrogatory to ensure its confidentiality. After reviewing the proposal and discussing it with our members, we had a number of questions about the purpose of the proposal, its scope, and whether its proposed format would provide useful information to state regulators. To address these questions and ensure our comments are fully informed and useful, we held conversations with a member of the Task Force and several NAIC staff. Following is a brief summary of a few of the questions and the answers provided by the NAIC:

Q1 Have there in fact been many recent catastrophe related insolvencies? 2022 P&C RBC Aggregate Report indicates continued improvement in the number of insurers at various RBC action levels.

*A1 Yes, there have been several recent insolvencies in certain catastrophe prone states, but there have also been recent insolvencies and impairments in other states, particularly those exposed to secondary perils such as convective storms. Some smaller insurers are reporting challenges in affording sufficient reinsurance coverage and are retaining more catastrophe risk.*

Q2 Current RBC RCat requires reporting catastrophe risk, net of reinsurance, for Hurricane, EQ and Windstorm (information only) at the 50, 100, 250 and 500 return periods. The change RCat values from prior periods would provide directional and quantitative information about net catastrophe exposure. Do the states really need the high level of detail in the proposal for all insurers subject to RCat reporting?

*A2 Yes. Several states have been requesting this information annually from many of their domestic insurers, and while the reinsurance program is considered in detail on financial examinations, that process is too infrequent. An annual requirement would provide all states with this information for each of their domestic insurers.*

Q3 Has the NAIC considered that most insurance groups purchase insurance at the group level? The disclosures in the proposal would have to be allocated to individual RBC reporting entities and is unlikely to provide consistent and useful information.

*A3 The Task Force might consider allowing group reporting.*

Q4 Would the NAIC consider limiting the scope of the proposal? RBC aggregate data shows nearly 1400 reporting entities with greater than a 1000% RBC ratio. Large groups are required to report similar information in their ORSA, Annual Registration Statement and in public reporting to the SEC.

*A4 The Task Force might consider limiting the scope of the proposal if industry suggested thresholds would not exclude insurers that lack sufficient reinsurance programs for natural catastrophe perils.*

Q5 The narrative description in the proposal is quite detailed, requiring a description of the natural catastrophe reinsurance program by peril, and separately providing granular program details (including type of coverage, layers, attachment points, limits, reinstatement provisions, etc.) for traditional and non-traditional reinsurance, and a graphical representation of the reinsurance program. This level of detailed reporting would be a significant compliance burden for many insurers and is often not available on a legal entity basis.

*A5 The proposal was designed based on public company disclosures. Regulators expect that insurers also report at this level of detail to their management and board of directors.*

We appreciate the dialogue with the NAIC about the purpose of the proposal and the rationale for its current design. We agree with the NAIC that state regulators should expect insurers to have robust processes and controls in place to manage natural catastrophe risk through an effective reinsurance program and through other means. We request that you consider the following suggestions for improvement to the proposal.

Group Reporting Option:

Public company financial reporting is reported on a consolidated basis, with details provided only for material amounts and risks. Based on the trades review of several large insurance groups' 10K filings, none report the level of detail requested in the proposal and none provide a reinsurance coverage tower graphic. Because catastrophe risk is managed, and reinsurance is purchased at the group level, the legal entity detail requested in the proposal will be challenging to complete and is unlikely to provide useful information to state regulators. Purchasing reinsurance protection at the group level, provides coverage for multiple catastrophe perils, provides administrative efficiency, and provides more effective coverage, since it covers several potential natural catastrophe losses in the group and is not sub-limited to specific legal entities. Multiple cedant reinsurance contracts require allocation agreements that allocate premiums and recoveries, but many elements of the proposal, such as coverage limits, attachments points, etc. cannot be allocated to individual entities. If these elements were allocated to individual entities, they would not provide useful information.

Example: An insurance group has a multiple cedant reinsurance contract that pays \$5 million XS of \$5 million and is spread among 5 entities in the group that write equal premiums. These entities might report \$1 million of limit each. If company A has a \$2 million loss from a covered event, but none of its affiliates have a loss from that event, a reader of this interrogatory might assume that company A has reinsurance protection, but because the reinsurance contract attaches at \$5 million, there would be no recovery.

We request that the Task Force consider modifying the proposal to allow group reporting rather than entity level reporting. Group level reporting is consistent with how insurance groups manage their catastrophe risks and artificial entity level allocations will not provide meaningful or comparable information to state regulators. We recommend that the interrogatory be prepared on a group level, include a list of the legal entities included in the group and perhaps also provide a summary of the allocation agreement. Identical filings could be included in each individual entity's RBC Interrogatory.

#### Material Perils:

Based on our review of several public filings, no reporting entities that we observed report the requested level of detail in the proposal for material natural catastrophe perils. Often this is broken out separately for hurricane and earthquake and frequently for only two major geographic areas (e.g., U.S. and Canada or U.S. and non-U.S.) Sometimes this information is only provided on an all perils basis world-wide. Providing this level of detail for immaterial risks will be time consuming, is inconsistent with financial reporting requirements for GAAP and Statutory Accounting and is unlikely to provide useful information to state insurance regulators.

#### Reinsurance Tower Graphic:

None of the public companies we observed provided a graphical presentation of the reinsurance program in their public filings. This is likely because they have overlapping reinsurance coverage for multiple perils, purchase reinsurance using a variety of different programs covering several geographic regions, use multiple, varying reinsurance structures for the same or similar risks and use facultative reinsurance cover for individual policies for program business. As a result, such graphical presentations would be very difficult to prepare and are unlikely to yield useful information. Preparing the requested graphics by peril will be costly and will unlikely provide useful information to state regulators.

We suggest the Task Force consider requiring separate reinsurance tower graphics for the top two or three perils that are material to the reporting entity's catastrophe reinsurance program. Based on our discussions with reinsurance intermediaries, most smaller insurers typically have only one major reinsured catastrophe peril, and do prepare a reinsurance tower graphic or receive it from their broker.

#### Redefining the Scope:

According to NAIC staff, approximately 870 RBC reporting entities are subject to RCat currently. This group is likely to grow if and when wildfire risk, convective storm risk and other catastrophe perils are eventually included in the RCat requirement. Basing the proposal only on insurers subject to RCat may in fact miss many insurers that are exposed to catastrophe risks other than hurricane and earthquake. For those insurers, a separate request of the insurer, as part of the annual financial analysis process, may be the best way for state insurance regulators to obtain information about catastrophe exposed insurers' reinsurance programs.

In order to better direct this requirement toward insurers facing increased solvency risk, the Task Force should consider narrowing the scope to focus on insurers with a higher risk of financial impairment or a higher risk of triggering an RBC action level as a consequence of their natural catastrophe risk and reinsurance program. A more focused scope should include insurers with significant catastrophe risk net of reinsurance, a high reliance on reinsurance to manage their catastrophe risk and perhaps include RBC ratios as an additional filter. Based on our analysis of annual statement data and review of several public company 10K filings, we suggest the following potential scope thresholds for consideration by the Task Force.

Proposed Scope Thresholds:

The following scope thresholds would be more effective identifying insurers that have significant net catastrophe exposure and that should be subject to the proposed RBC interrogatory and increased supervisory attention.

1. RBC Ratio below 1000% AND Reinsurance Utilization Rate greater than 30% (instead of reinsurance utilization, the Task Force could use a ratio derived from Schedule F, Part 6 “Restatement of Balance Sheet to Identify Net Credit for Reinsurance” at perhaps >50% of surplus)

OR

2. Probable Maximum Loss (PML) net of reinsurance as a percentage of Surplus of 25% or more

An RBC ratio greater than 1000% should in most cases indicate that the risk of insolvency in the near future is remote. However, RBC alone might not identify insurers that are heavily reliant on reinsurance if their net retention is low or if the catastrophe exposure is not a peril included in RCat. As a result, we propose pairing RBC with a reinsurance utilization rate threshold. Reinsurance utilization is typically measured as ceded reinsurance premium divided by gross written premiums and is a measure of the reliance on reinsurance. Industry aggregate data show that the industry aggregate reinsurance utilization ratio fluctuates in a very narrow band around 18%, so 30% may be a reasonable threshold. Based on our analysis of NAIC Annual Statement data these two criteria would result in 524 legal entities in scope for the proposed interrogatory.

Alternatively, the Task force might consider using a ratio of the effect of reinsurance on the balance sheet as a percentage of surplus, which can be derived easily from data in Schedule F, Part 6. We have not performed an analysis of this alternative using Annual Statement data, but a reasonable threshold might be a net benefit of reinsurance of 50% or more of an insurer’s surplus.

We are proposing net PML as a percentage of surplus as an additional threshold. This information is available in the RCat filings and the Annual Statement, so should be easily verifiable for any insurer currently subject to RCat. We believe that this threshold is more likely to focus regulators’ attention on the types of insurers that prompted this proposal. Since this data is confidential, we do not have the information to make an informed recommendation on the threshold but based on public company reporting and other public information, perhaps net PML of 25% of surplus at the 1-in-250 return period would be a good starting point. The Task force might want to consider



adding a change in PML to surplus ratios as an additional criterion. Finally, while the current scope of the proposal only includes insurers subject to RCat, using the net PML criteria could form the basis for separate state requests for similar information from other insurers that may have significant natural catastrophe risk other than hurricane and earthquake risk.

Thank you again for the opportunity to provide comments. We look forward to further engagement on these issues.

Sincerely,

Joseph B. Sieverling, SVP and Director of Financial Services  
Reinsurance Association of America

Matthew Vece, Director, Financial & Tax Counsel  
American Property and Casualty Insurance Association

Colleen W. Scheele, Public Policy Counsel and Director of Financial and Tax Policy  
National Association of Mutual Insurance Companies

cc: Tom Botsko, Chair Property Casualty RBC (E) Working Group  
Wanchin Chou, Chair, Catastrophe Risk (E) Subgroup

## Capital Adequacy (E) Task Force

### RBC Proposal Form

- |   |   |   |
|---|---|---|
| <input type="checkbox"/> Capital Adequacy (E) Task Force                      | <input type="checkbox"/> Health RBC (E) Working Group         | <input type="checkbox"/> Life RBC (E) Working Group                         |
| <input type="checkbox"/> Catastrophe Risk (E) Subgroup                        | <input type="checkbox"/> Investment RBC (E) Working Group     | <input type="checkbox"/> Longevity Risk (A/E) Subgroup                      |
| <input type="checkbox"/> Variable Annuities Capital. & Reserve (E/A) Subgroup | <input checked="" type="checkbox"/> P/C RBC (E) Working Group | <input type="checkbox"/> RBC Investment Risk & Evaluation (E) Working Group |

<p style="text-align: right;"><b>DATE:</b> <u>12/02/23</u></p> <p><b>CONTACT PERSON:</b> <u>Eva Yeung</u></p> <p><b>TELEPHONE:</b> <u>816-783-8407</u></p> <p><b>EMAIL ADDRESS:</b> <u>eyeung@naic.org</u></p> <p><b>ON BEHALF OF:</b> <u>P/C RBC (E) Working Group</u></p> <p><b>NAME:</b> <u>Tom Botsko</u></p> <p><b>TITLE:</b> <u>Chair</u></p> <p><b>AFFILIATION:</b> <u>Ohio Department of Insurance</u></p> <p><b>ADDRESS:</b> <u>50 West Town Street, Suite 300</u> <u>Columbus, OH 43215</u></p>	<p style="text-align: center;"><b>FOR NAIC USE ONLY</b></p> <hr/> <p>Agenda Item # <u>2023-14-P</u> Year <u>2024</u></p> <hr/> <p style="text-align: center;"><b>DISPOSITION</b></p> <p><b>ADOPTED:</b></p> <p><input type="checkbox"/> TASK FORCE (TF) _____</p> <p><input type="checkbox"/> WORKING GROUP (WF) _____</p> <p><input type="checkbox"/> SUBGROUP (SG) _____</p> <p><b>EXPOSED:</b></p> <p><input type="checkbox"/> TASK FORCE (TF) _____</p> <p><input checked="" type="checkbox"/> WORKING GROUP (WG) <u>12/02/23</u></p> <p><input type="checkbox"/> SUBGROUP (SG) _____</p> <p><b>REJECTED:</b></p> <p><input type="checkbox"/> TF <input type="checkbox"/> WG <input type="checkbox"/> SG _____</p> <p><b>OTHER:</b></p> <p><input type="checkbox"/> DEFERRED TO _____</p> <p><input type="checkbox"/> REFERRED TO OTHER NAIC GROUP _____</p> <p><input type="checkbox"/> (SPECIFY) _____</p>
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#### IDENTIFICATION OF SOURCE AND FORM(S)/INSTRUCTIONS TO BE CHANGED

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

#### DESCRIPTION/REASON OR JUSTIFICATION OF CHANGE(S)

The proposed change would remove Pet Insurance from Inland Marine line of business and add a new line of business to PR035, PR038, PR123, PR223, PR307, PR700 and PR701 to be consistent with the change in the Annual Statement. However, the RBC charges for R4 and R5 will remain the same as Inland Marine line of business.

#### Additional Staff Comments:

\*\* This section must be completed on all forms.

Revised 2-2023

## UNDERWRITING RISK PR017 – PR018

Underwriting risk is the largest portion of the risk-based capital charge for most property casualty insurance companies and makes up approximately 55 percent of the aggregate industry risk-based capital prior to the covariance adjustment. Underwriting risk is broken into two components in the RBC formula: the RBC charge calculated for reserves and the RBC charge applied against written premiums.

The reserve risk RBC is developed by multiplying a set of RBC factors, which are discounted for investment income and adjusted for each individual company's own relative experience, times the gross of non-tabular discount net reserves for each of 19 major lines of business. A set of credits is available to these by-line RBC charges for loss-sensitive business. The aggregate reserve risk RBC is then adjusted to allow a credit for the amount of diversification among the 19 lines of business.

The 19 major lines of business largely correspond to the major breakdowns in Schedule P of the annual statement. Calculations for some lines are combined: the occurrence form and claims made form of Other Liability (H1 and H2) are combined; the Special Property and Pet Insurance Plans are combined (I and U); the occurrence form and claims made form of Products Liability (R1 and R2) are combined; and Reinsurance - Property and Reinsurance – Financial Lines (N and P) are combined.

Those lines used in the calculation and the applicable subsections of Schedule P are: Homeowners/Farmowners Multi-Peril (A); Private Passenger Auto Liability and Medical Payments (B); Commercial Auto Liability (C); Workers Compensation (D); Commercial Multi-Peril (E); Medical Professional Liability-Occurrence (F-Section 1); Medical Professional Liability-Claims Made combined (F-Section 2); Special Liability (G); Other Liability-Occurrence and Other Liability-Claims Made combined (H-Section 1 and H-Section 2); Special Property (I); Auto Physical Damage (J); Other (Including Credit, Accident and Health) (L); Financial Guaranty/Mortgage Guaranty (S); Fidelity Surety (K); International (M); Reinsurance A and Reinsurance C (N and P); Reinsurance B (O); Products Liability-Occurrence;and Products Liability-Claims Made combined (R-Section 1 and R-Section 2); ~~and~~Warranty (T); and Pet Insurance Plans (U).

For any company that writes 5 percent or more of its business in the three accident and health lines (Group A&H, Credit A&H, and Other A&H) in the current year, or either of the two immediately preceding years, a separate calculation for health RBC is mandated, based on the life RBC formula.

The written premium RBC is developed by multiplying a factor times the current year's net written premiums, which are also broken down by line. The RBC factor for each line is based on the excess of a discounted combined ratio adjusted for investment income over 100 percent. As with the reserve risk factors, individual company experience is also considered in computing the RBC factor.



Detail Eliminated to Conserve



UNDERWRITING RISK - RESERVES PR017

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
SCH P LINE OF BUSINESS	H/F	PPA	CA	WC	CMP	MPL OCCURRENCE	MPL CLMS MADE	SL	OL	FIDELITY / SURETY
(1) INDUSTRY AVERAGE DEVELOPMENT	1.000	1.047	1.106	0.873	1.026	0.906	0.984	0.994	0.969	0.852
(2) COMPANY DEVELOPMENT	0.999	1.047	1.106	0.873	1.026	0.906	0.984	0.994	0.969	0.852
(3) (2)/(1)	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
(4) INDUSTRY LOSS EXPENSE RBC %	0.213	0.179	0.276	0.344	0.494	0.383	0.276	0.304	0.531	0.371
(5) COMPANY RBC % (4)*(3)*.5+(4)*.5	0.213	0.179	0.276	0.344	0.494	0.383	0.276	0.304	0.531	0.371
(6) LOSS & LOSS ADJUSTMENT EXPENSE UNPAID SCH. P PART 1 (in 000s)	0	0	0	0	0	0	0	0	0	0
(7) OTHER DISCOUNT AMOUNT NOT INCLUDED IN LOSS & LOSS ADJUSTMENT EXPENSE UNPAID IN SCH. P PART 1 (in 000s)	0	0	0	0	0	0	0	0	0	0
(8) ADJUSTMENT FOR INVESTMENT INCOME	0.938	0.928	0.911	0.830	0.876	0.865	0.883	0.890	0.852	0.940
(9) BASE LOSS & LOSS ADJUSTMENT EXPENSE RESERVE RISK-BASED CAPITAL (000s) MAX {0,[(5)+1]*(8)-1}*[(6)+(7)] zero if Line [(6)+(7)] is negative	0	0	0	0	0	0	0	0	0	0
(10) % DIRECT LOSS SENS	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
(11) % ASSUMED LOSS SENS	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
(12) LOSS SENSITIVE DISCOUNT (in 000s)	0	0	0	0	0	0	0	0	0	0
(13) LOSS & LOSS ADJUSTMENT EXPENSE RBC AFTER DSCT (in 000s) L(09) - L(12)	0	0	0	0	0	0	0	0	0	0
(14) LOSS CONCEN FACTOR										
(15) TOTAL NET RESERVE RBC x1000 (converted to whole dollars)										

This worksheet is to show the results of the calculation of Underwriting Risk - Reserves

Enter data in PR035 through PR039, PR100 through PR701 and PROTH

(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
SPECIAL PROPERTY/ <b>PET</b> <b>INSURANCE</b> <b>PLANS</b>	AUTO PHYSICAL DAMAGE	OTHER (INCLUD CREDIT,A&H)	FINANCIAL / MORTGAGE GUARANTY	INTL	REIN. PROPERTY & FINANCIAL LINES	REIN. LIABILITY	PL	WARRANTY	TOTAL
									XXX
<b>0.983</b>	1.016	0.946	0.674	2.414	0.924	1.024	0.874	0.995	XXX
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	XXX
0.246	0.155	0.220	0.179	0.359	0.415	0.656	0.802	0.371	XXX
0.246	0.155	0.220	0.179	0.359	0.415	0.656	0.802	0.371	XXX
0	0	0	0	0	0	0	0	0	0
<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
0.966	0.976	0.967	0.926	0.874	0.901	0.838	0.841	0.940	XXX
0	0	0	0	0	0	0	0	0	0
<b>0.000%</b>	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	XXX
<b>0.000%</b>	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	XXX
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
									1.000
									0

**UNDERWRITING RISK - NET WRITTEN PREMIUMS PR018**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
SCH P LINE OF BUSINESS	H/F	PPA	CA	WC	CMP	MPL OCCURRENCE	MPL CLMS MADE	SL	OL	FIDELITY / SURETY
(1) INDUSTRY AVERAGE LOSS & LOSS ADJUSTMENT EXPENSE RATIO										
(2) COMPANY AVERAGE LOSS & LOSS ADJUSTMENT EXPENSE RATIO	0.679	0.791	0.777	0.651	0.671	0.767	0.815	0.578	0.641	0.363
(3) (2)/(1)	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
(4) INDUSTRY LOSSES & LOSS ADJUSTMENT EXPENSE RATIO	0.936	0.969	1.010	1.044	0.883	1.668	1.130	0.922	1.013	0.854
(5) COMPANY RBC LOSSES & LOSS ADJUSTMENT EXPENSE RATIO (3)*(4)*0.5+(4)*0.5	0.936	0.969	1.010	1.044	0.883	1.668	1.130	0.922	1.013	0.854
(6) COMPANY UNDERWRITING EXPENSE RATIO	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(7) ADJUSTMENT FOR INVESTMENT INCOME	0.954	0.925	0.890	0.839	0.896	0.767	0.827	0.898	0.816	0.904
(8) C/Y NET WRITTEN PREMIUM (in 000s)	0	0	0	0	0	0	0	0	0	0
(9) BASE WRITTEN PREMIUM RISK-BASED CAPITAL (in 000s) MAX {0,(8)*[(5)*(7)+(6)-1]} zero if Line (8) is negative	0	0	0	0	0	0	0	0	0	0
(10) % DIRECT LOSS SENS WP	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
(11) % ASSUMED LOSS SENS WP	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%
(12) LOSS SENSITIVE DSCT - WP (in 000s)	0	0	0.0	0.0	0	0	0	0	0	0
(13) NWP RBC AFTER DSCT (in 000s)	0	0	0.0	0.0	0	0	0	0	0	0
(14) PREMIUM CONCENTRATION FACTOR										
(15) NET WRITTEN PREMIUM RBC x 1000 (converted to whole dollars)										

This worksheet is to show the results of the calculation of Underwriting Risk - Net Written Premiums

Enter data in PR035 through PR039, PR100 through PR701 and PROTH

(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
SPECIAL PROPERTY/PET INSURANCE PLANS	AUTO PHYSICAL DAMAGE	OTHER (INCLUDE CREDIT, A&H)	FINANCIAL/M ORTGAGE GUARANTY	INTL	REIN. PROPERTY & FINANCIAL LINES	REIN. LIABILITY	PL	WARRANTY	TOTAL
									XXX
<b>0.550</b>	0.727	0.702	0.209	1.136	0.578	0.743	0.597	0.652	XXX
1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	XXX
0.863	0.836	0.935	1.598	1.234	1.170	1.322	1.263	0.854	XXX
0.863	0.836	0.935	1.598	1.234	1.170	1.322	1.263	0.854	XXX
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	XXX
0.949	0.971	0.947	0.884	0.905	0.893	0.777	0.774	0.904	XXX
<b>0</b>	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
<b>0.000%</b>	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	XXX
<b>0.000%</b>	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	XXX
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
									1.000
									0

## UNDERWRITING AND INVESTMENT EXHIBIT - PREMIUMS WRITTEN PR035

(1) Did your company write Accident and Health Insurance in 2023?	Y
If answer is yes, please complete Column 2, 2023 Net Premiums Written.	
(2) Did your company write Accident and Health Insurance in 2022?	Y
If answer is yes, please complete Column 3, 2022 Net Premiums Written.	
(3) Were the total net Premiums written zero in 2023?	N
(4) Were the total net Premiums written zero in 2022?	N

For all companies, enter net premiums written in all Columns, Line 1 through Line 34.

Line of Business	(1) 2024 Net Premiums Written	(2) 2023 Net Premiums Written	(3) 2022 Net Premiums Written
1. Fire	0	xxx	xxx
2.1 Allied Lines	0	xxx	xxx
2.2 Multiple Peril Crop	0	xxx	xxx
2.3 Federal Flood	0	xxx	xxx
2.4 Private Crop	0	xxx	xxx
2.5 Private Flood	0	xxx	xxx
3. Farmowners Multiple Peril	0	xxx	xxx
4. Homeowners Multiple Peril	0	xxx	xxx
5.1 Commercial Multiple Peril (Non-Liability Portion)	0	xxx	xxx
5.2 Commercial Multiple Peril (Liability Portion)	0	xxx	xxx
6. Mortgage Guaranty	0	xxx	xxx
8. Ocean marine	0	xxx	xxx
9.1 Inland marine	0	xxx	xxx
9.2 Pet Insurance Plans	0	xxx	xxx
10. Financial Guaranty	0	xxx	xxx
11.1 Medical Professional Liability - Occurrence	0	xxx	xxx
11.2 Medical Professional Liability - Claims-Made	0	xxx	xxx
12. Earthquake	0	xxx	xxx
13.1 Comprehensive (Hospital and Medical) Individual	0	0	0
13.2 Comprehensive (Hospital and Medical) Group	0	0	0
14. Credit Accident and Health (group and individual)	0	0	0
15.1 Vision Only	0	0	0
15.2 Dental Only	0	0	0
15.3 Disability Income	0	0	0
15.4 Medicare Supplement	0	0	0
15.5 Medicaid Title XIX	0	0	0
15.6 Medicare Title XVIII	0	0	0
15.7 Long-Term Care	0	0	0
15.8 Federal Employees Health Benefits Plan	0	0	0
15.9 Other Health	0	0	0
16. Workers' Compensation	0	xxx	xxx
17.1 Other Liability - Occurrence	0	xxx	xxx
17.2 Other Liability - Claims-Made	0	xxx	xxx
17.3 Excess Workers' Compensation	0	xxx	xxx
18.1 Products Liability - Occurrence	0	xxx	xxx
18.2 Products Liability - Claims-Made	0	xxx	xxx
19.1 Private Passenger Auto No-Fault (Personal Injury Protection)	0	xxx	xxx
19.2 Other Private Passenger Auto Liability	0	xxx	xxx
19.3 Commercial Auto No-Fault (Personal Injury Protection)	0	xxx	xxx
19.4 Other Commercial Auto Liability	0	xxx	xxx
21.1 Private Passenger Auto Physical Damage	0	xxx	xxx
21.2 Commercial Auto Physical Damage	0	xxx	xxx
22. Aircraft (all perils)	0	xxx	xxx
23. Fidelity	0	xxx	xxx
24. Surety	0	xxx	xxx
26. Burglary and theft	0	xxx	xxx
27. Boiler and machinery	0	xxx	xxx
28. Credit	0	xxx	xxx
29. International	0	xxx	xxx
30. Warranty	0	xxx	xxx
31. Reinsurance Property	0	xxx	xxx
32. Reinsurance Liability	0	xxx	xxx
33. Reinsurance Financial Lines	0	xxx	xxx
34. Aggregate Write-Ins for Other Lines of Business	0	xxx	xxx
35. TOTALS	0	0	0

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



**MEDICAL TABULAR RESERVE DISCOUNT PR038****Underwriting Risk - Reserves**

Annual Statement Source: Medical Tabular Reserve Discount

	<u>Line</u>	<u>Column</u>	<u>Value (000 Omitted)</u>
1 Homeowner/Farmowner	7	1	0
2 Private Pass Auto Liab	7	2	0
3 Comm Auto Liab	7	3	0
4 Workers' Comp	7	4	0
5 Comm Multi Peril	7	5	0
6 Medical Professional Liability - Occurrence	7	6	0
7 Medical Professional Liability - Claims-Made	7	7	0
8 Special Liab	7	8	0
9 Other Liab - Occurrence	7	9	0
10 Other Liab - Claims Made	7	9	0
11 Fidelity & Surety	7	10	0
12 Special Property	7	11	0
13 Auto Physical Damage	7	12	0
14 Other (Credit, A&H)	7	13	0
15 Fin Guaranty/Mrtg Guaranty	7	14	0
16 International	7	15	0
17 Medical Tabular Reserve Discount - Reinsurance :Property	7	16	0
18 Medical Tabular Reserve Discount - Reinsurance :Liability	7	17	0
19 Medical Tabular Reserve Discount - Reinsurance :Financial Lines	7	16	0
20 Product Liab - Occurrence	7	18	0
21 Product Liab - Claims Made	7	18	0
22 Warranty	7	19	0
<b>23 Pet Insurance Plans</b>	<b>7</b>	<b>11</b>	<b>0</b>
24 Total	7	20	0

**Underwriting Risk - Premiums**

Annual Statement Source : STMTINCOME (page 4, col.1 In 4)

	<u>Line</u>	<u>Column</u>	<u>Value</u>
25 Other Underwriting Expenses Incurred	6	1	0

SCHEDULE P PART IU - PET INSURANCE PLANS PR123

	(3) Premiums Earned, Net	(24) Total Net Losses and Expenses Unpaid	(28) Total Losses and Expenses Incurred, Net	Earthquake and Hurricane Experience*					Wildfire Catastrophe Experience*					(28III) Expenses Incurred, Net excluding Earthquake, Hurricane and Wildfire Losses
				(24A) Total U.S. Net Losses Unpaid	(28A) Total U.S. Losses Incurred, Net	(24B) Total Non-U.S. Net Losses Unpaid	(28B) Total Non-U.S. Losses Incurred, Net	(28C) Total Losses and Expenses Incurred, Net excluding Earthquake and Hurricane Losses	(24I) Total U.S. Net Losses Unpaid	(28I) Total U.S. Losses Incurred, Net	(24II) Total Non-U.S. Net Losses Unpaid	(28II) Total Non-U.S. Losses Incurred, Net		
(2) 2015	0		0		0		0	0		0		0	0	0
(3) 2016	0		0		0		0	0		0		0	0	0
(4) 2017	0		0		0		0	0		0		0	0	0
(5) 2018	0		0		0		0	0		0		0	0	0
(6) 2019	0		0		0		0	0		0		0	0	0
(7) 2020	0		0		0		0	0		0		0	0	0
(8) 2021	0		0		0		0	0		0		0	0	0
(9) 2022	0		0		0		0	0		0		0	0	0
(10) 2023	0		0		0		0	0		0		0	0	0
(11) 2024	0		0		0		0	0		0		0	0	0
(12) Totals		0		0	0	0	0	0		0	0	0	0	0

vendor link items

manual data entry items

\*Please provide losses only; no expenses. Catastrophe losses should 1.) be the net losses incurred for the reporting entity, not net losses incurred for the group; 2.) be a subset of, and therefore, less than, total net losses reported in Column (28); 3.) be reported in 000s to be consistent with all values reported in this exhibit; and 4.) not be reported as negative amounts.

\*\*If this line of business has incurred U.S. catastrophe losses arising from events either included on the list of U.S. catastrophe events approved by the Catastrophe Risk Subgroup as available on the NAIC's website or numbered and labeled by PCS as a hurricane, tropical storm, or earthquake, provide only the amount of those catastrophe losses in Catastrophe Experience columns (24A) and (28A).

\*\*\*If this line of business has incurred non-U.S. catastrophe losses arising from a hurricane, tropical storm, or earthquake from an event included on the list of non-U.S. catastrophe events approved by the Catastrophe Risk Subgroup as available on the NAIC's website, provide only the amount of those catastrophe losses in Catastrophe Experience Columns (24B) and (28B).

\*\*\*\*Columns 24I through 28III are for informational purposes only.

**SCHEDULE P PART 2U - PET INSURANCE PLANS PR223**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
(2) 2015	0									0
(3) 2016		0								0
(4) 2017			0							0
(5) 2018				0						0
(6) 2019					0					0
(7) 2020						0				0
(8) 2021							0			0
(9) 2022								0		0
(10) 2023									0	0

**SCHEDULE P PART 7A SECTION 1 PRIMARY LOSS SENSITIVE CONTRACTS PR700**

Schedule P Part 1	(3) % of Loss Sens to Total Net Loss & Expense Unpd	(6) % of Loss Sens to Total Net Premiums Written
1. Homeowners/Farmowners	0.000%	0.000%
2. Private Passenger Auto Liab./Medical	0.000%	0.000%
3. Commercial Auto/Truck Liab./Medical	0.000%	0.000%
4. Workers' Compensation	0.000%	0.000%
5. Commercial Multiple Peril	0.000%	0.000%
6. Medical Professional Liability - Occurrence	0.000%	0.000%
7. Medical Professional Liability - Claim-Made	0.000%	0.000%
8. Special Liability	0.000%	0.000%
9. Other Liability - Occurrence	0.000%	0.000%
10. Other Liability - Claims-Made	0.000%	0.000%
11. Special Property	0.000%	0.000%
12. Auto Physical Damage	0.000%	0.000%
13. Fidelity/Surety	0.000%	0.000%
14. Other (Credit, A&H)	0.000%	0.000%
15. International	0.000%	0.000%
19. Products Liability - Occurrence	0.000%	0.000%
20. Products Liability - Claims-Made	0.000%	0.000%
21. Financial Guaranty/Mortgage Guaranty	0.000%	0.000%
22. Warranty	0.000%	0.000%
<b>23. Pet Insurance Plans</b>	<b>0.000%</b>	<b>0.000%</b>

**SCHEDULE P PART 7B SECTION 1 REINSURANCE LOSS SENSITIVE CONTRACTS PR701**

Schedule P Part 1	(3) % of Loss Sens to Total Net Loss & Expense Unpd	(6) % of loss sens to Total Net Premiums Written
1. Homeowners/Farmowners	0.000%	0.000%
2. Private Passenger Auto Liab./Medical	0.000%	0.000%
3. Commercial Auto/Truck Liab./Medical	0.000%	0.000%
4. Workers' Compensation	0.000%	0.000%
5. Commercial Multiple Peril	0.000%	0.000%
6. Medical Professional Liability - Occurrence	0.000%	0.000%
7. Medical Professional Liability - Claim-Made	0.000%	0.000%
8. Special Liability	0.000%	0.000%
9. Other Liability - Occurrence	0.000%	0.000%
10. Other Liability - Claims-Made	0.000%	0.000%
11. Special Property	0.000%	0.000%
12. Auto Physical Damage	0.000%	0.000%
13. Fidelity/Surety	0.000%	0.000%
14. Other	0.000%	0.000%
15. International	0.000%	0.000%
16. Reinsurance - Property	0.000%	0.000%
17. Reinsurance Liability	0.000%	0.000%
18. Reinsurance -Financial Lines	0.000%	0.000%
19. Products Liability - Occurrence	0.000%	0.000%
20. Products Liability - Claims-Made	0.000%	0.000%
21. Financial Guaranty/Mortgage Guaranty	0.000%	0.000%
22. Warranty	0.000%	0.000%
<b>23. Pet Insurance Plans</b>	<b>0.000%</b>	<b>0.000%</b>

## Capital Adequacy (E) Task Force

### RBC Proposal Form

- |   |   |   |
|---|---|---|
| <input type="checkbox"/> Capital Adequacy (E) Task Force                      | <input type="checkbox"/> Health RBC (E) Working Group     | <input type="checkbox"/> Life RBC (E) Working Group                         |
| <input checked="" type="checkbox"/> Catastrophe Risk (E) Subgroup             | <input type="checkbox"/> Investment RBC (E) Working Group | <input type="checkbox"/> Longevity Risk (A/E) Subgroup                      |
| <input type="checkbox"/> Variable Annuities Capital. & Reserve (E/A) Subgroup | <input type="checkbox"/> P/C RBC (E) Working Group        | <input type="checkbox"/> RBC Investment Risk & Evaluation (E) Working Group |

<p style="text-align: right;"><b>DATE:</b> <u>12/02/23</u></p> <p><b>CONTACT PERSON:</b> <u>Eva Yeung</u></p> <p><b>TELEPHONE:</b> <u>816-783-8407</u></p> <p><b>EMAIL ADDRESS:</b> <u>eyeung@naic.org</u></p> <p><b>ON BEHALF OF:</b> <u>P/C RBC (E) Working Group</u></p> <p><b>NAME:</b> <u>Tom Botsko</u></p> <p><b>TITLE:</b> <u>Chair</u></p> <p><b>AFFILIATION:</b> <u>Ohio Department of Insurance</u></p> <p><b>ADDRESS:</b> <u>50 West Town Street, Suite 300</u> <u>Columbus, OH 43215</u></p>	<p style="text-align: center;"><b><u>FOR NAIC USE ONLY</u></b></p> <hr/> <p>Agenda Item # <u>2023-15-CR</u> Year <u>2024</u></p> <hr/> <p style="text-align: center;"><b><u>DISPOSITION</u></b></p> <p><b>ADOPTED:</b></p> <p><input type="checkbox"/> TASK FORCE (TF) _____</p> <p><input type="checkbox"/> WORKING GROUP (WF) _____</p> <p><input type="checkbox"/> SUBGROUP (SG) _____</p> <p><b>EXPOSED:</b></p> <p><input type="checkbox"/> TASK FORCE (TF) _____</p> <p><input type="checkbox"/> WORKING GROUP (WG) _____</p> <p><input checked="" type="checkbox"/> SUBGROUP (SG) <u>12/02/23</u></p> <p><b>REJECTED:</b></p> <p><input type="checkbox"/> TF <input type="checkbox"/> WG <input type="checkbox"/> SG _____</p> <p><b>OTHER:</b></p> <p><input type="checkbox"/> DEFERRED TO _____</p> <p><input type="checkbox"/> REFERRED TO OTHER NAIC GROUP _____</p> <p><input type="checkbox"/> (SPECIFY) _____</p>
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#### IDENTIFICATION OF SOURCE AND FORM(S)/INSTRUCTIONS TO BE CHANGED

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

#### DESCRIPTION/REASON OR JUSTIFICATION OF CHANGE(S)

The proposed change may add severe convective storm as one of the catastrophe perils for informational purposes only in the Rcat component. While the Catastrophe Risk (E) Subgroup reviewed the possibility of expanding the current catastrophe framework to include other perils that may experience a greater tail risk under projected climate-related trends, the severe convective storm has been identified as a catastrophe peril in the Rcat component.

**Additional Staff Comments:**

**\*\* This section must be completed on all forms.**

**Revised 2-2023**

**CALCULATION OF CATASTROPHE RISK CHARGE RCAT  
PR027A, PR027B, PR027C, PR027D, PR027, AND PR027INT**

The catastrophe risk charge for earthquake (PR027A), hurricane (PR027B), ~~and~~ wildfire and convective storms for informational purposes only (PR027C and PR027D) risks is calculated by multiplying the RBC factors by the corresponding modeled losses and reinsurance recoverables. The risk applies on a net basis with a corresponding contingent credit risk charge for certain categories of reinsurers. Data must be provided for the worst year in 50, 100, 250, and 500; however, only the worst year in 100 will be used in the calculation of the catastrophe risk charge. While projected losses modeled on an Aggregate Exceedance Probability basis is preferred, companies are permitted to report on an Occurrence Exceedance Probability basis if that is consistent with the company's internal risk management process.

The projected losses can be modeled using the following NAIC approved third party commercial vendor catastrophe models: AIR, CoreLogic for earthquake and hurricane only, RMS, KCC, the ARA HurLoss Model (hurricane only), or the Florida Public Model for hurricane, as well as catastrophe models that are internally developed by the insurer or that are the result of adjustments made by the insurer to vendor models to represent the own view of catastrophe risk (hereinafter "own models").

However, an insurer seeking to use an own model must first obtain written permission to do so by the domestic or lead state insurance regulator. In the situation where the model output is used to determine the catastrophe risk capital requirement for a single entity, the regulator granting permission to use the own model is the domestic state. In the situation where the model output is used to determine the catastrophe risk capital requirement for a group, the grantor is the lead state regulator. In the situation where the insurer seeking permission is a non-U.S. insurer, the grantor shall be the lead state regulator. Under all scenarios, the regulator that is granting permission should inform other domestic states that have a catastrophe risk exposure and share the results of the review.

To obtain permission to use the own model, the insurer must provide the domestic or lead state insurance regulator with written evidence of each of the following:

1. The nature, scale, and complexity of the insurer's catastrophe risk make it reasonable for the insurer to use its own model.
2. The own model is used for catastrophe risk management, capital assessment, and the capital allocation process.
3. The insurer has validated the own model(s) for each of the perils included in the RBC catastrophe risk charge. The insurer is including both U.S. and non-U.S. exposures in the calculation of the RBC charge.
4. The insurer has individuals with experience in developing, testing and validating internal models or engages third parties with such experience.
5. The own model was developed using reasonable data and assumptions.
6. The insurer must provide supporting model documentation and/or the differences from the vendor models if modified from the vendor models, supporting that the model was developed using reasonable data and assumptions. The insurer must provide a copy of the latest validation report and the insurer is solely responsible for the relevant cost. The validation report must provide a description of the scope, content, results and limitations of the validation, the individual qualifications of validation team and the date of the validation. Both the model documentation and the model validation report must be provided at a minimum once every five years, or whenever the lead or domestic state calls an examination; whenever there is a material change in the model; or whenever there is a material change in the insurer's exposure to catastrophe exposure.
7. The results of the own model for each relevant peril should be compared with the results produced by at least one of the following models: AIR, CoreLogic for earthquake and hurricane only, RMS, KCC, ARA HurLoss (hurricane only), or the Florida Public Model for hurricane. The insurer must provide the comparison and an explanation of the drivers of differences between the results produced by the internal model vs. results produced by the selected prescribed model. Evidence that the own model produces reasonable results must be provided at a minimum once every five years, or whenever the lead or domestic state calls an examination; whenever there is a material change in the model; or whenever there is a material change in the insurer's exposure to catastrophe exposure.
8. If the own model has been approved or accepted by the non-U.S. lead supervisor for use in the determination of regulatory capital, the insurer must submit evidence, if available, from the non-US lead supervisor of the most recent approval/acceptance including the description of scope, content, results and limitations of the approval/acceptance process and dates of any planned future approval/acceptance, if known. The name and the contact information of a contact person at the non-US lead supervisor should also be provided for questions on the approval/acceptance process.

If the lead or domestic state determines that permission to use the own model cannot be granted, the insurer shall be required to determine the RBC Catastrophe Risk Charge through the use of one of the third-party commercial vendor models (AIR, CoreLogic for earthquake and hurricane only, RMS, KCC, ARA HurLoss (hurricane only)), or the Florida Public Model for hurricane, as advised by the lead state or domestic state.

If the lead or domestic state determines that permission to use the own model can be granted to determine the RBC Catastrophe Risk Charge, the model will be subject to additional review through the ongoing examination process. If, as a result of the examination, the lead or domestic state determines that permission to use the own model should be revoked, the insurer may be required to resubmit the risk-based capital filing and any past filings so impacted where own model was used, as directed by the lead state or domestic state. If the insurer obtains permission to use the own model, it cannot revert back to using third party commercial vendor models to determine the RBC Catastrophe Risk Charge in subsequent reporting periods, unless this is agreed with the lead or domestic state that granted permission.

The contingent credit risk charge should be calculated in a manner consistent with the way the company internally evaluates and manages its modeled net catastrophe risk.

Note that no tax effect offsets or reinstatement premiums should be included in the modeled losses. Further note that the catastrophe risk charge is for earthquake and hurricane risks only.

As per the footnote on this page, modeled losses to be entered PR027A, PR027B ~~and PR027C~~ and PR027D in Lines (1) through (4) are to be calculated using one of the **third party commercial vendor** models – AIR, CoreLogic for earthquake and hurricane only, RMS, KCC, ARA HurLoss (hurricane only); or the Florida Public Model (hurricane only) **or the insurer’s own catastrophe model**; and using the insurance company’s own insured property exposure information as inputs to the model. The insurance company may elect to use the modeled results from any one of the models, or any combination of results of two or more of the models. Each insurer will not be required to utilize any prescribed set of modeling assumptions but will be expected to use the same exposure data, modeling, and assumptions that the insurer uses in its own internal catastrophe risk management process. Any exceptions must be explained in the required *Attestation Re: Catastrophe Modeling Used in RBC Catastrophe Risk Charges* within this RBC Report.

The Interrogatory on page (PR027INT) supports an exemption from filing the catastrophe risk charge.

Any company qualifying for exemption from the earthquake risk charge must identify the particular criteria from among (1a), (1b), (2) and (3) that provides its qualification for exemption, and may leave the other three items from this group of four possible qualifications for exemption blank; except identification of criteria (3) as the basis for the exemption requires a further answer to (3a) and (3b). If an insurer does not write or assume earthquake risks leaving no gross exposure, enter an “X” in PR027INT interrogatory 3, with no need to fill in (3a) and (3b). If the company qualifies for exemption from the earthquake risk charge, page PR027A and line (1) on PR027 may be left blank.

Any company qualifying for exemption from the hurricane risk charge must identify the particular criteria from among (4a), (4b), (5) and (6) that provides its qualification for exemption, and may leave the other three items from this second group of four possible qualifications for exemption blank. If an insurer does not write or assume hurricane risks leaving no gross exposure, enter an “X” in PR027INT interrogatory 6. If the company qualifies for exemption from the hurricane risk charge, page PR027B and line (2) on PR027 may be left blank.

Any company qualifying for exemption from the wildfire risk charge must identify the particular criteria from among (7a), (7b), (8), ~~and (9)~~ and (10) that provides its qualification for exemption and may leave the other ~~three-four~~ items from this third group of ~~four-five~~ possible qualifications for exemption blank. If an insurer does not write or assume ~~hurricane wildfire~~ risks leaving no gross exposure, enter an “X” in PR027INT interrogatory 9. If the company qualifies for exemption from the wildfire risk charge, page PR027C and line (3) on PR027 may be left blank.

Any company qualifying for exemption from the convective storms risk charge must identify the particular criteria from among (11a), (11b), (12), (13) and (14) that provides its qualification for exemption and may leave the other four items from this fourth group of five possible qualifications for exemption blank. If an insurer does not write or assume convective storms risks leaving no gross exposure, enter an “X” in PR027INT interrogatory 13. If the company qualifies for exemption from the convective storms risk charge, page PR027D and line (4) on PR027 may be left blank.



In general, the following conditions will qualify a company for exemption: if it uses an intercompany pooling arrangement or quota share arrangement with U.S. affiliates covering 100% of its earthquake, hurricane ~~and~~, wildfire ~~and convective storms~~ risks such that there is no exposure for these risks; if it has a ratio of Insured Value – Property to surplus as regards policyholders of less than 50%; or if it writes Insured Value – Property that includes hurricane, earthquake and/or wildfire coverage in catastrophe-prone areas representing less than 10% of its surplus as regards policyholders.

“Insured Value – Property” includes aggregate policy limits for structures and contents for policies written and assumed in the following annual statement lines – Fire, Allied Lines, Earthquake, Farmowners, Homeowners, and Commercial Multi-Peril.

“Catastrophe-Prone Areas in the U.S.” include:

- i. For hurricane risks, Hawaii, District of Columbia and states and commonwealths bordering on the Atlantic Ocean and/or the Gulf of Mexico including Puerto Rico.
- ii. For earthquake risk or for fire following earthquake, any of the following commonwealth or states: Alaska, Hawaii, Washington, Oregon, California, Idaho, Nevada, Utah, Arizona, Montana, Wyoming, Colorado, New Mexico, Puerto Rico, and geographic areas in the following states that are in the New Madrid Seismic Zone - Missouri, Arkansas, Mississippi, Tennessee, Illinois and Kentucky.
- iii. For wildfire risk, California, Idaho, Montana, Oregon, Nevada, Wyoming, Colorado, New Mexico, Washington, Arizona, and Utah.

*Specific Instructions for Application of the Formula*

Column (1) – Direct and Assumed Modeled Losses

These are the direct and assumed modeled losses per the first footnote. Include losses only; no loss adjustment expenses. For companies that are part of an inter-company pooling arrangement, the losses in this column should be consistent with those reported in Schedule P, i.e. losses reported in this column should be the gross losses for the pool multiplied by the company’s share of the pool.

Column (2) – Net Modeled Losses

These are the net modeled losses per the footnote. Include losses only; no loss adjustment expenses.

Column (3) - Ceded Amounts Recoverable

These are the modeled losses ceded under any reinsurance contract. Include losses only, no loss adjustment expenses, and should be associated with the Net Modeled Losses.

Column (4) - Ceded Amounts with Zero Credit Risk Charge

Per the footnote, modeled catastrophe losses that would be ceded to the categories of reinsurers that are not subject to the RBC credit risk charge (i.e., U.S. affiliates and mandatory pools, whether authorized, unauthorized, or certified).

Column (6) – Amount

These are automatically calculated based on the previous columns.

Column (7) - RBC Requirement

A factor of 1.000 is applied to the reported modeled catastrophe losses calculated on both AEP and OEP basis, and a factor of 0.018 is applied to the reinsurance recoverables. The RBC Requirement is based on either AEP reported results or OEP reported results (not both), consistent with the way the company internally evaluates and manages its modeled net catastrophe risk.

Column (5) – Y/N

Please indicate “Y” for OEP basis and “N” for AEP basis. This column should not be blank.

**CALCULATION OF CATASTROPHE RISK CHARGE FOR CONVECTIVE STORMS PR027D**  
**(For Informational Purposes Only)**

Convective Storms	Reference	Modeled Losses			
		(1) Direct and Assumed	(2) Net	3† Ceded Amounts Recoverable	(4)†† Ceded Amounts Recoverable with zero Credit Risk Charge
(1) Worst Year in 50	Company Records	0	0	0	0
(2) Worst Year in 100	Company Records	0	0	0	0
(3) Worst Year in 250	Company Records	0	0	0	0
(4) Worst Year in 500	Company Records	0	0	0	0

(5)  
Y/N

(5) Has the company reported above, its modeled convective storms losses using an occurrence exceedance probability (OEP) basis?

	Reference	(6) Amount	Factor	(7) RBC Requirement (C(6) * Factor)
(6) Net Convective Storms Risk	L(2) C(2)	0	1.000	0
(7) Contingent Credit Risk for Convective Storms Risk	L(2) C(3) - C(4)	0	0.018	0
(8) Total Convective Storms Catastrophe Risk (AEP Basis)	If L(5) C(5) = "N", L(8) C(6) = L(6) C(7)+ L(7) C(7), otherwise "0"	0	1.000	0
(9) Total Convective Storms Catastrophe Risk (OEP Basis)	If L(5) C(5) = "Y", L(9) C(6) = L(6) C(7)+ L(7) C(7), otherwise "0"	0	1.000	0
(10) Total Convective Storms Catastrophe Risk	L(8) C(7) + L(9) C(7)			0

**Disclosure in lieu of model-based reporting:**

(11) For a company qualifying for the exemption under PR027INT D (14), complete 11a through 11c below:

- a. Provide the company's gross and net 1-in-100-year Convective Storms losses on a best estimate basis in lieu of model-based reporting.
- b. Provide details on how the company estimated the amounts shown in 11a.

c. Provide a narrative disclosure about how the company manages its Convective Storms risk.

Lines (1)-(4): Modeled losses to be entered on these lines are to be calculated using one of the following NAIC approved third party commercial vendor catastrophe models - AIR, RMS, or KCC, Corelogic or a catastrophe model that is internally developed by the insurer and has received permission of use by the lead or domestic state. The insurance company's own insured property exposure information should be used as inputs to the model(s). The insurance company may elect to use the modeled results from any one of the models, or any combination of the results of two or more of the models. Each insurer will not be required to utilize any prescribed set of modeling assumptions, but will be expected to use the same data, modeling, and assumptions that the insurer uses in its own internal catastrophe risk management process. An attestation to this effect and an explanation of the company's key assumptions and model selection may be required, and the company's catastrophe data, assumptions, model and results may be subject to examination.

† Column (3) is modeled catastrophe losses that would be ceded under reinsurance contracts. This should be associated with the Net Modeled Losses shown in Column (2).

†† Column (4) is modeled catastrophe losses that would be ceded to the categories of reinsurers that are not subject to the RBC credit risk charge (i.e., U.S. affiliates and mandatory pools, whether authorized, unauthorized, or certified).

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

**Capital Adequacy (E) Task Force****RBC Proposal Form**

- |   |   |   |
|---|---|---|
| <input type="checkbox"/> Capital Adequacy (E) Task Force                      | <input type="checkbox"/> Health RBC (E) Working Group         | <input type="checkbox"/> Life RBC (E) Working Group                         |
| <input type="checkbox"/> Catastrophe Risk (E) Subgroup                        | <input type="checkbox"/> Investment RBC (E) Working Group     | <input type="checkbox"/> Longevity Risk (A/E) Subgroup                      |
| <input type="checkbox"/> Variable Annuities Capital. & Reserve (E/A) Subgroup | <input checked="" type="checkbox"/> P/C RBC (E) Working Group | <input type="checkbox"/> RBC Investment Risk & Evaluation (E) Working Group |

<p style="text-align: right;">DATE: <u>1/10/24</u></p> <p><b>CONTACT PERSON:</b> <u>Eva Yeung</u></p> <p><b>TELEPHONE:</b> <u>816-783-8407</u></p> <p><b>EMAIL ADDRESS:</b> <u>eyeung@naic.org</u></p> <p><b>ON BEHALF OF:</b> <u>P/C RBC (E) Working Group</u></p> <p><b>NAME:</b> <u>Tom Botsko</u></p> <p><b>TITLE:</b> <u>Chair</u></p> <p><b>AFFILIATION:</b> <u>Ohio Department of Insurance</u></p> <p><b>ADDRESS:</b> <u>50 West Town Street, Suite 300</u> <u>Columbus, OH 43215</u></p>	<p style="text-align: center;"><b><u>FOR NAIC USE ONLY</u></b></p> <p>Agenda Item # <u>2024-01-P</u> Year <u>2024</u></p> <p style="text-align: center;"><b><u>DISPOSITION</u></b></p> <p><b>ADOPTED:</b></p> <p><input type="checkbox"/> TASK FORCE (TF) _____</p> <p><input type="checkbox"/> WORKING GROUP (WF) _____</p> <p><input type="checkbox"/> SUBGROUP (SG) _____</p> <p><b>EXPOSED:</b></p> <p><input type="checkbox"/> TASK FORCE (TF) _____</p> <p><input checked="" type="checkbox"/> WORKING GROUP (WG) <u>1/25/2024</u></p> <p><input type="checkbox"/> SUBGROUP (SG) _____</p> <p><b>REJECTED:</b></p> <p><input type="checkbox"/> TF <input type="checkbox"/> WG <input type="checkbox"/> SG _____</p> <p><b>OTHER:</b></p> <p><input type="checkbox"/> DEFERRED TO _____</p> <p><input type="checkbox"/> REFERRED TO OTHER NAIC GROUP _____</p> <p><input type="checkbox"/> (SPECIFY) _____</p>
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**IDENTIFICATION OF SOURCE AND FORM(S)/INSTRUCTIONS TO BE CHANGED**

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

**DESCRIPTION/REASON OR JUSTIFICATION OF CHANGE(S)**

The following proposed changes will be considered only if the Blanks (E) Working Group adopted the proposal 2023-16BWG.

- 1) PR111, 112, 113, 114, 121, 122, Columns 3 and 28 will change to vendor link for all 10 years.
- 2) PR211, 212, 213, 214, 221, 222, amounts in the exterior triangle will change to vendor link.
- 3) Remove PR301 through PR306.

**Additional Staff Comments:**

**\*\* This section must be completed on all forms.**

**Revised 2-2023**

SCHEDULE P PART II - SPECIAL PROPERTY PR111

	(3) Premiums Earned, Net	(24) Total Net Losses and Expenses Unpaid	(28) Total Losses and Expenses Incurred, Net	Earthquake and Hurricane Experience*				(28C) Total Losses and Expenses Incurred, Net excluding Earthquake and Hurricane Losses	Wildfire Catastrophe Experience*				(28III) Total Losses and Expenses Incurred, Net excluding Earthquake, Hurricane and Wildfire Losses	
				(24A) Total U.S. Net Losses Unpaid	(28A) Total U.S. Losses Incurred, Net	(24B) Total Non-U.S. Net Losses Unpaid	(28B) Total Non-U.S. Losses Incurred, Net		(24I) Total U.S. Net Losses Unpaid	(28I) Total U.S. Losses Incurred, Net	(24II) Total Non-U.S. Net Losses Unpaid	(28II) Total Non-U.S. Losses Incurred, Net		
(2) 2015	0		0		0		0		0		0		0	0
(3) 2016	0		0		0		0		0		0		0	0
(4) 2017	0		0		0		0		0		0		0	0
(5) 2018	0		0		0		0		0		0		0	0
(6) 2019	0		0		0		0		0		0		0	0
(7) 2020	0		0		0		0		0		0		0	0
(8) 2021	0		0		0		0		0		0		0	0
(9) 2022	0		0		0		0		0		0		0	0
(10) 2023	0		0		0		0		0		0		0	0
(11) 2024	0		0		0		0		0		0		0	0
(12) Totals		0		0	0	0	0	0	0	0	0	0	0	0

Vendor link items

manual data entry items

\*Please provide losses only; no expenses. Catastrophe losses should 1.) be the net losses incurred for the reporting entity, not net losses incurred for the group; 2.) be a subset of, and therefore, less than, total net losses reported in Column (28); 3.) be reported in 000s to be consistent with all values reported in this exhibit; and 4.) not be reported as negative amounts.

\*\*If this line of business has incurred U.S. catastrophe losses arising from events either included on the list of U.S. catastrophe events approved by the Catastrophe Risk Subgroup as available on the NAIC's website or numbered and labeled by PCS as a hurricane, tropical storm, or earthquake, provide only the amount of those catastrophe losses in Catastrophe Experience columns (24A) and (28A).

\*\*\*If this line of business has incurred non-U.S. catastrophe losses arising from a hurricane, tropical storm, or earthquake from an event included on the list of non-U.S. catastrophe events approved by the Catastrophe Risk Subgroup as available on the NAIC's website, provide only the amount of those catastrophe losses in Catastrophe Experience Columns (24B) and (28B).

\*\*\*\*Columns 24I through 28III are for informational purposes only.

SCHEDULE P PART IJ - AUTO PHYSICAL DAMAGE PR112

	(3) Premiums Earned, Net	(24) Total Net Losses and Expenses Unpaid	(28) Total Losses and Expenses Incurred, Net	Earthquake and Hurricane Experience*				(28C) Total Losses and Expenses Incurred, Net excluding Earthquake and Hurricane Losses	Wildfire Catastrophe Experience*				(28III) Expenses Incurred, Net excluding Earthquake, Hurricane and Wildfire Losses
				(24A) Total U.S. Net Losses Unpaid	(28A) Total U.S. Losses Incurred, Net	(24B) Total Non-U.S. Net Losses Unpaid	(28B) Total Non-U.S. Losses Incurred, Net		(24I) Total U.S. Net Losses Unpaid	(28I) Total U.S. Losses Incurred, Net	(24II) Total Non-U.S. Net Losses Unpaid	(28II) Total Non-U.S. Losses Incurred, Net	
(2) 2015	0		0		0		0		0		0		0
(3) 2016	0		0		0		0		0		0		0
(4) 2017	0		0		0		0		0		0		0
(5) 2018	0		0		0		0		0		0		0
(6) 2019	0		0		0		0		0		0		0
(7) 2020	0		0		0		0		0		0		0
(8) 2021	0		0		0		0		0		0		0
(9) 2022	0		0		0		0		0		0		0
(10) 2023	0		0		0		0		0		0		0
(11) 2024	0		0		0		0		0		0		0
(12) Totals		0		0		0			0		0		0

vendor link items  
 manual data entry items

\*Please provide losses only; no expenses. Catastrophe losses should 1.) be the net losses incurred for the reporting entity, not net losses incurred for the group; 2.) be a subset of, and therefore, less than, total net losses reported in Column (28); 3.) be reported in 000s to be consistent with all values reported in this exhibit; and 4.) not be reported as negative amounts.

\*\*If this line of business has incurred U.S. catastrophe losses arising from events either included on the list of U.S. catastrophe events approved by the Catastrophe Risk Subgroup as available on the NAIC's website or numbered and labeled by PCS as a hurricane, tropical storm, or earthquake, provide only the amount of those catastrophe losses in Catastrophe Experience columns (24A) and (28A).

\*\*\*If this line of business has incurred non-U.S. catastrophe losses arising from a hurricane, tropical storm, or earthquake from an event included on the list of non-U.S. catastrophe events approved by the Catastrophe Risk Subgroup as available on the NAIC's website, provide only the amount of those catastrophe losses in Catastrophe Experience Columns (24B) and (28B).

\*\*\*\*Columns 24I through 28III are for informational purposes only.

SCHEDULE P PART 1K - FIDELITY/SURETY PR113

	(3) Premiums Earned, Net	(24) Total Net Losses and Expenses Unpaid	(28) Total Losses and Expenses Incurred, Net	Earthquake and Hurricane Experience*				(28C) Total Losses and Expenses Incurred, Net excluding Earthquake and Hurricane Losses	Wildfire Catastrophe Experience*				(28III) Expenses Incurred, Net excluding Earthquake, Hurricane and Wildfire Losses
				(24A) Total U.S. Net Losses Unpaid	(28A) Total U.S. Losses Incurred, Net	(24B) Total Non-U.S. Net Losses Unpaid	(28B) Total Non-U.S. Losses Incurred, Net		(24I) Total U.S. Net Losses Unpaid	(28I) Total U.S. Losses Incurred, Net	(24II) Total Non-U.S. Net Losses Unpaid	(28II) Total Non-U.S. Losses Incurred, Net	
(2) 2015	0		0		0		0		0		0		0
(3) 2016	0		0		0		0		0		0		0
(4) 2017	0		0		0		0		0		0		0
(5) 2018	0		0		0		0		0		0		0
(6) 2019	0		0		0		0		0		0		0
(7) 2020	0		0		0		0		0		0		0
(8) 2021	0		0		0		0		0		0		0
(9) 2022	0		0		0		0		0		0		0
(10) 2023	0		0		0		0		0		0		0
(11) 2024	0		0		0		0		0		0		0
(12) Totals		0		0		0			0		0		0

vendor link items  
 manual data entry items

\*Please provide losses only; no expenses. Catastrophe losses should 1.) be the net losses incurred for the reporting entity, not net losses incurred for the group; 2.) be a subset of, and therefore, less than, total net losses reported in Column (28); 3.) be reported in 000s to be consistent with all values reported in this exhibit; and 4.) not be reported as negative amounts.

\*\*If this line of business has incurred U.S. catastrophe losses arising from events either included on the list of U.S. catastrophe events approved by the Catastrophe Risk Subgroup as available on the NAIC's website or numbered and labeled by PCS as a hurricane, tropical storm, or earthquake, provide only the amount of those catastrophe losses in Catastrophe Experience columns (24A) and (28A).

\*\*\*If this line of business has incurred non-U.S. catastrophe losses arising from a hurricane, tropical storm, or earthquake from an event included on the list of non-U.S. catastrophe events approved by the Catastrophe Risk Subgroup as available on the NAIC's website, provide only the amount of those catastrophe losses in Catastrophe Experience Columns (24B) and (28B).

\*\*\*\*Columns 24I through 28III are for informational purposes only.

SCHEDULE P PART 1L - OTHER (Including Credit, Accident and Health) PR114

	(3) Premiums Earned, Net	(24) Total Net Losses and Expenses Unpaid	(28) Total Losses and Expenses Incurred, Net	Earthquake and Hurricane Experience*				(28C) Total Losses and Expenses Incurred, Net excluding Earthquake and Hurricane Losses	Wildfire Catastrophe Experience*				(28III) Total Losses and Expenses Incurred, Net excluding Earthquake, Hurricane and Wildfire Losses	
				(24A) Total U.S. Net Losses Unpaid	(28A) Total U.S. Losses Incurred, Net	(24B) Total Non-U.S. Net Losses Unpaid	(28B) Total Non-U.S. Losses Incurred, Net		(24I) Total U.S. Net Losses Unpaid	(28I) Total U.S. Losses Incurred, Net	(24II) Total Non-U.S. Net Losses Unpaid	(28II) Total Non-U.S. Losses Incurred, Net		
(2) 2015	0		0		0		0		0		0		0	
(3) 2016	0		0		0		0		0		0		0	
(4) 2017	0		0		0		0		0		0		0	
(5) 2018	0		0		0		0		0		0		0	
(6) 2019	0		0		0		0		0		0		0	
(7) 2020	0		0		0		0		0		0		0	
(8) 2021	0		0		0		0		0		0		0	
(9) 2022	0		0		0		0		0		0		0	
(10) 2023	0		0		0		0		0		0		0	
(11) 2024	0		0		0		0		0		0		0	
(12) Totals		0		0		0			0		0		0	

vendor link items

manual data entry items

\*Please provide losses only; no expenses. Catastrophe losses should 1.) be the net losses incurred for the reporting entity, not net losses incurred for the group; 2.) be a subset of, and therefore, less than, total net losses reported in Column (28); 3.) be reported in 000s to be consistent with all values reported in this exhibit; and 4.) not be reported as negative amounts.

\*\*If this line of business has incurred U.S. catastrophe losses arising from events either included on the list of U.S. catastrophe events approved by the Catastrophe Risk Subgroup as available on the NAIC's website or numbered and labeled by PCS as a hurricane, tropical storm, or earthquake, provide only the amount of those catastrophe losses in Catastrophe Experience columns (24A) and (28A).

\*\*\*If this line of business has incurred non-U.S. catastrophe losses arising from a hurricane, tropical storm, or earthquake from an event included on the list of non-U.S. catastrophe events approved by the Catastrophe Risk Subgroup as available on the NAIC's website, provide only the amount of those catastrophe losses in Catastrophe Experience Columns (24B) and (28B).

\*\*\*\*Columns 24I through 28III are for informational purposes only.



SCHEDULE P PART 1S - FINANCIAL GUARANTY/MORTGAGE GUARANTY PR121

	(3) Premiums Earned, Net	(24) Total Net Losses and Expenses Unpaid	(28) Total Losses and Expenses Incurred, Net	Earthquake and Hurricane Experience*				(28C) Total Losses and Expenses Incurred, Net excluding Earthquake and Hurricane Losses	Wildfire Catastrophe Experience*				(28III) Total Losses and Expenses Incurred, Net excluding Earthquake, Hurricane and Wildfire Losses	
				(24A) Total U.S. Net Losses Unpaid	(28A) Total U.S. Losses Incurred, Net	(24B) Total Non-U.S. Net Losses Unpaid	(28B) Total Non-U.S. Losses Incurred, Net		(24I) Total U.S. Net Losses Unpaid	(28I) Total U.S. Losses Incurred, Net	(24II) Total Non-U.S. Net Losses Unpaid	(28II) Total Non-U.S. Losses Incurred, Net		
(2) 2015	0		0		0		0		0		0		0	0
(3) 2016	0		0		0		0		0		0		0	0
(4) 2017	0		0		0		0		0		0		0	0
(5) 2018	0		0		0		0		0		0		0	0
(6) 2019	0		0		0		0		0		0		0	0
(7) 2020	0		0		0		0		0		0		0	0
(8) 2021	0		0		0		0		0		0		0	0
(9) 2022	0		0		0		0		0		0		0	0
(10) 2023	0		0		0		0		0		0		0	0
(11) 2024	0		0		0		0		0		0		0	0
(12) Totals		0		0	0	0			0		0		0	0

vendor link items  
 manual data entry items

\*Please provide losses only; no expenses. Catastrophe losses should 1.) be the net losses incurred for the reporting entity, not net losses incurred for the group; 2.) be a subset of, and therefore, less than, total net losses reported in Column (28); 3.) be reported in 000s to be consistent with all values reported in this exhibit; and 4.) not be reported as negative amounts.

\*\*If this line of business has incurred U.S. catastrophe losses arising from events either included on the list of U.S. catastrophe events approved by the Catastrophe Risk Subgroup as available on the NAIC's website or numbered and labeled by PCS as a hurricane, tropical storm, or earthquake, provide only the amount of those catastrophe losses in Catastrophe Experience columns (24A) and (28A).

\*\*\*If this line of business has incurred non-U.S. catastrophe losses arising from a hurricane, tropical storm, or earthquake from an event included on the list of non-U.S. catastrophe events approved by the Catastrophe Risk Subgroup as available on the NAIC's website, provide only the amount of those catastrophe losses in Catastrophe Experience Columns (24B) and (28B).

\*\*\*\*Columns 24I through 28III are for informational purposes only.

SCHEDULE P PART IT - WARRANTY PR122

	(3) Premiums Earned, Net	(24) Total Net Losses and Expenses Unpaid	(28) Total Losses and Expenses Incurred, Net	Earthquake and Hurricane Experience*				(28C) Total Losses and Expenses Incurred, Net excluding Earthquake and Hurricane Losses	Wildfire Catastrophe Experience*				(28III) Total Losses and Expenses Incurred, Net excluding Earthquake, Hurricane and Wildfire Losses
				(24A) Total U.S. Net Losses Unpaid	(28A) Total U.S. Losses Incurred, Net	(24B) Total Non-U.S. Net Losses Unpaid	(28B) Total Non-U.S. Losses Incurred, Net		(24I) Total U.S. Net Losses Unpaid	(28I) Total U.S. Losses Incurred, Net	(24II) Total Non-U.S. Net Losses Unpaid	(28II) Total Non-U.S. Losses Incurred, Net	
(2) 2015	0		0		0		0		0		0		0
(3) 2016	0		0		0		0		0		0		0
(4) 2017	0		0		0		0		0		0		0
(5) 2018	0		0		0		0		0		0		0
(6) 2019	0		0		0		0		0		0		0
(7) 2020	0		0		0		0		0		0		0
(8) 2021	0		0		0		0		0		0		0
(9) 2022	0		0		0		0		0		0		0
(10) 2023	0		0		0		0		0		0		0
(11) 2024	0		0		0		0		0		0		0
(12) Totals		0		0		0			0		0		0

vendor link items  
 manual data entry items

\*Please provide losses only; no expenses. Catastrophe losses should 1.) be the net losses incurred for the reporting entity, not net losses incurred for the group; 2.) be a subset of, and therefore, less than, total net losses reported in Column (28); 3.) be reported in 000s to be consistent with all values reported in this exhibit; and 4.) not be reported as negative amounts.

\*\*If this line of business has incurred U.S. catastrophe losses arising from events either included on the list of U.S. catastrophe events approved by the Catastrophe Risk Subgroup as available on the NAIC's website or numbered and labeled by PCS as a hurricane, tropical storm, or earthquake, provide only the amount of those catastrophe losses in Catastrophe Experience columns (24A) and (28A).

\*\*\*If this line of business has incurred non-U.S. catastrophe losses arising from a hurricane, tropical storm, or earthquake from an event included on the list of non-U.S. catastrophe events approved by the Catastrophe Risk Subgroup as available on the NAIC's website, provide only the amount of those catastrophe losses in Catastrophe Experience Columns (24B) and (28B).

\*\*\*\*Columns 24I through 28II are for informational purposes only.

**SCHEDULE P PART 2I - SPECIAL PROPERTY PR211**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
(2) 2015	0									0
(3) 2016		0								0
(4) 2017			0							0
(5) 2018				0						0
(6) 2019					0					0
(7) 2020						0				0
(8) 2021							0			0
(9) 2022								0		0
(10) 2023									0	0

**SCHEDULE P PART 2J - AUTO PHYSICAL DAMAGE PR212**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
(2) 2015	0									0
(3) 2016		0								0
(4) 2017			0							0
(5) 2018				0						0
(6) 2019					0					0
(7) 2020						0				0
(8) 2021							0			0
(9) 2022								0		0
(10) 2023									0	0

**SCHEDULE P PART 2K - FIDELITY/SURETY PR213**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
(2) 2015	0									0
(3) 2016		0								0
(4) 2017			0							0
(5) 2018				0						0
(6) 2019					0					0
(7) 2020						0				0
(8) 2021							0			0
(9) 2022								0		0
(10) 2023									0	0

**SCHEDULE P PART 2L - OTHER ( INCLUDING CREDIT, ACCIDENT & HEALTH) PR214**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
(2) 2015	0									0
(3) 2016		0								0
(4) 2017			0							0
(5) 2018				0						0
(6) 2019					0					0
(7) 2020						0				0
(8) 2021							0			0
(9) 2022								0		0
(10) 2023									0	0

**SCHEDULE P PART 2S - FINANCIAL GUARANTY/MORTGAGE GUARANTY PR221**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
(2) <b>2015</b>	0									0
(3) <b>2016</b>		0								0
(4) <b>2017</b>			0							0
(5) <b>2018</b>				0						0
(6) <b>2019</b>					0					0
(7) <b>2020</b>						0				0
(8) <b>2021</b>							0			0
(9) <b>2022</b>								0		0
(10) <b>2023</b>									0	0

**SCHEDULE P PART 2T - WARRANTY PR222**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
(2) <b>2015</b>	0									0
(3) <b>2016</b>		0								0
(4) <b>2017</b>			0							0
(5) <b>2018</b>				0						0
(6) <b>2019</b>					0					0
(7) <b>2020</b>						0				0
(8) <b>2021</b>							0			0
(9) <b>2022</b>								0		0
(10) <b>2023</b>									0	0



**SCHEDULE P PART 31 - SPECIAL PROPERTY PR301**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
(2) 2015	0	0	0	0	0	0	0	0	0	0
(3) 2016		0	0	0	0	0	0	0	0	0
(4) 2017			0	0	0	0	0	0	0	0
(5) 2018				0	0	0	0	0	0	0
(6) 2019					0	0	0	0	0	0
(7) 2020						0	0	0	0	0
(8) 2021							0	0	0	0
(9) 2022								0	0	0
(10) 2023									0	0

**SCHEDULE P PART 3J - AUTO PHYSICAL DAMAGE - PR302**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
(2) 2015	0	0	0	0	0	0	0	0	0	0
(3) 2016		0	0	0	0	0	0	0	0	0
(4) 2017			0	0	0	0	0	0	0	0
(5) 2018				0	0	0	0	0	0	0
(6) 2019					0	0	0	0	0	0
(7) 2020						0	0	0	0	0
(8) 2021							0	0	0	0
(9) 2022								0	0	0
(10) 2023									0	0

**SCHEDULE P PART 3K - FIDELITY/SURETY — PR303**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
<del>(2)</del> 2015	0	0	0	0	0	0	0	0	0	0
<del>(3)</del> 2016		0	0	0	0	0	0	0	0	0
<del>(4)</del> 2017			0	0	0	0	0	0	0	0
<del>(5)</del> 2018				0	0	0	0	0	0	0
<del>(6)</del> 2019					0	0	0	0	0	0
<del>(7)</del> 2020						0	0	0	0	0
<del>(8)</del> 2021							0	0	0	0
<del>(9)</del> 2022								0	0	0
<del>(10)</del> 2023									0	0

**SCHEDULE P PART 3L - OTHER (INCLUDE CREDIT, ACCIDENT AND HEALTH — PR304**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
(2) 2015	0	0	0	0	0	0	0	0	0	0
(3) 2016		0	0	0	0	0	0	0	0	0
(4) 2017			0	0	0	0	0	0	0	0
(5) 2018				0	0	0	0	0	0	0
(6) 2019					0	0	0	0	0	0
(7) 2020						0	0	0	0	0
(8) 2021							0	0	0	0
(9) 2022								0	0	0
(10) 2023									0	0

**SCHEDULE P PART 3S - FINANCIAL GUARANTY/MORTGAGE GUARANTY PR305**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
<del>(2) 2015</del>	0	0	0	0	0	0	0	0	0	0
<del>(3) 2016</del>		0	0	0	0	0	0	0	0	0
<del>(4) 2017</del>			0	0	0	0	0	0	0	0
<del>(5) 2018</del>				0	0	0	0	0	0	0
<del>(6) 2019</del>					0	0	0	0	0	0
<del>(7) 2020</del>						0	0	0	0	0
<del>(8) 2021</del>							0	0	0	0
<del>(9) 2022</del>								0	0	0
<del>(10) 2023</del>									0	0

**SCHEDULE P PART 3T - WARRANTY PR306**

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
(2) 2015	0	0	0	0	0	0	0	0	0	0
(3) 2016		0	0	0	0	0	0	0	0	0
(4) 2017			0	0	0	0	0	0	0	0
(5) 2018				0	0	0	0	0	0	0
(6) 2019					0	0	0	0	0	0
(7) 2020						0	0	0	0	0
(8) 2021							0	0	0	0
(9) 2022								0	0	0
(10) 2023									0	0

Priority 1 – High Priority  
 Priority 2 – Medium Priority  
 Priority 3 – Low Priority

**CAPITAL ADEQUACY (E) TASK FORCE  
 WORKING AGENDA ITEMS FOR CALENDAR YEAR 2024**

2024 #	Owner	2024 Priority	Expected Completion Date	Working Agenda Item	Source	Comments	Date Added to Agenda
<b>Ongoing Items – Life RBC</b>							
L1	Life RBC WG	Ongoing	Ongoing	Make technical corrections to Life RBC instructions, blank and /or methods to provide for consistent treatment among asset types and among the various components of the RBC calculations for a single asset type.			
L2	Life RBC WG	1	2023 or later	1. Monitor the impact of the changes to the variable annuities reserve framework and risk-based capital (RBC) calculation and determine if additional revisions need to be made. 2. Develop and recommend appropriate changes including those to improve accuracy and clarity of variable annuity (VA) capital and reserve requirements.	CADTF	Being addressed by the Variable Annuities Capital and Reserve (E/A) Subgroup	
L3	Life RBC WG	1	2023 or later	Provide recommendations for the appropriate treatment of longevity risk transfers by the updated longevity factors and consider expanding the scope to include all payout annuities.	New Jersey	Being addressed by the Longevity (E/A) Subgroup	
L4	Life RBC WG	1	2023 or later	Monitor the economic scenario governance framework, review material economic scenario generator updates, key economic conditions, and metrics, support the implementation of an economic scenario generator for use in statutory reserve and capital calculations and develop and maintain acceptance criteria		Being addressed by the Generator of Economic Scenarios (GOES) (E/A) Subgroup	
<b>Carryover Items Currently being Addressed – Life RBC</b>							
L4	Life RBC WG	1	2023 or later	Update the current C-3 Phase I or C-3 Phase II methodology to include indexed annuities with consideration of contingent deferred annuities as well	AAA		
L5	Life RBC WG	1	2023 or later	Review companies at action levels, including previous years, to determine what drivers of the events are and consider whether changes to the RBC statistics are warranted.			
L6	Life RBC WG	1	2023 or later	Work with the Academy on creating guidance for the adopted C-2 mortality treatment for 2023 and next steps.			
2024 #	Owner	2024 Priority	Expected Completion Date	Working Agenda Item	Source	Comments	Date Added to Agenda
<b>Ongoing Items – RBC IR &amp; E</b>							
<b>Carryover Items Currently being Addressed – RBC IR &amp; E</b>							
IR1	RBC IRE	2	2023 or later	Supplementary Investment Risks Interrogatories (SIRI)	Referred from CADTF Referral from Blackrock and IL DOI	The Task Force received the referral on Oct. 27. This referral will be tabled until the bond factors have been adopted	1/12/2022 11/19/2020

							and the TF will conduct a holistic review all investment referrals.	
IR2	RBC IRE	2	2023 or later	NAIC Designation for Schedule D, Part 2 Section 2 - Common Stocks Equity investments that have an underlying bond characteristic should have a lower RBC charge. Similar to existing guidance for SVO-identified ETFs reported on Schedule D-1, are treated as bonds.	<b>Referred from CADTF</b> Referral from SAPWG 8/13/2018	10/8/19 - Exposed for a 30-day Comment period ending 11/8/2019 3-22-20 - Tabled discussion pending adoption of the bond structure and factors.	<b>1/12/2022</b>  10/11/2018	
IR3	RBC IRE	2	2023 or later	Structured Notes - defined as an investment that is structured to resemble a debt instrument, where the contractual amount of the instrument to be paid at maturity is at risk for other than the failure of the borrower to pay the contractual amount due. Structured notes reflect derivative instruments (i.e., put option or forward contract) that are wrapped by a debt structure.	<b>Referred from CADTF</b> Referral from SAPWG April 16, 2019	10/8/19 - Exposed for a 30-day Comment period ending 11/8/2019 3-22-20 - Tabled discussion pending adoption of the bond structure and factors.	<b>1/12/2022</b>  8/4/2019	
IR4	RBC IRE	2	2023 or later	Comprehensive Fund Review for investments reported on Schedule D Pt 2 Sn2	<b>Referred from CADTF</b> Referral from VOSTF 9/21/2018	Discussed during Spring Mtg. NAIC staff to do analysis. 10/8/19 - Exposed for a 30-day comment period ending 11/8/19 3-22-20 - Tabled discussion pending adoption of the bond structure and factors.	<b>1/12/2022</b>  11/16/2018	
<b>New Items – RBC IR &amp; E</b>								
IR5			2023 or later	Evaluate the appropriate RBC treatment of Asset-Backed Securities (ABS), including Collateralized Loan Obligations (CLO), collateralized fund obligations (CFOs), or other similar securities carrying similar types of tail risk (Complex Assets).	Request from E Committee, SAPWG, VOSTF	Per the request of E Committee comments were solicited asking if these types of assets should be considered a part of the RBC framework.	<b>1/12/2022</b>	
IR6			2023 or later	Evaluate the appropriate RBC treatment of Residual Tranches.	Request from E Committee, SAPWG, VOSTF	Per the request of E Committee comments were solicited asking if these types of assets should be considered	<b>1/12/2022</b>	



						a part of the RBC framework.	
IR7			2025 or later	Phase 2 Bond analysis - evaluate and develop an approach to map other ABS to current bond factors following the established principles from Phase I where the collateral has an assigned RBC. This project will likely require an outside consultant and the timeline could exceed 2-3 years.	Request from E Committee	Per the request of E Committee comments were solicited requesting the need for outside review.	1/12/2022
IR8	RBC IRE		2023 or later	Address the tail risk concerns not captured by reserves for privately structured securities.	Referral from the Macroprudential (E) Working Group		8/11/2022
<b>2024 #</b>	<b>Owner</b>	<b>2024 Priority</b>	<b>Expected Completion Date</b>	<b>Working Agenda Item</b>	<b>Source</b>	<b>Comments</b>	<b>Date Added to Agenda</b>
<b>Ongoing Items – P&amp;C RBC</b>							
P1	Cat Risk SG	1		Continue development of RBC formula revisions to include a risk charge based on catastrophe model output:			
			Year-end 2024 or later	a) Evaluate other catastrophe risks for possible inclusion in the charge - determine whether to recommend developing charges for any additional perils, and which perils or perils those should be.	Referral from the Climate and Resiliency Task Force. March 2021	12/2/23-Proposal 2023-15-CR (Convective Storm for Informational Purposes Only Structure) was exposed for a 60-day comment period at the Joint P/C RBC and Cat Risk SG meeting.	4/26/2021
P2	PCRBCWG	1	Ongoing	Review and analyze the P/C RBC charges that have not been reviewed since developed.			3/23/2023
<b>Carryover Items Currently being Addressed – P&amp;C RBC</b>							
P3	P&C RBC WG	1	Year-end 2025 or later	Evaluate a) the current growth risk methodology whether it is adequately reflects both operational risk and underwriting risk; b) the premium and reserve based growth risk factors either as a stand-alone task or in conjunction with the ongoing underwriting risk factor review with consideration of the operational risk component of excessive growth; c) whether the application of the growth factors to NET proxies adequately accounts for growth risk that is ceded to reinsures that do not trigger growth risk in their own right. <i>Referral to the Academy:</i> <a href="https://naiconline.sharepoint.com/teams/FRSRBC/PRBC/2018%20Calls%20-%20PRBC/PCRBC/06_14/attC01_Growth%20Risk%20Referral%20to%20Academy.pdf">https://naiconline.sharepoint.com/teams/FRSRBC/PRBC/2018%20Calls%20-%20PRBC/PCRBC/06_14/attC01_Growth%20Risk%20Referral%20to%20Academy.pdf</a>	Referral from Operational Risk Subgroup	1) Sent a referral to the Academy on 6/14/18 conference call.	1/25/2018

P4	P&C RBC WG	1	2024 Summer Meeting or later	Continue working with the Academy to review the methodology and revise the underwriting (Investment Income Adjustment, Loss Concentration, LOB UW risk) charges in the PRBC formula as appropriate.		11/16/23 The Academy provided a presentation on their Underwriting Risk Report at the Joint PCRBC And Cat Risk SG meeting.	6/10/2019
P5	P&C RBC WG	1	2025 Summer Meeting or later	Evaluate the Underwriting Risk Line 1 Factors in the P/C formula.			7/30/2020
P6	Cat Risk SG	1	2025 Spring Meeting	Quantify the R5 Ex-cat Factors for wildfire peril (for informational purposes only) Evaluate the possibility of adding PR018A to determine the R5 including the wildfire peril			3/21/2023
P7	Cat Risk SG	2	2025 Spring Meeting	Evaluate the impact of flood peril to the insurance market			3/21/2023
P8	PCRBCWG	1	2024 Spring Meeting	Adding pet insurance line in the RBC PR017, 018, 035 and RBC Schedule P, parts due to the adoption of the Annual Statement Blanks proposal 2023-01BWG.		12/2/23 Proposal 2023-14-P (Pet Insurance) was exposed for a 60-day comment period at the Joint P/C RBC and Cat Risk SG meeting. <b>2/21/24 Proposal 2023-01BWG was adopted at the BWG Interim Meeting.</b>	7/27/2023
<b>New Items – P&amp;C RBC</b>							
P9	Cat Risk SG	1	2024 Summer Meeting	Create a new disclosure to collect more information of insurers catastrophe reinsurance programs. <i>Referral from Reinsurance (E) Task Force:</i> <a href="https://naiconline.sharepoint.com/teams/FRSRBC/PRBC/2024%20Calls%20-%20Joint/03_17_NM/Att2c_%20Referral%20from%20RTF%20to%20PCRBCWG%20(1).docx">https://naiconline.sharepoint.com/teams/FRSRBC/PRBC/2024%20Calls%20-%20Joint/03_17_NM/Att2c_%20Referral%20from%20RTF%20to%20PCRBCWG%20(1).docx</a>	Referral from Reinsurance (E) Task Force	11/16/23 Received a referral and proposal from RTF. 12/2/23 Proposal 2023-13-CR (Cat Risk Insurance Program Interrogatory) was exposed for a 60-day comment period at the Joint PCRBC and Cat Risk SG meeting.	2/20/2024
P10	PCRBCWG	1	2024 Summer Meeting	Update PR019, Line 25 Annual Statement Source and the Statement Value to avoid double-counting on Stop-Loss premium.			2/20/2024

P11	Cat Risk SG	1	2024 Summer Meeting	Create additional Rcat pages to collect commercial Cat modelers product information known as "Climate Conditioned Catalogs", which would provide an estimate of climate change for hurricane and wildfire.	From Solvency Workstream of the Climate & Resiliency (EX) Task Force	1/29/24 Proposal 2023-17-CR was exposed for a 30-day public comment period at the Cat Risk SG Interim Meeting on Jan. 29.	1/29/2024
P12	PCRBCWG	1	2024 Spring Meeting	Change the RBC Schedule P short-tail lines to vendor link, which will pull directly from the Annual Statement, Schedule P short-tail lines as the adopted blanks proposal 2023-16BWG modified the Schedule P short-tail lines to show 10 years of data beginning in 2024.		2/21/24 Blanks Proposal 2023-16BWG was adopted at the BWG meeting	
<b>2024 #</b>	<b>Owner</b>	<b>2024 Priority</b>	<b>Expected Completion Date</b>	<b>Working Agenda Item</b>	<b>Source</b>	<b>Comments</b>	<b>Date Added to Agenda</b>
<b>Ongoing Items – Health RBC</b>							
X1	Health RBC WG	Yearly	Yearly	Evaluate the yield of the 6-month U.S. Treasury Bond as of Jan. 1 each year to determine if further modification to the Comprehensive Medical, Medicare Supplement and Dental and Vision underwriting risk factors is required. Any adjustments will be rounded up to the nearest 0.5%.	HRBCWG	Adopted 2022-16-CA (YE-2023) Exposed 2024-09-CA (YE-2024)	11/4/2021
X2	Health RBC WG	3	Ongoing	Continue to monitor the Federal Health Care Law or any other development of federal level programs and actions (e.g., state reinsurance programs, association health plans, mandated benefits, and cross-border) for future changes that may have an impact on the Health RBC Formula.	4/13/2010 CATF Call	Adopted 2014-01H Adopted 2014-02H Adopted 2014-05H Adopted 2014-06H Adopted 2014-24H Adopted 2014-25H Adopted 2016-01-H Adopted 2017-09-CA Adopted 2017-10-H The Working Group will continually evaluate any changes to the health formula because of ongoing federal discussions and legislation.  Discuss and monitor the development of federal level programs and the potential impact on the HRBC formula.	1/11/2018
<b>Carryover Items Currently being Addressed – Health RBC</b>							

X3	Health RBC WG	2	Year-End 2025 RBC or Later	Consider changes for stop-loss insurance or reinsurance.	AAA Report at Dec. 2006 Meeting	(Based on Academy report expected to be received at YE-2016) 2016-17-CA Adopted proposal 2023-01-CA	
X4	Health RBC WG	2	Year-end 2025 RBC or later	Review the individual factors for each health care receivables line within the Credit Risk H3 component of the RBC formula.	HRBC WG	Adopted 2016-06-H Rejected 2019-04-H Annual Statement Guidance (Year-End 2020) and Annual Statement Blanks Proposal (Year-End 2021) referred to the Blanks (E) Working Group	
X5	Health RBC WG	1	Year-end 2025 RBC or later	Work with the Academy to perform a comprehensive review of the H2 - Underwriting Risk component of the health RBC formula including the Managed Care Credit review (Item 18 above)  Review the Managed Care Credit calculation in the health RBC formula - specifically Category 2a and 2b.  Review Managed Care Credit across formulas.  As part of the H2 - Underwriting Risk review, determine if other lines of business should include investment income and how investment income would be incorporated into the existing lines if there are changes to the structure.	HRBCWG	Review the Managed Care Category and the credit calculated, more specifically the credit calculated when moving from Category 0 & 1 to 2a and 2b.	4/23/2021  12/3/2018
X6	Health RBC WG	1	Year-end 2025 or later	Review referral letter from the Operational Risk (E) Subgroup on the excessive growth charge and the development of an Ad Hoc group to charge.	HRBCWG	Review if changes are required to the Health RBC Formula	4/7/2019
X7	Health RBC WG	3	Year-End 2025 or later	Discuss and determine the re-evaluation of the bond factors for the 20 designations.	Referral from Investment RBC July/2020	Working Group will use two- and five-year time horizon factors in 2020 impact analysis. Proposal 2021-09-H - Adopted 5/25/21 by the WG	9/11/2020
<b>New Items – Health RBC</b>							
<b>2024 #</b>	<b>Owner</b>	<b>2024 Priority</b>	<b>Expected Completion Date</b>	<b>Working Agenda Item</b>	<b>Source</b>	<b>Comments</b>	<b>Date Added to Agenda</b>

Ongoing Items – Task Force								
CA1	CADTF	2	2023	Affiliated Investment Subsidiaries Referral Ad Hoc group formed Sept. 2016	Ad Hoc Group	Structural and instructions changes will be exposed by each individual working group for comment in 2022 with an anticipated effective date of 2023. Proposal 2022-09-CA was adopted at the 2022 Summer Meeting. Proposal 2022-09-CA MOD was adopted at the 2023 Spring Meeting. Proposal 2023-12-CA was adopted at the 2023 Fall Meeting. Editorial Proposal 2024-08-CA will be exposed on 3/17/24 for a 30-day public comment,		
CA2			Ongoing	All investment related items referred to the RBC Investment Risk & Evaluation (E) Working Group		Proposal 2024-02-CA (Residual Structure PC & Health) was exposed for comment ending Mar. 2.		1/12/2022
CA3	CADTF	3	Ongoing	Receivable for Securities factor		Consider evaluating the factor every 3 years. (2024, 2027, 2030 etc.)  Factors will be exposed for comments in April 2024.		
CA4	CADTF	1	2026 or later	Established the Risk Evaluation Ad Hoc Group to: a) Evaluate the RBC factors. b) Potentially develop an evaluating process. c) Prioritize those factors that require reviewing.		7/26/23 – the Risk Evaluation Ad Hoc Group established 3 Ad Hoc Subgroup to		03/23/2023

							focus on different issues: 1) RBC Purposes & Guidelines Ad Hoc Subgroup; 2) Asset Concentration Ad Hoc Subgroup; and 3) Geographic Concentration Ad Hoc Subgroup.	
<b>Carryover Items Currently being Addressed – Task Force</b>								
<b>New Items –Task Force</b>								
CA5	CADTF	2	2024 or later	Evaluate if changes should be made in the RBC formula to reflect the split of the Annual Statement, Schedule D, Part 1 into two sections. <i>Referral:</i> SCDPT1	Blanks WG and SAPWG	12/2/23 – the TF agreed to send a referral to the RBCIREWG to continue reviewing this issue.	12/2/2023	
CA6	CADTF	2	2024 or later	Evaluate if changes should be made in the RBC formula to reflect the possible changes in the Annual Statement, Schedule BA proposal for non-bond debt securities <i>Referrals:</i> SCBAPT1	Blanks WG and SAPWG	12/2/23 – the TF received a referral from SAPWG regarding the possible Annual Statement reporting for debt securities that do not qualify as bonds on Schedule BA. TF agreed to forward the referral along with the ACLI comment to the RBCIREWG.	12/2/2023	
CA7	CADTF	2	2024 or later	Evaluate if changes should be made in the RBC formula to reflect the possible changes in Schedule BA Collateral Loan reporting, including structural changes to RBC blanks and forecasting and changes of risk charges that commensurate with underlying collateral type. <i>Referral from Statutory Accounting Principles (E) Working Group:</i> <a href="https://naiconline.sharepoint.com/teams/FRSRBC/Capital%20Adequacy%20CapAd%20Task%20Force/2024%20Calls/03_17NM/Att14Collateral%20Loan%20Memo%20to%20Multiple%20Groups.docx">https://naiconline.sharepoint.com/teams/FRSRBC/Capital%20Adequacy%20CapAd%20Task%20Force/2024%20Calls/03_17NM/Att14Collateral%20Loan%20Memo%20to%20Multiple%20Groups.docx</a>		1/23/24 – the TF received a referral from SAPWG regarding collateral loan reporting changes	1/23/2024	
CA8	CADTF	2	2024 or later	Review the proposal from the ACLI to modify the treatment of repurchase agreements in the Life RBC formula to determine whether its possible application to P/C and Health formulas. <i>Referral from Life Risk-Based Capital (E) Working Group:</i> <a href="#">Att16 2024-06-CA Repurchase Agreements P&amp;C and Health.pdf</a>	Life RBC WG	1/25/24 – the TF received a referral from LRBCWG. Proposal 2024-06-CA (Repurchase Agreements PC & Health) was exposed	1/25/2024	

						for comment ending Mar.2.	
CA9	CADTF	2	2024 or later	Establish a long-term approach for the issue of the negative interest maintenance reserve (IMR) <i>Referrals:</i> Negative IMR	SAPWG	12/2/23 – the TF agreed to forward the referral to LRBCWG.	12/2/2023

## Capital Adequacy (E) Task Force

### RBC Proposal Form

- |   |   |   |
|---|---|---|
| <input checked="" type="checkbox"/> Capital Adequacy (E) Task Force           | <input type="checkbox"/> Health RBC (E) Working Group     | <input type="checkbox"/> Life RBC (E) Working Group                         |
| <input type="checkbox"/> Catastrophe Risk (E) Subgroup                        | <input type="checkbox"/> Investment RBC (E) Working Group | <input type="checkbox"/> Longevity Risk (A/E) Subgroup                      |
| <input type="checkbox"/> Variable Annuities Capital. & Reserve (E/A) Subgroup | <input type="checkbox"/> P/C RBC (E) Working Group        | <input type="checkbox"/> RBC Investment Risk & Evaluation (E) Working Group |

<p style="text-align: right;">DATE: <u>2/8/2024</u></p> <p><b>CONTACT PERSON:</b> <u>Eva Yeung</u></p> <p><b>TELEPHONE:</b> <u>816-783-8407</u></p> <p><b>EMAIL ADDRESS:</b> <u>eyeung@naic.org</u></p> <p><b>ON BEHALF OF:</b> <u>Capital Adequacy (E) Task Force</u></p> <p><b>NAME:</b> <u>Tom Botsko</u></p> <p><b>TITLE:</b> <u>Chair</u></p> <p><b>AFFILIATION:</b> <u>Ohio Department of Insurance</u></p> <p><b>ADDRESS:</b> <u>50 West Town Street, Suite 300</u> <u>Columbus, OH 43215</u></p>	<p style="text-align: center;"><b><u>FOR NAIC USE ONLY</u></b></p> <p>Agenda Item # <u>2024-08-CA</u> Year <u>2024</u></p> <p style="text-align: center;"><b><u>DISPOSITION</u></b></p> <p><b>ADOPTED:</b></p> <p><input type="checkbox"/> TASK FORCE (TF) _____</p> <p><input type="checkbox"/> WORKING GROUP (WF) _____</p> <p><input type="checkbox"/> SUBGROUP (SG) _____</p> <p><b>EXPOSED:</b></p> <p><input type="checkbox"/> TASK FORCE (TF) _____</p> <p><input type="checkbox"/> WORKING GROUP (WG) _____</p> <p><input type="checkbox"/> SUBGROUP (SG) _____</p> <p><b>REJECTED:</b></p> <p><input type="checkbox"/> TF <input type="checkbox"/> WG <input type="checkbox"/> SG _____</p> <p><b>OTHER:</b></p> <p><input type="checkbox"/> DEFERRED TO _____</p> <p><input type="checkbox"/> REFERRED TO OTHER NAIC GROUP _____</p> <p><input type="checkbox"/> (SPECIFY) _____</p>
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#### IDENTIFICATION OF SOURCE AND FORM(S)/INSTRUCTIONS TO BE CHANGED

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

#### DESCRIPTION/REASON OR JUSTIFICATION OF CHANGE(S)

This proposal removes the reference of "H0 Component" and "R0 Component" from the Column 12 heading on pages XR002 and PR003, respectively. The "H0" and "R0" references are misleading in that only affiliate types 1-2 flow into H0 and R0, while affiliate types 3-9 flow into H1 and R2.

#### Additional Staff Comments:

**\*\* This section must be completed on all forms.**

**Revised 2-2023**



XR002

DETAILS FOR AFFILIATED STOCKS

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Name of Affiliate	Affil Type	NAIC Company Code or Alien ID Number	Affiliate's RBC after Covariance Before Basic Operational Risk XR025 Line (41) PR032 Line (60) LR031 Line (69) + (73)	Book/Adjusted Carrying Value (Statement Value) of Affiliate's Common Stock	Valuation Basis of Col (5) M - Market Value after any "discount" A - All Other	Total Value of Affiliate's Outstanding Common Stock	Statutory Surplus of Affiliate Subject to RBC (Adjusted for % Owned)	Book/Adjusted Carrying Value (Statement Value) of Affiliate's Preferred Stock	Total Value of Affiliate's Outstanding Preferred Stock	Percent Owned *	RBC Required (H0-Component)	Market Value Excess Component Affiliated Common Stock RBC Required (H1 Component)
(01)										100.000%	0	0
(02)										100.000%	0	0
(03)										100.000%	0	0
(04)										100.000%	0	0
(05)										100.000%	0	0
(06)										100.000%	0	0
(07)										100.000%	0	0
(08)										100.000%	0	0
(09)										100.000%	0	0
(10)										100.000%	0	0

PR003

DETAILS FOR AFFILIATED STOCKS PR003

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
Name of Affiliate	Affil Type	NAIC Company Code or Alien ID Number	Affiliate's RBC After Covariance before Basic Operational Risk LR031 L69 + L73 PR032 L60 XR025 L41	Book/Adjusted Carrying Value (statement value) of Affiliate's Common Stock	Valuation Basis of Column (5) M - Market Value after any "discount" A - All Other	Total Value of Affiliate's Outstanding Common Stock	Statutory Surplus of Affiliate Subject to RBC (Adjusted for % Owned)	Book/Adjusted Carrying Value (statement value) of Affiliate's Preferred Stock	Total Value of Affiliate's Outstanding Preferred Stock	Percent Owned*	RBC Required (R0-Component)	Market Value Excess Component Affiliate Common Stock RBC Required (R2 Component)
0000001										100.000%	0	0
0000002										100.000%	0	0
0000003										100.000%	0	0
0000004										100.000%	0	0
0000005										100.000%	0	0
0000006										100.000%	0	0
0000007										100.000%	0	0
0000008										100.000%	0	0
0000009										100.000%	0	0
0000010										100.000%	0	0

**MEMORANDUM**

**TO:** Tom Botsko, Chair Representative of the Capital Adequacy (E) Task Force and Chair of the Property and Casualty Risk-Based Capital (E) Working Group and  
Steve Drutz, Chair of the Health Risk-Based Capital (E) Working Group  
Philip Barlow, Chair of the Life Risk-Based Capital (E) Working Group and Chair of the Risk-Based Capital Investment Risk and Evaluation (E) Working Group  
Pat Gosselin, Chair of the Blanks (E) Working Group

**FROM:** Dale Bruggeman, Chair of the Statutory Accounting Principles (E) Working Group  
Kevin Clark, Vice Chair of the Statutory Accounting Principles (E) Working Group

**DATE:** January 23, 2024

**RE:** Collateral Loan Reporting Changes

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At the 2023 Fall National Meeting, the Statutory Accounting Principles (E) Working Group exposed agenda item *2023-28: Collateral Loan Reporting*, which proposes to expand Schedule BA Collateral Loans disclosures and reporting lines to quickly identify the type of collateral in support of admittance of collateral loans in scope of *SSAP No. 21R—Other Admitted Assets*. Currently, collateral loans are only divided by affiliated or unaffiliated and do not identify the various investment categories of underlying collateral. There are also proposed new disclosures to aggregate and identify what is admitted and not admitted within each of those newly proposed investment categories.

Since the existing Schedule BA Collateral Loans reporting lines have a connection to the Asset Valuation Reserve (AVR) and/or Risk Based Capital (RBC) schedules and instructions, we recognize the potential for corresponding revisions to them, and ask for your input. As discussions take place, we will keep you notified of significant changes that occur; and after completion we will forward referrals as necessary. For reporting changes, SAPWG typically sponsors Blanks changes to the Annual Statements, which would include necessary changes in format/instruction to the AVR schedule for the Life statement. We expect the format of RBC schedules and related instructional changes will happen within the RBC working groups in due course, as well as any consideration of risk charges for the proposed expansion lines based on underlying collateral. Please note that the AVR schedule and Life RBC schedules work together and may require some planning on all groups' parts. We also wanted to make you aware that during discussions of reporting changes under the bond project, we identified that some companies are reporting collateral loans as non-private equity funds, which then obtain RBC charges based on the underlying collateral assets.

The agenda item is initially exposed until Jan. 22, 2024, and includes a direct request to industry to provide comments on the proposed collateral loan reporting lines. NAIC staff expects further discussion on the extent of reporting lines needed and how those lines should be mapped to AVR for life companies.

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If you have any questions, or would like to further discuss, please contact the Statutory Accounting Principles (E) Working Group chair or vice chair (Dale Bruggeman, or Kevin Clark), or NAIC staff Julie Gann ([jgann@naic.org](mailto:jgann@naic.org)).

Cc: Julie Gann, Robin Marcotte, Jake Stultz, Jason Farr, Wil Oden, Mary Caswell, Crystal Brown, Dave Fleming, Eva Yeung, Maggie Chang

## Capital Adequacy (E) Task Force

### RBC Proposal Form

- |   |   |   |
|---|---|---|
| <input checked="" type="checkbox"/> Capital Adequacy (E) Task Force           | <input type="checkbox"/> Health RBC (E) Working Group     | <input type="checkbox"/> Life RBC (E) Working Group                         |
| <input type="checkbox"/> Catastrophe Risk (E) Subgroup                        | <input type="checkbox"/> Investment RBC (E) Working Group | <input type="checkbox"/> Longevity Risk (A/E) Subgroup                      |
| <input type="checkbox"/> Variable Annuities Capital. & Reserve (E/A) Subgroup | <input type="checkbox"/> P/C RBC (E) Working Group        | <input type="checkbox"/> RBC Investment Risk & Evaluation (E) Working Group |

<p style="text-align: right;">DATE: <u>1/27/24</u></p> <p><b>CONTACT PERSON:</b> <u>Eva Yeung</u></p> <p><b>TELEPHONE:</b> <u>816-783-8407</u></p> <p><b>EMAIL ADDRESS:</b> <u>eyeung@naic.org</u></p> <p><b>ON BEHALF OF:</b> <u>P/C RBC (E) Working Group</u></p> <p><b>NAME:</b> <u>Tom Botsko</u></p> <p><b>TITLE:</b> <u>Chair</u></p> <p><b>AFFILIATION:</b> <u>Ohio Department of Insurance</u></p> <p><b>ADDRESS:</b> <u>50 West Town Street, Suite 300</u> <u>Columbus, OH 43215</u></p>	<p style="text-align: center;"><b>FOR NAIC USE ONLY</b></p> <hr/> <p>Agenda Item # <u>2024-02-CA</u> Year <u>2024</u></p> <hr/> <p style="text-align: center;"><b>DISPOSITION</b></p> <p><b>ADOPTED:</b></p> <p><input type="checkbox"/> TASK FORCE (TF) _____</p> <p><input type="checkbox"/> WORKING GROUP (WF) _____</p> <p><input type="checkbox"/> SUBGROUP (SG) _____</p> <p><b>EXPOSED:</b></p> <p><input checked="" type="checkbox"/> TASK FORCE (TF) <u>1/31/24</u></p> <p><input type="checkbox"/> WORKING GROUP (WG) _____</p> <p><input type="checkbox"/> SUBGROUP (SG) _____</p> <p><b>REJECTED:</b></p> <p><input type="checkbox"/> TF <input type="checkbox"/> WG <input type="checkbox"/> SG _____</p> <p><b>OTHER:</b></p> <p><input type="checkbox"/> DEFERRED TO _____</p> <p><input type="checkbox"/> REFERRED TO OTHER NAIC GROUP _____</p> <p><input type="checkbox"/> (SPECIFY) _____</p>
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#### IDENTIFICATION OF SOURCE AND FORM(S)/INSTRUCTIONS TO BE CHANGED

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

#### DESCRIPTION/REASON OR JUSTIFICATION OF CHANGE(S)

This proposal adds a line in the Blanks; and updates the instruction on XR008 and PR008 to include the total of residual tranches.

**Additional Staff Comments:**

**\*\* This section must be completed on all forms.**

**Revised 2-2023**

## Fixed Income Assets XR007 and XR008

The RBC requirement for fixed income assets is largely driven by the default risk on those assets. There are two major subcategories: Bonds and Miscellaneous. Bonds include items that meet the definition of a bond, regardless if the bond is long-term (reported on Schedule D-1), short-term (reported on Schedule DA), or a cash equivalent (reported on Schedule E-2). Miscellaneous fixed income assets include non-bond items reported on the cash equivalent and short-term schedules, derivatives, mortgage loans, collateral loans, and other items reported on Schedule BA: Other Long-Term Invested Assets.

### Bonds (XR007)

The bond factors for investment grade bonds (NAIC Designation (1.A-2.C) are based on cash flow modeling. Each bond of a portfolio was annually tested for default (based on a “roll of the dice”) where the default probability varies by NAIC Designation Category and that year’s economic environment. The default probabilities were based on historical data intended to reflect a complete business cycle of favorable or unfavorable credit environments. The risk of default was measured over a five-year time horizon, based on the duration of assets held for health companies.

The factors for NAIC Designation Category 3.A to 6 recognize that these non-investment grade bonds are reported at the lower of amortized cost or fair value. These bond risk factors are based on the market value fluctuation for each of the NAIC Designation Category compared to the market value fluctuation of stocks during the 2008-2009 financial crisis.

While the life and property/casualty formulas have a separate calculation for the bond size factor (based on the number of issuers in the RBC filer’s portfolio), the health formula does not include a separate calculation, instead a bond size component was incorporated into the bond factors. A representative portfolio of 382 issuers was used in calculating the bond risk factors.

There is no RBC requirement for bonds guaranteed by the full faith and credit of the United States, Other U.S. Government Obligations, and securities on the NAIC U.S. Government Money Market Fund List because it is assumed that there is no default risk associated with U.S. Government issued securities.

The book/adjusted carrying value of all bonds should be reported in Columns (1), (2) or (3). The bonds are split into twenty-one different risk classifications. These risk classifications are based on the NAIC Designation Category as defined and permitted in the *Purposes and Procedures Manual of the Investment Analysis Office*. The subtotal of Columns (1), (2), and (3) will be calculated in Column (4). The RBC requirement will be automatically calculated in Column (5).

### Miscellaneous Fixed Income Assets (XR008)

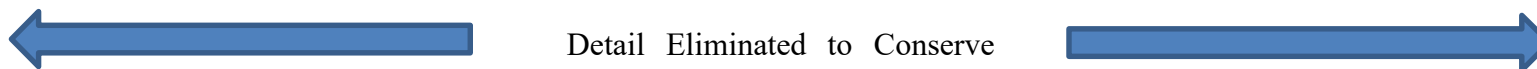
The factor for cash is 0.3 percent. It is recognized that there is a small risk related to possible insolvency of the bank where cash deposits are held. This factor was based on the original unaffiliated NAIC 01 bond risk factor prior to the increased granularity of the NAIC Designation Categories in 2021 and reflects the short-term nature of this risk. The required risk-based capital for cash will not be less than zero, even if the company’s cash position is negative.

The Short-Term Investments to be included in this section are those short-term investments not reflected elsewhere in the formula. The 0.3 percent factor is equal to the factor for cash. The amount reported in Line (8) reflects the total from Schedule DA: Short-Term Investments (Line (6)), less the short-term bonds (Line (7)). (The short-term bonds reported in Line (7) should equal Schedule DA, Part 1, Column 7, Line 2509999999.)

Mortgage loans (reported on Schedule B) and Derivatives (reported on Schedule DB) receive a factor of 5 percent, consistent with other risk-based capital formulas studied by the Working Group.

The following investment types are captured on Schedule BA: Other Long-Term Invested Assets. Specific factors have been established for certain Schedule BA assets based on the nature of the investment. Those Schedule BA assets not specifically identified below receive a 20 percent factor (Line (16) [and Line \(22\)](#)).

- Collateral Loans reported on Line (13) receive a factor of 5 percent, consistent with other risk-based capital formulas studied by the Working Group.
- Working Capital Finance Investments: The book adjusted carrying value of NAIC 01 and 02 Working Capital Finance Investments, Lines (14) and (15), should equal the Notes to Financial Statement, Lines 5M(01a) and 5M(01b), Column 3 of the annual statement.
- Low-income housing tax credit investment are reported on Column (1) in accordance with *SSAP No. 93—Low Income Housing Tax Credit Property Investments*.
  - Federal Guaranteed 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.
  - Federal Non-Guaranteed 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.
  - State Guaranteed LIHTC investments that at a minimum meet the federal requirements for guaranteed LIHTC investments are to be included in Line (19).
  - State Non-Guaranteed LIHTC investments that at a minimum meet the federal requirements for non-guaranteed LIHTC investments are to be included on Line (20).
  - All Other LIHTC investments, state and federal LIHTC investments that do not meet the requirements of Lines (17) through (20) would be reported on Line (21).

PR008 – Other Long-Term AssetsSchedule BA Assets (Other Invested Assets – excluding collateral loans, low income housing tax credits and Working Capital Finance Investments)

Other Invested Assets are those that are listed in Schedule BA and are somewhat more speculative and risky than most other investments. The factor for Schedule BA assets excluding collateral loans, low income housing tax credits, working capital finance investments, and residual tranches or interests is 20%.

The book/adjusted carrying value of total Schedule BA assets (including collateral loans, low income housing tax credits ~~and~~ Working Capital Finance Investments, and residual tranches or interests) should equal Page 2, Line 8, Column 3 of the annual statement.

Low Income Housing Tax Credits

Report Column (1) in accordance with *SSAP No. 93—Low Income Housing Tax Credit Property Investments*.

Federal Guaranteed low-income housing tax credit (LIHTC) investments are to be included in Line (13). There must be an all-inclusive guarantee from an ARO-rated entity that guarantees the yield on the investment.

Federal Non-guaranteed LIHTC investments with the following risk mitigation factors are to be included in Line (14):

- 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.

State LIHTC investments that at a minimum meet the federal requirements for guaranteed LIHTC investments are to be included in Line (15).

State LIHTC investments that at a minimum meet the federal requirements for non-guaranteed LIHTC investments are to be included in Line (16).


State and federal LIHTC investments that do not meet the requirements of lines (13) through (16) would be reported on Line (17).

Working Capital Finance Investments

The book/adjusted carrying value of NAIC 01 and 02 Working Capital Finance Investments should equal Note to the Financial Statement, Lines 5M(01a) and 5M(01b), Column 3 of the annual statement.

FIXED INCOME ASSETS - MISCELLANEOUS

	<u>Annual Statement Source</u>	(1) <u>Bk/Adj Carrying Value</u>	(2) <u>Factor</u>	<u>RBC Requirement</u>
(1) Cash	Page 2, Line 5, inside amount 1		0.0030	
(2) Cash Equivalents	Page 2, Line 5, inside amount 2			
(3) Less: Cash Equivalents, Total Bonds	Schedule E, Part 2, Column 7, Line 250999999			
(4) Less: Exempt Money Market Mutual Funds as Identified by SVO	Schedule E, Part 2, Column 7, Line 820999999			
(5) Net Cash Equivalents	Lines (2) - (3) - (4)		0.0030	
(6) Short-Term Investments	Page 2, Line 5, inside amount 3			
(7) Short-Term Bonds	Schedule DA, Part 1, Column 7, Line 250999999			
(8) Total Other Short-Term Investments	Lines (6) - (7)		0.0030	
(9) Mortgage Loans - First Liens	Page 2, Column 3, Line 3.1		0.0500	
(10) Mortgage Loans - Other Than First Liens	Page 2, Column 3, Line 3.2		0.0500	
(11) Receivable for Securities	Page 2, Column 3, Line 9		0.0240	
(12) Aggregate Write-Ins for Invested Assets	Page 2, Column 3, Line 11		0.0500	
(13) Collateral Loans	Included in Page 2, Column 3, Line 8		0.0500	
(14) NAIC 01 Working Capital Finance Investments	Notes to Financial Statement 5M(01a), Column 3		0.0038	
(15) NAIC 02 Working Capital Finance Investments	Notes to Financial Statement 5M(01b), Column 3		0.0125	
(16) Other Long-Term Invested Assets Excluding Collateral Loans, <b>Residual Tranches or Interests</b> and Working Capital Finance Investments	Included in Page 2, Column 3, Line 8		0.2000	
(17) Federal Guaranteed Low Income Housing Tax Credits	Schedule BA Part 1, Column 12 Lines 3599999 + 3699999		0.0014	
(18) Federal Non-Guaranteed Low Income Housing Tax Credits	Schedule BA Part 1, Column 12 Lines 3799999 + 3899999		0.0260	
(19) State Guaranteed Low Income Housing Tax Credits	Schedule BA Part 1, Column 12 Lines 3999999 + 4099999		0.0014	
(20) State Non-Guaranteed Low Income Housing Tax Credits	Schedule BA Part 1, Column 12 Lines 4199999 + 4299999		0.0260	
(21) All Other Low Income Housing Tax Credits	Schedule BA Part 1, Column 12 Lines 4399999 + 4499999		0.1500	
<b>(22) Total Residual Tranches or Interests</b>	<b>Schedule BA, Part 1, Column 12 Lines 4699999 + 4799999 + 4899999 + 4999999 + 5099999 + 5199999 + 5299999 + 5399999 + 5499999 + 5599999 + 5699999 + 5799999</b>		<b>0.2000</b>	
<b>(23) Total Other Long-Term Invested Assets (Page 2, Column 3, Line 8)</b>	Lines (13) + (14) + (15) + (16) + (17) + (18) + (19) + (20) + (21) + <b>(22)</b>			
<b>(24) Derivatives</b>	Page 2, Column 3, Line 7		0.0500	
<b>(25) Total Miscellaneous Fixed Income Assets RBC</b>	Lines (1) + (5) + (8) + (9) + (10) + (11) + (12) + <b>(23)</b> + <b>(24)</b>			

 Denotes items that must be manually entered on filing software.




CALCULATION OF TOTAL RISK-BASED CAPITAL AFTER COVARIANCE

		(1) RBC Amount
<b>H0 - INSURANCE AFFILIATES AND MISC. OTHER AMOUNTS</b>		
(1) Off-Balance Sheet Items	XR005, Off-Balance Sheet Page, Line (21)	_____
(2) Directly Owned Health Insurance Companies or Health Entities	XR003, Affiliates Page, Column (2), Line (1)	_____
(3) Directly Owned Property and Casualty Insurance Affiliates	XR003, Affiliates Page, Column (2), Line (2)	_____
(4) Directly Owned Life Insurance Affiliates	XR003, Affiliates Page, Column (2), Line (3)	_____
(5) Indirectly Owned Health Insurance Companies or Health Entities	XR003, Affiliates Page, Column (2), Line (4)	_____
(6) Indirectly Owned Property and Casualty Insurance Affiliates	XR003, Affiliates Page, Column (2), Line (5)	_____
(7) Indirectly Owned Life Insurance Affiliates	XR003, Affiliates Page, Column (2), Line (6)	_____
(8) Affiliated Alien Insurers - Directly Owned	XR003, Affiliates Page, Column (2), Line (9) + (10) + (11)	_____
(9) Affiliated Alien Insurers - Indirectly Owned	XR003, Affiliates Page, Column (2), Line (12) + (13) + (14)	_____
(10) Total H0	Sum Lines (1) through (9)	=====
<b>H1 - ASSET RISK - OTHER</b>		
(11) Holding Company in Excess of Indirect Subs	XR003, Affiliates Page, Column (2), Line (7)	_____
(12) Investment Subsidiary	XR003, Affiliates Page, Column (2), Line (8)	_____
(13) Investment in Upstream Affiliate (Parent)	XR003, Affiliates Page, Column (2), Line (15)	_____
(14) Directly Owned Health Insurance Companies or Health Entities Not Subject to RBC	XR003, Affiliates Page, Column (2), Line (16)	_____
(15) Directly Owned Property and Casualty Insurance Companies Not Subject to RBC	XR003, Affiliates Page, Column (2), Line (17)	_____
(16) Directly Owned Life Insurance Companies Not Subject to RBC	XR003, Affiliates Page, Column (2), Line (18)	_____
(17) Affiliated Non-Insurer	XR003, Affiliates Page, Column (2), Line (19) + (20) + (21)	_____
(18) Fixed Income Assets	XR006, Off-Balance Sheet Collateral, Lines (27) + (37) + (38) + (39) + XR007, Fixed Income Assets - Bonds, Line (27) + <b>XR008, Fixed Income Assets - Miscellaneous, Line (25)</b>	_____
(19) Replication & Mandatory Convertible Securities	XR009, Replication/MCS Page, Line (9999999)	_____
(20) Unaffiliated Preferred Stock	XR006, Off-Balance Sheet Collateral, Line (34) + XR010, Equity Assets Page, Line (7)	_____
(21) Unaffiliated Common Stock	XR006, Off-Balance Sheet Collateral, Line (35) + XR010, Equity Assets Page, Line (13)	_____
(22) Property & Equipment	XR006, Off-Balance Sheet Collateral, Line (36) + XR011, Prop/Equip Assets Page, Line (9)	_____
(23) Asset Concentration	XR012, Grand Total Asset Concentration Page, Line (27)	_____
(24) Total H1	Sum Lines (11) through (23)	=====
<b>H2 - UNDERWRITING RISK</b>		
(25) Net Underwriting Risk	XR013, Underwriting Risk Page, Line (21)	_____
(26) Other Underwriting Risk	XR015, Underwriting Risk Page, Line (25.3)	_____
(27) Disability Income	XR015, Underwriting Risk Page, Lines (26.3) + (27.3) + (28.3) + (29.3) + (30.6) + (31.3) + (32.3)	_____
(28) Long-Term Care	XR016, Underwriting Risk Page, Line (41)	_____
(29) Limited Benefit Plans	XR017, Underwriting Risk Page, Lines (42.2) + (43.6) + (44)	_____
(30) Premium Stabilization Reserve	XR017, Underwriting Risk Page, Line (45)	_____
(31) Total H2	Sum Lines (25) through (30)	=====

  Denotes items that must be manually entered on filing software.

## CALCULATION OF TOTAL RISK-BASED CAPITAL AFTER COVARIANCE

		(1) <u>RBC Amount</u>
<b>H3 - CREDIT RISK</b>		
(32)	Total Reinsurance RBC	XR020, Credit Risk Page, Line (17)
(33)	Intermediaries Credit Risk RBC	XR020, Credit Risk Page, Line (24)
(34)	Total Other Receivables RBC	XR021, Credit Risk Page, Line (30)
(35)	Total H3	Sum Lines (32) through (34)
<b>H4 - BUSINESS RISK</b>		
(36)	Administrative Expense RBC	XR022, Business Risk Page, Line (7)
(37)	Non-Underwritten and Limited Risk Business RBC	XR022, Business Risk Page, Line (11)
(38)	Premiums Subject to Guaranty Fund Assessments	XR022, Business Risk Page, Line (12)
(39)	Excessive Growth RBC	XR022, Business Risk Page, Line (19)
(40)	Total H4	Sum Lines (36) through (39)
(41)	RBC after Covariance Before Basic Operational Risk	$H0 + \text{Square Root of } (H1^2 + H2^2 + H3^2 + H4^2)$
(42)	Basic Operational Risk	0.030 x Line (41)
(43)	C-4a of U.S. Life Insurance Subsidiaries	Company Records
(44)	Net Basic Operational Risk	Line (42) - (43) (not less than zero)
(45)	RBC After Covariance Including Basic Operational Risk	Lines (41) + (44)
(46)	Authorized Control Level RBC	.50 x Line (45)

 Denotes items that must be manually entered on filing software.

## OTHER LONG-TERM ASSETS PR008

	Annual Statement Source	(1) <u>Book/Adjusted</u> <u>Carrying Value</u>	<u>Factor</u>	(2) <u>RBC Requirement</u>
(1) Company Occupied Real Estate	P2 L4.1 C3	0	0.100	0
(2) Encumbrances	P2 L4.1, inside item	0	0.100	0
(3) Property Held For the Production of Income	P2 L4.2 C3	0	0.100	0
(4) Property Held For Sale	P2 L4.3 C3	0	0.100	0
(5) Encumbrances (Property Held For the Production of Income)	P2 L4.2, inside item	0	0.100	0
(6) Encumbrances (Property Held For Sale)	P2 L4.3, inside item	0	0.100	0
(7) Total Real Estate	L(1)+L(2)+L(3)+L(4)+L(5)+L(6)	0		0
(8) Mortgage Loans - First Liens	P2 L3.1 C3	0	0.050	0
(9) Mortgage Loans - Other Than First Liens	P2 L3.2 C3	0	0.050	0
(10) Total Mortgage Loans	L(8) + L(9)	0		0
(11) Schedule BA Assets - Total	P2 L8 C3	0		
(12) Less: Collateral Loans	PR009 L(13)	0		
(13) Federal Guaranteed Low Income Housing Tax Credits	Schedule BA Part 1, C12 L3599999 +L3699999	0	0.0014	0
(14) Federal Non-Guaranteed Low Income Housing Tax Credits	Schedule BA Part 1, C12 L3799999 +L3899999	0	0.0260	0
(15) State Guaranteed Low Income Housing Tax Credits	Schedule BA Part 1, C12 L3999999 +L4099999	0	0.0014	0
(16) State Non-Guaranteed Low Income Housing Tax Credits	Schedule BA Part 1, C12 L4199999 +L4299999	0	0.0260	0
(17) All Other Low Income Housing Tax Credits	Schedule BA Part 1, C12 L4399999 +L4499999	0	0.1500	0
(18) Working Capital Finance Investments	L(21)+L(22)	0		
<b>(19) Total Residual Tranches or Interests</b>	<b>Schedule BA, Part 1, Column 12 Lines 4699999 + 4799999 + 4899999 + 4999999 + 5099999 + 5199999 + 5299999 + 5399999 + 5499999 + 5599999 + 5699999 + 5799999</b>		<b>0.2000</b>	
<b>(20) Schedule BA Assets Excluding Collateral Loans, LIHTC, &amp;-WCFI, &amp; Residual Tranches or Interests</b>	L(11)-L(12)-L(13)-L(14)-L(15) -L(16)-L(17)-L(18)-L(19)	0	0.2000	0
(21) NAIC 01 Working Capital Finance Investments	Notes to Financial Statement Item L5M(01a) C3	0	0.0038	0
(22) NAIC 02 Working Capital Finance Investments	Notes to Financial Statement Item L5M(01b) C3	0	0.0125	0
<b>(23) Total Other Long-Term Assets</b>	L(7)+L(10)+L(13)+L(14)+L(15) +L(16)+L(17)+L(19)+L(20)+L(21)+L(22)	0		0

## Calculation of Total Risk-Based Capital After Covariance PR030 R0-R1

(1)

<b>R0 - Subsidiary Insurance Companies and Misc. Other Amounts</b>		<b>PRBC O&amp;I Reference</b>	<b>RBC Amount</b>
(1)	Directly Owned Property and Casualty Insurance Affiliates	PR004 L(2)C(2)	0
(2)	Indirectly Owned Property and Casualty Insurance Affiliates	PR004 L(5)C(2)	0
(3)	Directly Owned Life Insurance Affiliates	PR004 L(3)C(2)	0
(4)	Indirectly Owned Life Insurance Affiliates	PR004 L(6)C(2)	0
(5)	Directly Owned Health Insurance Companies or Health Entities	PR004 L(1)C(2)	0
(6)	Indirectly Owned Health Insurance Companies or Health Entities	PR004 L(4)C(2)	0
(7)	Directly Owned Alien Insurance Companies or Health Entities	PR004 L(9)+L(10)+L(11)C(2)	0
(8)	Indirectly Owned Alien Insurance Companies or Health Entities	PR004 L(12)+L(13)+L(14)C(2)	0
(9)	Misc Off-Balance Sheet - Non-controlled Assets	PR014 L(15) C(3)	0
(10)	Misc Off-Balance Sheet - Guarantees for Affiliates	PR014 L(16) C(3)	0
(11)	Misc Off-Balance Sheet - Contingent Liabilities	PR014 L(17) C(3)	0
(12)	Misc Off-Balance Sheet - SSAP No.101 Par. 11A DTA	PR014 L(19) C(3)	0
(13)	Misc Off-Balance Sheet - SSAP No.101 Par. 11B DTA	PR014 L(20) C(3)	0
(14)	Total R0	L(1)+L(2)+L(3)+L(4)+L(5)+L(6)+L(7)+L(8)+L(9)+L(10)+L(11)+L(12)+L(13)	0
<b>R1 - Asset Risk - Fixed Income</b>			
(15)	Bonds Subject to Size Factor	PR006 L(27)C(5)	0
(16)	Bond Size Factor RBC	PR006 L(30)C(5)	0
(17)	Off-balance Sheet Collateral & Sch DL, PT1 - Total Bonds	PR015 L(27)C(4)	0
(18)	Off-balance Sheet Collateral & Sch DL, PT1 - Cash, & Short-Term Investments and Mort Loans on Real Est.	PR015 L(38)+(39)C(4)	0
(19)	Other Long-Term Assets - Mortgage Loans, LIHTC, & WCFI, & Residual Tranches or Interests	PR008 L(10)+L(13)+L(14)+L(15)+L(16)+L(17)+L(19)+L(21)+L(22)C(2)	0
(20)	Misc Assets - Collateral Loans	PR009 L(13)C(2)	0
(21)	Misc Assets - Cash	PR009 L(3)C(2)	0
(22)	Misc Assets - Cash Equivalents	PR009 L(7)C(2)	0
(23)	Misc Assets - Other Short-Term Investments	PR009 L(10)C(2)	0
(24)	Replication - Synthetic Asset: One Half	PR010 L(9999999)C(7)	0
(25)	Asset Concentration RBC - Fixed Income	PR011 L(21)C(3) Grand Total Page	0
(26)	Total R1	L(15)+L(16)+L(17)+L(18)+L(19)+L(20)+L(21)+L(22)+L(23)+L(24)+L(25)	0

	<b>Property &amp; Casualty</b>		<b>Health</b>		<b>Life</b>	
	<u>2022</u>	<u>2023</u>	<u>2022</u>	<u>2023</u>	<u>2022</u>	<u>2023</u>
<b># of Companies filed Annual Statement</b>	2,889	2,551	1,175	1,059	756	718
<b># of Companies with residuals</b>	58	66	21	23	83	104
<b>Total Assets</b>	5,219,421,595,168	3,206,072,852,018	465,434,970,993	475,817,841,772	8,507,428,241,259	8,977,615,788,695
<b>Total BA Assets</b>	188,443,545,197	165,134,888,757	21,425,413,339	20,357,858,154	344,951,631,754	344,927,950,572
<b>Residual Tranche Investments</b>	5,601,759,446	1,551,970,804	220,517,642	317,688,548	5,742,324,462	11,630,554,468
<b>BA Assets for companies with Residuals</b>	56,742,440,680	59,489,049,882	3,706,756,284	5,707,940,117	225,093,296,860	271,891,710,677
<b>Surplus</b>	2,138,343,562,200	1,329,194,842,267	222,762,518,238	218,261,055,309	589,146,253,802	616,991,807,118

**Residuals as a Percentage of:**

<b>Total BA Assets</b>	2.97%	0.94%	1.03%	1.56%	1.66%	3.37%
<b>BA Assets for companies with Residuals</b>	9.87%	2.61%	5.95%	5.57%	2.55%	4.28%
<b>Total Assets</b>	0.11%	0.05%	0.05%	0.07%	0.07%	0.13%
<b>Total Surplus</b>	0.26%	0.12%	0.10%	0.15%	0.97%	1.89%

<b>Total BA Assets as a Percentage of Total Assets</b>	3.61%	5.15%	4.60%	4.28%	4.05%	3.84%
<b>BA Assets for companies with Residuals as a Percentag of Total Assets</b>	1.09%	1.86%	0.80%	1.20%	2.65%	3.03%

## Capital Adequacy (E) Task Force

### RBC Proposal Form

- |   |   |   |
|---|---|---|
| <input checked="" type="checkbox"/> Capital Adequacy (E) Task Force           | <input type="checkbox"/> Health RBC (E) Working Group     | <input type="checkbox"/> Life RBC (E) Working Group                         |
| <input type="checkbox"/> Catastrophe Risk (E) Subgroup                        | <input type="checkbox"/> Investment RBC (E) Working Group | <input type="checkbox"/> Longevity Risk (A/E) Subgroup                      |
| <input type="checkbox"/> Variable Annuities Capital. & Reserve (E/A) Subgroup | <input type="checkbox"/> P/C RBC (E) Working Group        | <input type="checkbox"/> RBC Investment Risk & Evaluation (E) Working Group |

<p style="text-align: right;">DATE: <u>1/27/24</u></p> <p><b>CONTACT PERSON:</b> <u>Eva Yeung</u></p> <p><b>TELEPHONE:</b> <u>816-783-8407</u></p> <p><b>EMAIL ADDRESS:</b> <u>eyeung@naic.org</u></p> <p><b>ON BEHALF OF:</b> <u>P/C RBC (E) Working Group</u></p> <p><b>NAME:</b> <u>Tom Botsko</u></p> <p><b>TITLE:</b> <u>Chair</u></p> <p><b>AFFILIATION:</b> <u>Ohio Department of Insurance</u></p> <p><b>ADDRESS:</b> <u>50 West Town Street, Suite 300</u> <u>Columbus, OH 43215</u></p>	<p style="text-align: center;"><b><u>FOR NAIC USE ONLY</u></b></p> <p>Agenda Item # <u>2024-06-CA</u> Year <u>2024/2025</u></p> <p style="text-align: center;"><b><u>DISPOSITION</u></b></p> <p><b>ADOPTED:</b></p> <p><input type="checkbox"/> TASK FORCE (TF) _____</p> <p><input type="checkbox"/> WORKING GROUP (WF) _____</p> <p><input type="checkbox"/> SUBGROUP (SG) _____</p> <p><b>EXPOSED:</b></p> <p><input checked="" type="checkbox"/> TASK FORCE (TF) <u>1/31/2024</u></p> <p><input type="checkbox"/> WORKING GROUP (WG) _____</p> <p><input type="checkbox"/> SUBGROUP (SG) _____</p> <p><b>REJECTED:</b></p> <p><input type="checkbox"/> TF <input type="checkbox"/> WG <input type="checkbox"/> SG _____</p> <p><b>OTHER:</b></p> <p><input type="checkbox"/> DEFERRED TO _____</p> <p><input type="checkbox"/> REFERRED TO OTHER NAIC GROUP _____</p> <p><input type="checkbox"/> (SPECIFY) _____</p>
---	---

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

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

#### DESCRIPTION/REASON OR JUSTIFICATION OF CHANGE(S)

This proposal mirrors the Life proposal 2024-03-L for Repurchase Agreements to reduce the repo charge to 0.2% for programs that meet "conforming program criteria" through the General Interrogatories (XR005, PR014, L (3)). All other repo programs that do not meet the conforming programing criteria would continue to receive the current 1% charge. Refer to Proposal 2024-03-L for detail information.

Additional Staff Comments:

**\*\* This section must be completed on all forms.**

**Revised 2-2023**

PR014 - Off-Balance Sheet and Other Items

Detail Eliminated to Conserve

Line (2)

Collateral from all other securities lending programs should be reported in General Interrogatories Part 1, Line 25.05 and included in Line (2).

Line (3) through (4) Insurers may also engage in repurchase agreement transactions which are eligible for lower off-balance sheet charges. The off-balance sheet charges are comprised of two items. The amount of collateral received in the repurchase agreement transaction, subject to the elements specified under Line Item-(2) below, will be assigned a .002 factor. The overcollateralization amount, more specifically the difference between the collateral sold and collateral received, will receive a 0.01 factor.

Repurchase agreement programs (similar in nature to Securities Lending) 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 repurchase agreements and how cash collateral received will be invested.
2. Written operational procedures to monitor and control the risks associated with securities lending/repurchase agreements. 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 collateral with margin percentages in line with industry standards for repurchase agreement transactions.
  - e. Daily mark-to-market of sold securities and obtaining additional collateral needed to ensure that collateral at all times is in line with the value of the loans to maintain the appropriate margin.
  - f. Not subject to any automatic stay in bankruptcy and may be closed out and terminated immediately upon the bankruptcy of any party.
  - g. Counterparty credit rating of BBB or higher
3. A binding repurchase agreement (standard "Master Repurchase 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.

Line (3)

Collateral included in General Interrogatories, Part 1, Line XX25.XX of the annual statement should be included in Line (3).

Line (4)

Overcollateralization included in General Interrogatories, Part 1, Line XX25.XX of the annual Statement should be included in Line (4).

Line (5)

Collateral from all other repurchase agreement programs should be included in Line (5).

Lines (36) through (416)

Non controlled assets are any assets reported on the balance sheet that are 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 (~~4214~~), include assets pledged as collateral reported in the General Interrogatories Part 1, Line 26.30 other than assets related to the Federal Reserve's Term Asset Loan Facility (TALF).

Line (4618)

Guarantees for affiliates include guarantees for the benefit of an affiliate which result in a material contingent exposure of the company's assets to liability. The definition of "material" exposure or financial effect is the same as for annual statement disclosure requirements.

Line (4719)

Contingent liabilities include any material contingent liabilities that are disclosed in the Notes to Financial Statements. *This category includes all structured securities for which the company has not received a full release from liability from a third party.*

Line (4820)

"Yes" means the entity which files the U.S. 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 non-insurance entity or holding company makes the filing). "N/A" means the entity is exempt from filing a US federal income tax return; lines (~~4618~~) and (~~4719~~) should be zero in this case.

Lines (4921) and (2022)

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



Off-Balance Sheet and Other Items  
XR005



Detail Eliminated to Conserve



Line (2) – Collateral from all other securities lending programs should be reported in General Interrogatories Part 1, Line 25.05 and included in Line (2).

Line (3) through (4) Insurers may also engage in repurchase agreement transactions which are eligible for lower off-balance sheet charges. The off-balance sheet charges are comprised of two items. The amount of collateral received in the repurchase agreement transaction, subject to the elements specified under Item (2) below, will be assigned a .002 factor. The overcollateralization amount, more specifically the difference between the collateral sold and collateral received, will receive 0.01 factor.

Repurchase agreement programs (similar in nature to Securities Lending) 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 repurchase agreements and how cash collateral received will be invested.
2. Written operational procedures to monitor and control the risks associated with repurchase agreements. 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 collateral with margin percentages in line with industry standards for repurchase transactions.
  - e. Daily mark-to-market of sold securities and obtaining additional collateral needed to ensure that collateral at all times is in line with the value of the loans to maintain the appropriate margin.
  - f. Not subject to any automatic stay in bankruptcy and may be closed out and terminated immediately upon the bankruptcy of any party.
  - g. Counterparty credit rating of BBB or higher
3. A binding repurchase agreement (standard “Master Repurchase 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.

Line (3)

Collateral included in General Interrogatories, Part 1, Line **XX.XX** of the annual statement should be included in Line (3).

Line (4)

Overcollateralization included in General Interrogatories, Part 1, Line **XX.XX** of the annual Statement should be included in Line (4).

Line (5)

Collateral from all other repurchase programs should be included in Line (5).

Lines (63) through (164) – Non-controlled assets are any assets reported on the balance sheet that are 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 Lines (124) and (135), include assets pledged as collateral reported in the General Interrogatories Part 1, Lines 26.30 and 26.31 other than assets related to the Federal Reserve’s Term Asset Loan Facility (TALF).

Line (168) – Guarantees for Affiliates include loan guarantees or other undertakings for the benefit of an affiliate which results in a material contingent exposure of the company’s or any affiliated insurer’s assets. The definition of “material” exposure or financial effect is the same as for annual statement disclosure requirements.

Line (179) – Contingent liabilities include any material contingent liabilities that are disclosed in the Notes to Financial Statements. *This category includes all structured securities for which the company has not received a full release of liability from a third party.*

Line (1208) – “Yes” means the entity which files the U.S. 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 U.S. Federal income tax return which includes the reporting entity is not a regulated insurance company (e.g., a non-insurance entity or holding company makes the filing). “N/A” means the entity is exempt from filing a U.S. Federal income tax return; Lines (1921) and (2022) should be zero in this case.

Lines (1921) and (220) - 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—Income Taxes*, paragraphs 11a and 11b (lesser of paragraph 11b(i) and 11b(ii)). For the period for which the paragraph 11a component is determined, the charge is reduced to one-half percent (0.5%) when the insurance company either filed its own separate U.S. Federal income tax return or it was included in a consolidated U.S. 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—Income Taxes*. Paragraph 11a is found in Section 2, subpart (a), Paragraph 11b is found in Section 2, subpart (b).

## OFF-BALANCE SHEET AND OTHER ITEMS

	Annual Statement Source	(1) Bk/Adj Carrying Value	(2) Factor	(3) RBC Requirement	(4) Yes/No Response
<b>Noncontrolled Assets</b>					
(1) Loaned to Others - Conforming Securities Lending Programs	General Interrogatories Part 1 Line 25.04		0.002		
(2) Loaned to Others - Securities Lending Programs - Other	General Interrogatories Part 1 Line 25.05		0.010		
<b>(3) Subject to Repurchase Agreements</b>	<b>General Interrogatories Part 1 Line 26.21</b>		<b>0.010</b>		
<b>(3) Loaned to Others - Conforming Repurchase Agreement Program Collateral</b>	<b>TBD</b>		<b>0.002</b>		
<b>(4) Loaned to Others - Conforming Repurchase Agreement Program Overcollateralization</b>	<b>TBD</b>		<b>0.010</b>		
<b>(5) Loaned to Others - Repurchase Agreement Programs - Other</b>	<b>TBD</b>		<b>0.010</b>		
(6) Subject to Reverse Repurchase Agreements	General Interrogatories Part 1 Line 26.22		0.010		
(7) Subject to Dollar Repurchase Agreements	General Interrogatories Part 1 Line 26.23		0.010		
(8) Subject to Reverse Dollar Repurchase Agreements	General Interrogatories Part 1 Line 26.24		0.010		
(9) Placed Under Option Agreements	General Interrogatories Part 1 Line 26.25		0.010		
(10) Letter Stock or Securities Restricted as to Sale - Excluding FHLB Capital Stock	General Interrogatories Part 1 Line 26.26		0.010		
(11) FHLB Capital Stock	General Interrogatories Part 1 Line 26.27		0.010		
(12) On Deposit with States	General Interrogatories Part 1 Line 26.28		0.010		
(13) On Deposit with Other Regulatory Bodies	General Interrogatories Part 1 Line 26.29		0.010		
(14) Pledged as Collateral - Excluding Collateral Pledged to an FHLB	General Interrogatories Part 1 Line 26.30		0.010		
(15) Pledged as Collateral to FHLB (Including Assets Backing Funding Agreements)	General Interrogatories Part 1 Line 26.31		0.010		
(16) Other	General Interrogatories Part 1 Line 26.32		0.010		
(17) Total Noncontrolled Assets	Sum of Lines (1) through (16)				
(18) Guarantees for Affiliates	Notes to Financial Statements 14A(03C1), Column 2		0.010		
(19) Contingent Liabilities	Notes to Financial Statements 14A(1), Column 2		0.010		
(20) Is the entity responsible for filing the U.S. Federal income tax return for the reporting insurer a regulated insurance company?	"Yes", "No" or "N/A" in Column (4)				
(21) SSAP No. 101 Paragraph 11a Deferred Tax Assets	Notes to Financial Statements, Item 9A2(a), Column 3		†		
(22) SSAP No. 101 Paragraph 11b Deferred Tax Assets	Notes to Financial Statements, Item 9A2(b), Column 3		0.010		
(23) Total Miscellaneous Off-Balance Sheet and Other Items	<b>Lines (17) + (18) + (19) + (20) + (21) + (22)</b>				

† If Line (20) Column (4) is "Yes", then the factor is 0.005. If Line (20) Column (4) is "No", then the factor is 0.010. If Line (20) Column (4) is "N/A", then the factor is 0.000.

Denotes items that must be manually entered on filing software.

## CALCULATION OF TOTAL RISK-BASED CAPITAL AFTER COVARIANCE

		(1) <u>RBC Amount</u>
<b>H0 - INSURANCE AFFILIATES AND MISC. OTHER AMOUNTS</b>		
(1) Off-Balance Sheet Items	XR005, Off-Balance Sheet Page, Line (23)	_____
(2) Directly Owned Health Insurance Companies or Health Entities	XR003, Affiliates Page, Column (2), Line (1)	_____
(3) Directly Owned Property and Casualty Insurance Affiliates	XR003, Affiliates Page, Column (2), Line (2)	_____
(4) Directly Owned Life Insurance Affiliates	XR003, Affiliates Page, Column (2), Line (3)	_____
(5) Indirectly Owned Health Insurance Companies or Health Entities	XR003, Affiliates Page, Column (2), Line (4)	_____
(6) Indirectly Owned Property and Casualty Insurance Affiliates	XR003, Affiliates Page, Column (2), Line (5)	_____
(7) Indirectly Owned Life Insurance Affiliates	XR003, Affiliates Page, Column (2), Line (6)	_____
(8) Affiliated Alien Insurers - Directly Owned	XR003, Affiliates Page, Column (2), Line (9) + (10) + (11)	_____
(9) Affiliated Alien Insurers - Indirectly Owned	XR003, Affiliates Page, Column (2), Line (12) + (13) + (14)	_____
(10) Total H0	Sum Lines (1) through (9)	=====
<b>H1 - ASSET RISK - OTHER</b>		
(11) Holding Company in Excess of Indirect Subs	XR003, Affiliates Page, Column (2), Line (7)	_____
(12) Investment Subsidiary	XR003, Affiliates Page, Column (2), Line (8)	_____
(13) Investment in Upstream Affiliate (Parent)	XR003, Affiliates Page, Column (2), Line (15)	_____
(14) Directly Owned Health Insurance Companies or Health Entities Not Subject to RBC	XR003, Affiliates Page, Column (2), Line (16)	_____
(15) Directly Owned Property and Casualty Insurance Companies Not Subject to RBC	XR003, Affiliates Page, Column (2), Line (17)	_____
(16) Directly Owned Life Insurance Companies Not Subject to RBC	XR003, Affiliates Page, Column (2), Line (18)	_____
(17) Affiliated Non-Insurer	XR003, Affiliates Page, Column (2), Line (19) + (20) + (21)	_____
(18) Fixed Income Assets	XR006, Off-Balance Sheet Collateral, Lines (27) + (37) + (38) + (39) + XR007, Fixed Income Assets - Bonds, Line (27) + XR008, Fixed Income Assets - Miscellaneous, Line (24)	_____
(19) Replication & Mandatory Convertible Securities	XR009, Replication/MCS Page, Line (9999999)	_____
(20) Unaffiliated Preferred Stock	XR006, Off-Balance Sheet Collateral, Line (34) + XR010, Equity Assets Page, Line (7)	_____
(21) Unaffiliated Common Stock	XR006, Off-Balance Sheet Collateral, Line (35) + XR010, Equity Assets Page, Line (13)	_____
(22) Property & Equipment	XR006, Off-Balance Sheet Collateral, Line (36) + XR011, Prop/Equip Assets Page, Line (9)	_____
(23) Asset Concentration	XR012, Grand Total Asset Concentration Page, Line (27)	_____
(24) Total H1	Sum Lines (11) through (23)	=====
<b>H2 - UNDERWRITING RISK</b>		
(25) Net Underwriting Risk	XR013, Underwriting Risk Page, Line (21)	_____
(26) Other Underwriting Risk	XR015, Underwriting Risk Page, Line (25.3)	_____
(27) Disability Income	XR015, Underwriting Risk Page, Lines (26.3) + (27.3) + (28.3) + (29.3) + (30.6) + (31.3) + (32.3)	_____
(28) Long-Term Care	XR016, Underwriting Risk Page, Line (41)	_____
(29) Limited Benefit Plans	XR017, Underwriting Risk Page, Lines (42.2) + (43.6) + (44)	_____
(30) Premium Stabilization Reserve	XR017, Underwriting Risk Page, Line (45)	_____
(31) Total H2	Sum Lines (25) through (30)	=====

  Denotes items that must be manually entered on filing software.

## OFF-BALANCE SHEET ITEMS AND OTHER ITEMS PR014

	Annual Statement Source	(1) Statement Value	(2) Factor	(3) RBC Requirement	(4) Yes/No Response
<u>Non-Controlled Assets</u>					
(1) Conforming Securities Lending Programs	General Interrogatories Part 1 L25.04	0	0.002	0	
(2) Securities Lending Programs - Other	General Interrogatories Part 1 L25.05	0	0.010	0	
<del>(3) Subject to Repurchase Agreements</del>	<del>General Interrogatories Part 1 L26.21</del>	<del>0</del>	<del>0.010</del>	<del>0</del>	
(3) Loaned to Others - Conforming Repurchase Agreement Program Collateral	TBD	0	0.002	0	
(4) Loaned to Others - Conforming Repurchase Agreement Program Overcollateralization	TBD	0	0.010	0	
(5) Loaned to Others - Repurchase Agreement Programs - Other	TBD	0	0.010	0	
(6) Subject to Reverse Repurchase Agreements	General Interrogatories Part 1 L26.22	0	0.010	0	
(7) Subject to Dollar Repurchase Agreements	General Interrogatories Part 1 L26.23	0	0.010	0	
(8) Subject to Reverse Dollar Repurchase Agreements	General Interrogatories Part 1 L26.24	0	0.010	0	
(9) Placed Under Option Agreements	General Interrogatories Part 1 L26.25	0	0.010	0	
(10) Letter Stock or Other Securities Restricted as to Sale - Excluding FHLB Capital Stock	General Interrogatories Part 1 L26.26	0	0.010	0	
(11) FHLB Capital Stock	General Interrogatories Part 1 L26.27	0	0.010	0	
(12) On Deposit with States	General Interrogatories Part 1 L26.28	0	0.010	0	
(13) On Deposit with Other Regulatory Bodies	General Interrogatories Part 1 L26.29	0	0.010	0	
(14) Pledged as Collateral - Excluding Collateral Pledged to an FHLB	General Interrogatories Part 1 L26.30	0	0.010	0	
(15) Pledged as Collateral to FHLB - Including Assets Backing Funding Agreements	General Interrogatories Part 1 L26.31	0	0.010	0	
(16) Other	General Interrogatories Part 1 L26.32	0	0.010	0	
(17) Total Non-Controlled Assets	Sum of L(1) through L(16)	0		0	
(18) Guarantees for Affiliates	Notes to Financial Statements Item 14A(03C1)	0	0.010	0	
(19) Contingent Liabilities	Notes to Financial Statements Item 14a1 + Item 27a Amount 2 Unrecorded Loss Contingencies	0	0.010	0	
(20) Is the entity responsible for filing the U.S. Federal income tax return for the reporting insurer a regulated insurance company?	"Yes", "No" or "N/A" in Column (4)				
(21) SSAP No. 101 Paragraph 11A Deferred Tax Assets	Notes to Financial Statements Item 9A2(a)	0		0	
(22) SSAP No. 101 Paragraph 11B Deferred Tax Assets	Notes to Financial Statements Item 9A2(b)	0	0.010	0	
(23) Total Miscellaneous Off Balance Sheet and Other Items=L(17)+L(18)+L(19)+L(21)+L(22)		0		0	

† If Line (20) Column (4) is "Yes", then the factor is 0.005. If Line (20) Column (4) is "No", then the factor is 0.010. If Line (20) Column (4) is "N/A", then the factor is 0.000.

## Calculation of Total Risk-Based Capital After Covariance PR030 R0-R1

(1)

<b>R0 - Subsidiary Insurance Companies and Misc. Other Amounts</b>		<b>PRBC O&amp;I Reference</b>	<b>RBC Amount</b>
(1)	Directly Owned Property and Casualty Insurance Affiliates	PR004 L(2)C(2)	0
(2)	Indirectly Owned Property and Casualty Insurance Affiliates	PR004 L(5)C(2)	0
(3)	Directly Owned Life Insurance Affiliates	PR004 L(3)C(2)	0
(4)	Indirectly Owned Life Insurance Affiliates	PR004 L(6)C(2)	0
(5)	Directly Owned Health Insurance Companies or Health Entities	PR004 L(1)C(2)	0
(6)	Indirectly Owned Health Insurance Companies or Health Entities	PR004 L(4)C(2)	0
(7)	Directly Owned Alien Insurance Companies or Health Entities	PR004 L(9)+L(10)+L(11)C(2)	0
(8)	Indirectly Owned Alien Insurance Companies or Health Entities	PR004 L(12)+L(13)+L(14)C(2)	0
(9)	Misc Off-Balance Sheet - Non-controlled Assets	PR014 L(17) C(3)	0
(10)	Misc Off-Balance Sheet - Guarantees for Affiliates	PR014 L(18) C(3)	0
(11)	Misc Off-Balance Sheet - Contingent Liabilities	PR014 L(19) C(3)	0
(12)	Misc Off-Balance Sheet - SSAP No.101 Par. 11A DTA	PR014 L(21) C(3)	0
(13)	Misc Off-Balance Sheet - SSAP No.101 Par. 11B DTA	PR014 L(22) C(3)	0
(14)	Total R0	L(1)+L(2)+L(3)+L(4)+L(5)+L(6)+L(7)+L(8)+L(9)+L(10)+L(11)+L(12)+L(13)	0
<b>R1 - Asset Risk - Fixed Income</b>			
(15)	Bonds Subject to Size Factor	PR006 L(27)C(5)	0
(16)	Bond Size Factor RBC	PR006 L(30)C(5)	0
(17)	Off-balance Sheet Collateral & Sch DL, PT1 - Total Bonds	PR015 L(27)C(4)	0
(18)	Off-balance Sheet Collateral & Sch DL, PT1 - Cash, & Short-Term Investments and Mort Loans on Real Est.	PR015 L(38)+(39)C(4)	0
(19)	Other Long-Term Assets - Mortgage Loans, LIHTC & WCFI	PR008 L(10)+L(13)+L(14)+L(15)+L(16)+L(17)+L(20)+L(21)C(2)	0
(20)	Misc Assets - Collateral Loans	PR009 L(13)C(2)	0
(21)	Misc Assets - Cash	PR009 L(3)C(2)	0
(22)	Misc Assets - Cash Equivalents	PR009 L(7)C(2)	0
(23)	Misc Assets - Other Short-Term Investments	PR009 L(10)C(2)	0
(24)	Replication - Synthetic Asset: One Half	PR010 L(9999999)C(7)	0
(25)	Asset Concentration RBC - Fixed Income	PR011 L(21)C(3) Grand Total Page	0
(26)	Total R1	L(15)+L(16)+L(17)+L(18)+L(19)+L(20)+L(21)+L(22)+L(23)+L(24)+L(25)	0

**MEMORANDUM**

**TO:** Dale Bruggeman, Chair, Statutory Accounting Principles (E) Working Group  
Tom Botsko, Chair, Capital Adequacy (E) Task Force

**FROM:** Philip Barlow, Chair, Life Risk-Based Capital (E) Working Group

**DATE:** January 25, 2024

**RE:** Repurchase Agreement RBC Proposal Referral

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The Life Risk-Based Capital (E) Working Group received, discussed, and exposed for public comment, a proposal from the American Council of Life Insurers (ACLI) to modify the treatment of repurchase agreements in the life risk-based capital (RBC) formula (Proposal). One comment was received from the ACLI with full support of the Proposal. ACLI has subsequently provided an official proposal with structural changes to the RBC blanks and instructions. The implementation of the structural changes is predicated on changes made to the Annual Statement's General Interrogatories. NAIC staff has reviewed the proposal and noted accounting differences between repurchase agreements and security lending programs, on which the proposal appears to base the RBC treatment.

The Working Group would appreciate consideration by the Statutory Accounting Principles (E) Working Group on accounting and reporting aspects of the proposal as well as the Capital Adequacy (E) Task Force on its possible application to the other RBC formulas.

Cc: Dave Fleming, Julie Gann, Robin Marcotte, Jake Stultz, Jason Farr, Wil Oden, Mary Caswell, Maggie Chang, Eva Yeung, Crystal Brown