

CAPITAL ADEQUACY (E) TASK FORCE

Capital Adequacy (E) Task Force March 17, 2024, Minutes

Capital Adequacy (E) Task Force Jan. 31, 2024, Minutes (Attachment One)

Proposal 2023-16-CR 2023 Cat Event List (Attachment One-A)

Health Risk-Based Capital (E) Working Group (RBC) Feb. 22, 2024, Virtual Meeting Minutes (Attachment Two)

Comments Received on the Academy's Health Care Receivables Presentation (Attachment Two-A)

Life Risk-Based Capital (E) Working Group March 17, 2024, Minutes (Attachment Three)

Life Risk-Based Capital (E) Working Group Jan. 25, 2024, Virtual Meeting Minutes (Attachment Three-A)

American Council of Life Insurer's (ACLI) Repurchase Agreements Proposal (Attachment Three-A1)

Presentation from the American Academy of Actuaries (Academy) on C-3 risks (Attachment Three-B)

Presentation from the Academy on Covariance (Attachment Three-C)

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Property and Casualty Risk-Based Capital (E) Working Group and Catastrophe Risk (E) Subgroup March 17, 2024, Joint Minutes (Attachment Four)

Property and Casualty Risk-Based Capital (E) Working Group and Catastrophe Risk (E) Subgroup Jan. 30, 2024, Joint E-vote Minutes (Attachment Four-A)

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Proposal 2023-14-P (Pet Insurance) (Attachment Eight)

Proposal 2023-15-CR (Convective Storm for Information Purposes Only Structure) (Attachment Nine)

Proposal 2024-01-P (Schedule P Short Tails) (Attachment Ten)

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Proposal 2024-08-CA (Col 12 Affiliated Investment) (Attachment Twelve)

Collateral Loan Memorandum from the Statutory Accounting Principles (E) Working Group (Attachment Thirteen)

Proposal 2024-02-CA (Residual Structure PC & Health) 20% for 2024 Reporting (Attachment Fourteen)

Proposal 2024-02-CA (Residual Structure PC & Health) 45% for 2024 Reporting (Attachment Fifteen)

Repurchase Agreement RBC Proposal Referral from the Life Risk-Based Capital (E) Working Group (Attachment Sixteen)

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Draft: 3/20/23

Capital Adequacy (E) Task Force
Phoenix, Arizona
March 17, 2024

The Capital Adequacy (E) Task Force met in Phoenix, AZ, March 17, 2024. The following Task Force members participated: Judith L. French, Chair, represented by Tom Botsko (OH); Doug Ommen, Vice Chair, represented by Mike Yanacheak and Kevin Clark (IA); Lori K. Wing-Heier represented by David Phifer (AK); Mark Fowler represented by Sheila Travis (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 Carolyn Morgan and Jane Nelson (FL); Dana Popish Severinghaus represented by Vincent Tsang (IL); Amy L. Beard represented by Roy Eft (IN); Vicki Schmidt (KS); Sharon P. Clark represented by Jeff Gaither (KY); Kathleen A. Birrane represented by Dmitriy Valekha (MD); Grace Arnold represented by Fred Andersen (MN); Chlora Lindley-Myers represented by John Rehagen (MO); 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 John Sirovetz (NJ); Glen Mulready represented by Andrew Schallhorn (OK); Michael Wise represented by Will Davis (SC); Cassie Brown represented by Rachel Hemphill and Jamie Walker (TX); Mike Kreidler represented by Steve Drutz (WA); and Nathan Houdek represented by Amy Malm (WI). Also participating was: Troy Downing represented by Erin Snyder (MT).

1. Adopted its Jan. 31, 2024, and 2023 Fall National Meeting Minutes

Botsko said the Task Force met Jan. 31, 2024, and Dec. 2, 2023. During its Jan. 31, 2024, meeting, the Task Force took the following action: 1) adopted proposal 2023-16-CR (2023 U.S. and Non-U.S. Catastrophe Risk Event Lists); 2) exposed: a) proposal 2024-02-CA (Residual Structure PC & Health); and b) proposal 2024-06-CA (Repurchase Agreements PC & Health) for a 30-day public comment period that ended March 2, 2024. He stated that the Task Force received no comments during the exposure period.

Kaumann made a motion, seconded by Eft, to adopt the Task Force's Jan. 31, 2024, (Attachment One) and Dec. 2, 2023 (*see NAIC Proceedings – Fall 2023, Capital Adequacy (E) Task Force*) minutes. 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 Feb. 22 and took the following action: 1) adopted its Nov. 8, 2023, minutes, which included the following action: a) adopted its July 25 minutes; b) adopted proposal 2023-11-H for page XR014 Fee-For-Service and Other Risk Revenue for Medicare and Medicaid; c) received an update from the American Academy of Actuaries (Academy) on the health care receivables and H-2 Underwriting Risk Review projects; d) discussed pandemic risk and heard a presentation from the Texas Department of Insurance (TDI); e) received an overview of the Risk Evaluation Ad Hoc group; and f) discussed questions on the 2022 health risk-based capital (RBC) statistics; 2) exposed proposal 2024-09-CA (Underwriting Risk Investment Income Adjustment Factors); 3) discussed comments received on the Academy health care receivables presentation; 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; and 6) received an update on the Academy H-2 Underwriting Risk Review project.

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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 March 17 and took the following action: 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) received an update from the Academy on asset-backed securities (ABS) RBC as well as its plan to review the Oliver Wyman residual study; 4) discussed residual tranches; and 5) discussed next steps and requested feedback on a memorandum detailing the projected next project to review registered and diversified funds and the way to move forward on this initiative.

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

Barlow said the Life Risk-Based Capital (E) Working Group met March 17 and took the following action: 1) adopted its 2023 Fall National Meeting minutes; 2) adopted its Jan. 25, 2024, minutes, which included the following action: a) discussed the American Council of Life Insurers' (ACLI's) repurchase agreements proposal; b) discussed the proposal to add a line for total adjusted capital (TAC) adjustment for non-admitted affiliates; and c) discussed the proposal to add a line to Schedule BA mortgages for omitted asset valuation reserves (AVRs); 3) received updates from the Generator of Economic Scenarios (GOES) (E/A) Subgroup, Longevity Risk (E/A) Subgroup, and Variable Annuities Capital and Reserve (E/A) Subgroup; 4) heard a presentation from the Academy on C-3 risks and potential covariance calculation changes in the life RBC formula; and 5) exposed the repurchase agreement proposal with changes requested by the ACLI for a 30-day public comment period ending April 15.

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 March 17 and took the following action: 1) adopted their Jan. 30 minutes, which included the following action: a) adopted proposal 2023-16-CR (2023 Cat Event List); 2) adopted the Catastrophe Risk (E) Subgroup's Jan. 29 minutes, which took the following action: a) exposed proposal 2023-17-CT (Climate Scenario Analysis); b) discussed severe convective storm peril impact analysis; c) discussed wildfire peril impact analysis; and 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) 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 the wildfire peril and convective storm peril impact analysis; and 12) discussed underwriting risk factors and investment income adjustment factors.

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

3. Received Updates from its Ad Hoc Subgroups

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

Hemphill said this ad hoc subgroup met several times between September 2023 and January 2024. She stated that the meetings included robust discussion among stakeholders and comments and suggested alternatives were

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solicited from the entire subgroup. Hemphill also said two key items identified by the Subgroup that require further review by the Task Force are: 1) the preamble with suggested revisions; and 2) the possibility of removing the TAC and authorized control level (ACL) amounts in the annual statement's five-year historical data page. Bryan Bayerle (ACLI) commented that it could potentially reduce the transparency of the RBC ratio. He said that the ACLI is looking forward to working with the Task Force to address this item as a significant number of issues could potentially be produced, particularly with respect to the five-year trend.

B. Asset Concentration Ad Hoc Subgroup

Clark said the Asset Concentration Ad Hoc Subgroup met three more times after the 2023 Fall National Meeting. The Ad Hoc Subgroup accomplished two things during the meetings: 1) further refinement of the decision tree to evaluate when an asset concentration element may warrant an RBC solution; and 2) walked through an example of the flow chart using sector/industry concentration. He also mentioned that several refinements were made to the flowchart.

C. Geographic Concentration Ad Hoc Subgroup

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.

Botsko said the Task Force appreciates all the Ad Hoc Subgroups' efforts in reviewing these outstanding issues (Attachment Six). He recommended that the Task Force consider the following plan: 1) disbanding all three Ad Hoc Subgroups, as well as the Risk Evaluation Ad Hoc Group; 2) referring the asset concentration and geographic concentration issues to the Risk-Based Capital Investment Risk and Evaluation (E) Working Group and the Catastrophe Risk (E) Subgroup, respectively, for further review of all outstanding issues; 3) continuing review of the purposes and guidelines issues and, if necessary, establishing a formal Subgroup to review not only purposes and guidelines issues but also any non-investment risk issues related to all three lines of business; and 4) exposing the revised preamble during its meeting in April. Without hearing any objections, the Task Force agreed to the suggested plan.

4. Adopted Proposal 2023-13-CR (Cat Risk Insurance Program Interrogatory)

Chou said the purpose of this proposal is to collect additional information from insurers on the structure of their catastrophe reinsurance program on an annual confidential basis. He stated that the Working Group and Subgroup exposed this proposal for a 60-day public comment period that ended Jan. 30, 2024. Chou said the Subgroup received one comment letter from the joint trades during the exposure period.

Chou made a motion, seconded by Rehagen, to adopt proposal 2023-13-CR (Attachment Seven). The motion passed unanimously.

5. Adopted Proposal 2023-14-P (Pet Insurance)

Botsko said proposal 2023-14-P would remove pet insurance from the 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. He stated that the Working Group and Subgroup exposed this proposal for a 60-day public comment period at the 2023 Fall National Meeting. No comments were received.

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Davis made a motion, seconded by Yanacheak, to adopt proposal 2023-14-P (Attachment Eight). The motion passed unanimously.

6. Adopted Proposal 2023-15-CR (Convective Storm for Information Purposes Only Structure)

Chou said this proposal provides the structure change for adding severe convective storm as one of the catastrophe perils for informational purposes only in the Rcat component. He stated that the Working Group and Subgroup exposed this proposal for a 60-day public comment period at the 2023 Fall National Meeting. No comments were received.

Chou made a motion, seconded by Malm, to adopt proposal 2023-15-CR (Attachment Nine). The motion passed unanimously.

7. Adopted Proposal 2024-01-P (Schedule P Short Tails)

Botsko said that on Feb. 21, the Blanks (E) Working Group adopted blanks proposal 2023-16BWG, which changes Schedule P short-tail lines to show 10 years of data beginning in 2024 reporting. He stated that the Risk-Based Capital Schedule P formulas will require to be updated to reflect the changes in the annual statement. Botsko said the Property and Casualty Risk-Based Capital (E) Working Group exposed proposal 2024-01-P for a 30-day public comment ending Feb. 24, 2024. No comments were received.

Chou made a motion, seconded by Eft, to adopt proposal 2024-01-P (Attachment Ten). The motion passed unanimously.

8. Adopted its Working Agenda

Botsko summarized the changes to the Task Force's 2024 working agenda, which included the following substantial changes in Health Risk-Based Capital (E) Working Group section: 1) removing "work with the Academy" language in item X4; and 2) removing item X7. He also stated that the following changes are included in the property and casualty (P/C) section: 1) changing the expected completion date to "2025 Summer" in item P5; 2) adding a hyperlink for the referral to the Academy in item P3; and 3) adding two items for the Subgroup and one item for the Working Group in the "New Item" section. Botsko said there are no changes for the Life Risk-Based Capital (E) Working Group. Barlow said that, as discussed earlier, the item of asset concentration refinements has been referred to the Risk-Based Capital Investment Risk and Evaluation (E) Working Group. Botsko said it will be reflected in the Risk-Based Capital Investment Risk and Evaluation (E) Working Group's new item sections, and this update will be considered at the Summer National Meeting. Regarding the Capital Adequacy (E) Task Force section, Botsko said the comment column was updated for CA1 through CA4. He also said five items were added to the Task Force's new item section.

Commissioner Schmidt made a motion, seconded by Kaumann, to adopt the Task Force's revised 2024 working agenda (Attachment Eleven). The motion passed unanimously.

9. Exposed Proposal 2024-08-CA (Col 12 Affiliated Investment)

Botsko said the purpose of this proposal is to remove the reference to "H0 Component" and "R0 Component" from the Column 12 heading on pages XR002 and PR003, respectively. He stated that the "H0" and "R0" references are misleading because only affiliate types 1 and 2 flow into H0 and R0, while affiliate types 3-9 flow into H1 and R2.

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The Task Force agreed to expose proposal 2024-08-CA (Attachment Twelve) for a 30-day public comment period ending April 16.

10. Received an Update from the Health Risk-Based Capital (E) Working Group on the H2 Component Project

The Health Risk-Based Capital (E) Working Group has been working with the Academy over the last two years to comprehensively review the H2-Underwriting Risk component. This review looks primarily at comprehensive medical (individual and group); dental and vision; Medicaid; Medicare supplement; Medicare Advantage; and stand-alone Medicare Part D/prescription drug plan (PDP) coverage. The Academy has broken this into three separate tracks: Track 1 is looking at structural changes; Track 2 is modeling and analyzing the factors; and Track 3 is looking at the managed care credit. These changes are anticipated to affect the structure and factors on pages XR013 through XR015 in the health RBC formula. The life and P/C RBC formulas currently utilize the factors from the health RBC formula and share a similar structure to the health formula. As such, the Task Force is working diligently with the Academy to ensure that any changes made to the health RBC formula can be carried over into the P/C and life RBC formulas.

11. Exposed the Collateral Loan Memorandum from the Statutory Accounting Principles (E) Working Group

Julie Gann (NAIC) said the purpose of this referral (Attachment Thirteen) is to inform the Task Force of potential revisions on 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 *Statement of Statutory Accounting Principles (SSAP) No. 21R—Other Admitted Assets*. She also said the memorandum dated Jan. 30 is the notice of the discussions that the Statutory Accounting Principles (E) Working Group had at that time. Gann stated that an updated referral regarding the recent actions of the Working Group was sent to the Life Risk-Based Capital (E) Working Group Feb. 29. It indicated the possibility of more granular reporting on the type of collateral loans on Schedule BA, as the Statutory Accounting Principles (E) Working Group is currently exposing the expanding structure and requesting comments from state insurance regulators and industry on whether collateral loans backed by certain types of collateral should flow through the AVR for RBC impact. She also recommended the Task Force expose both referrals at the same time to provide interested parties with a better understanding of the entire discussion.

The Task Force agreed to expose this referral for a 45-day public comment period ending May 1.

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

Botsko said that during its Jan. 31 meeting, the Task Force asked the interested parties to consider a couple of options: 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 P/C and health RBC formulas. In addition, the updated exhibit (Attachment Fourteen) is included in the materials. Botsko also stated that this proposal was exposed for a 30-day public comment period and received no comments. Chou said that he recommended the Task Force choose the third option. Yanacheak said he is inclined to adopt the structure, as it gives the Task Force the greatest flexibility to change the factors. Barlow said he supports adopting the structure with a 45% charge, consistent with the life approach. Drutz and Hemphill agreed with Barlow.

Yanacheak made a motion, seconded by Drutz, to expose proposal 2024-02-CA with a 45% charge for a 30-day public comment period ending April 16. (Attachment Fifteen). The motion passed unanimously.

13. Exposed the Repurchase Agreement RBC Proposal Referral from the Life Risk-Based Capital (E) Working Group

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Botsko said that on Jan. 25, the Task Force received a referral from the Life Risk-Based Capital (E) Working Group. He stated that the Working Group is currently reviewing the treatment of repurchase agreements with the ACLI. Botsko stated that the Life Risk-Based Capital (E) Working Group is asking the Task Force to consider the possible application to the other RBC formulas. He said the Task Force will closely monitor the development of this issue.

The Task Force agreed to expose this referral (Attachment Sixteen) for a 30-day public comment period ending April 16.

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

SharePoint/NAIC Support Staff Hub/Member Meetings/E CMTE/CADTF/2024-1-Spring/March 17 CADTF minutes.docx

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 One-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

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"/> Op Risk RBC (E) Subgroup |
| <input type="checkbox"/> C3 Phase II/ AG43 (E/A) Subgroup | <input type="checkbox"/> P/C RBC (E) Working Group | <input type="checkbox"/> Stress Testing (E) Subgroup |

<p style="text-align: right;">DATE: <u>11/1/2022</u></p> <p>CONTACT PERSON: <u>Eva Yeung</u></p> <p>TELEPHONE: <u>816-783-8407</u></p> <p>EMAIL ADDRESS: <u>eveung@naic.org</u></p> <p>ON BEHALF OF: <u>Catastrophe Risk (E) Subgroup</u></p> <p>NAME: <u>Wanchin Chou</u></p> <p>TITLE: <u>Chair</u></p> <p>AFFILIATION: <u>Connecticut Department of Insurance</u></p> <p>ADDRESS: <u>153 Market St.</u> <u>Hartford, CT 06103</u></p>	<p style="text-align: center;"><u>FOR NAIC USE ONLY</u></p> <p>Agenda Item # <u>2023-16-CR</u></p> <p>Year <u>2023</u></p> <p style="text-align: center;"><u>DISPOSITION</u></p> <p><input checked="" type="checkbox"/> ADOPTED <u>1st release: 12/2/23 WG/TF</u> <u>2nd release: 1/31/24 TF</u></p> <p><u>2nd release:</u></p> <p><input type="checkbox"/> REJECTED _____</p> <p><input type="checkbox"/> DEFERRED TO _____</p> <p><input type="checkbox"/> REFERRED TO OTHER NAIC GROUP _____</p> <p><input checked="" type="checkbox"/> EXPOSED <u>1st release: 11/16/23</u> <u>2nd release: 1/16/24</u></p> <p><input type="checkbox"/> OTHER (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 RBC Instructions |
| <input type="checkbox"/> Fraternal RBC Blanks | <input type="checkbox"/> Health RBC Instructions | <input type="checkbox"/> Property/Casualty RBC Instructions |
| <input type="checkbox"/> Life RBC Blanks | <input type="checkbox"/> Fraternal RBC Instructions | <input checked="" type="checkbox"/> OTHER <u>Cat Event Lists</u> |

DESCRIPTION OF CHANGE(S)

2023 U.S. and non-U.S. Catastrophe Event Lists

REASON OR JUSTIFICATION FOR CHANGE **

New events were determined based on the sources from Swiss Re and Aon Benfield.

Additional Staff Comments:

11/16/23 – The Subgroup and the PCRBC WG exposed this proposal for a 7-public comment period ending 11/23/23.
11/23/23 – cgb No comments received.
1/16/24 - The Subgroup and the PCRBC WG exposed this proposal for a 7-public comment period ending 1/23/24.

** This section must be completed on all forms.

Revised 11-2013

U.S. List of Catastrophes for Use in Reporting catastrophe Data in PR036 and PR100+

Type of Event	Name	Date	Location	Overall losses when occurred
Wildfire	Texas	2014	Texas, California	> 25 million
Earthquake		2014	California	25+ million
Hurricane	Patricia	2015		25+ million
Hurricane	Joaquin	2015		25+ million
Wildfire	Butte Fire	9/9/15-10/1/15	Amador County, California	~ 300 million
Wildfire	Valley Fire	9/12/15-10/15/15	Lake, Napa and Sonoma County, California	~ 700 million
Hurricane	Matthew	2016	Florida, North Carolina, South Carolina, Georgia and Virginia	\$ 2,698,400,000
Hurricane	Hermine	2016	Florida, North Carolina, South Carolina, Georgia and Virginia	\$ 245,640,000
Wildfire	Erskine Fire	6/23/16-7/11/16	Lake Isabella, Kern County, California	~26 million
Wildfire	Soberanes Fire	7/22/16-9/30/16	Soberanes Creek, Garrapata State Park, Santa Lucia Preserve, Monterey County, California	> 200 million
Wildfire	Chimney Fire	8/13/16-9/6/16	Santa Lucia Range, San Luis Obispo County, California	> 25 million
Wildfire	Clayton Fire	8/13/16-8/26/16	Lake County, California	>25 million
Wildfire	Gatlinburg Wildfire	11/29/16-12/5/16	Sevier County, Gatlinburg, Pigeon Forge, Tennessee	~637 million
Wildfire	Northern California Wildfires	10/8/17-10/31/17	Northern California	~ 11 billion
Wildfire	Southern California Wildfires	12/4/17-12/23/17	Southern California	~ 2.2 billion
Hurricane	Harvey	2017	Texas, Louisiana	25+ million
Hurricane	Jose	2017	East Coast of the United States	25+ million
Hurricane	Irma	2017	Eastern United States	25+ million
Hurricane	Maria	2017	Southeastern United States, Mid-Atlantic States	25+ million
Hurricane	Nate	2017	Louisiana, Mississippi, Alabama, Tennessee and Eastern United States	25+ million
Tropical Storm	Alberto	2018	Southeast, Midwest	25+ million
Hurricane	Lane	2018	Hawaii	25+ million
Tropical Storm	Gordon	2018	Southeast, Gulf coast of the United States, Arkansas and Missouri	25+ million
Hurricane	Florence	2018	Southeast, Mid-Atlantic	25+ million
Hurricane	Michael	2018	Southeastern and East Coasts of United States	25+ million
Wildfire	Spring Creek Fire	6/27/18-7/11/18	Spring Creek, Colorado	< 100 million
Wildfire	Carr, Mendocino California Wildfires	7/23/18-8/15/18	Northern California	>1,000 million
Wildfire	Northern California Camp Wildfire	11/8/18-11/25/18	Butte County, California	>7.5 billion
Wildfire	Southern California Woolsey Wildfires	11/8/18-11/21/18	Los Angeles and Ventura County, California	2.9 billion
Hurricane	Dorian	2019	Southeast, Mid-Atlantic	500+ million
Hurricane	Barry	2019	Southeast, Midwest, Northeast	300+ million
Tropical Storm	Imelda	2019	Plains, Southeast	25+ million
Tropical Storm	Nestor	2019	Southeast	25+ million
Hurricane	Lorenzo	2019	Louisiana, Mississippi, Texas and Arkansas	25+ million
Wildfire	Saddleridge Wildfire	10/10/19-10/23/19	Sylmar, Los Angeles, Calimesa, Riverside County, California	<1,000 million
Wildfire	Kincadee Wildfire	10/23/19-11/6/19	Northeast of Geyserville, Sonoma County, California	<1,000 million
Tropical Storm	Cristobal	2020	Southeast, Plains, Midwest	150 million
Tropical Storm	Fay	2020	Southeast, Northeast	400 million
Hurricane	Hanna	2020	Texas	350 million
Hurricane	Isaias	2020	Southeast, Mid-Atlantic, Northeast	> 3 billion
Hurricane	Laura	2020	Plains, Southeast, Mid-Atlantic	> 4 billion
Hurricane	Sally	2020	Southeast (Alabama, Mississippi, Louisiana)	> 1 billion
Tropical Storm	Beta	2020	Plains, Southeast	25+ million
Hurricane	Delta	2020	Gulf Coast of United States, Southeast, Northeast (AL, GA, NC, SC, MS, LA, TX)	> 2 billion
Hurricane	Zeta	2020	Gulf coast of the United States, Southeastern United States, Mid-Atlantic	> 1.5 billion
Wildfire	Cameron Peak	08/13/20-12/02/20	Roosevelt National Forest, Larimer County, Colorado	~71 million
Wildfire	SCU Lighting Complex Wildfire	8/16/20-9/16/20	San Francisco Bay Area, Central Valley, Santa Clara, Alameda, Contra Costa, San Joaquin, Merced, Stanislaus	<1,000 million
Wildfire	Beachie Creek Wildfire	8/16/20-10/10/20	Approx. 2 miles south of Jaw Bones flats in rugged terrain deep in the Opal Creek Wilderness.	>1,000 million
Wildfire	CZU Lightning Complex Wildfire	8/16/20-9/22/20	San Mateo and Santa Cruz Counties, California	>1,000 million
Wildfire	LNU Lightning Complex Wildfire	8/17/20-10/2/20	Lake, Napa, Sonoma, Solano, and Yolo Counties, California	> 1,000 million

U.S. List of Catastrophes for Use in Reporting catastrophe Data in PR036 and PR100+

Wildfire	Carmel Fire	8/18/20-9/4/20	Carmel Valley, California	<1,000 million
Wildfire	North Complex Fire	8/18/20-10/12/20	Plumas and Butte Counties, California	<1,000 million
Wildfire	Creek Fire	9/4/20-10/12/20	Fresno and Madera Counties, California	<1,000 million
Wildfire	Bobcat Fire	9/6/20-10/23/20	Central San Gabriel Mountains, in and around the Angeles National Forest California	< 1,000 million
Wildfire	Babb Road Fire	9/7/20-9/18/20	Malden and Pine City, Palouse County of Eastern Washington	<1,000 million
Wildfire	Almeda Fire	9/7/20-9/16/20	Jackson County, Oregon	<1,000 million
Wildfire	Holiday Farm Fire	9/7/20-10/3/20	Willamette National Forest	<1,000 million
Wildfire	Echo Mountain Complex Fire	9/7/20-9/23/20	north of Lincoln City, Oregon	<100 million
Wildfire	Riverside Fire	9/8/20-10/3/20	Valley Drive between Misty Ridge Drive and Mitchell Avenue, Oregon	<100 million
Wildfire	Slater Fire	9/8/20-10-9/20	Northern California and Southern Oregon	<100 million
Wildfire	Glass Fire	9/27/20-10/19/20	Napa and Sonoma Counties, California	> 1,000 million
Wildfire	East Troublesome Fire	10/14/20-11/9/20	Grand County, Colorado	~543 million
Tropical Storm	Claudette	2021	Gulf Coast of the United States, Georgia, Carolinas	> 350 million
Hurricane	Elsa	2021	East Coast of the United States	1.2 billion
Tropical Storm	Fred	2021	Eastern United States (particularly Florida and North Carolina)	1.3 billion
Hurricane	Henri	2021	Northeastern United States	550 million
Hurricane	Ida	2021	Gulf Coast of the United States (especially Louisiana), East Coast of the United States (especially the Northeastern United States)	44 billion
Tropical Storm	Nicholas	2021	LA, TX	>1.1b
Tropical Storm	Wanda	2021	Southern United States, Mid-Atlantic United States, Northeastern United States	>200 million
Wildfire	Bootleg Wildfire	7/17/21-8/6/21	Northwest of Beatty, Oregon	<1,000 million
Wildfire	Dixie Wildfire	7/14/21-10/5/21	Butte, Plumas, Tehama, Lassen and Shasta Counties, California	>1,000 million
Wildfire	Caldor Fire	8/14/21-10/5/21	El Dorado National Forest and other areas of the Sierra Nevada in El Dorado, Amador, and Alpine County, California	<1,000 million
Wildfire	Corkscrew Fire	8/15/21-8/30/21	Ford, WA; Tum Tum, Springdale, City of Deer Park, Loon Lake, Clayton, H395, Scoop Mt	<100 million
Wildfire	Marshall Fire	12/30/21-1/1/22	Boulder County, Colorado	~ 2 billion
Wildfire	Calf Canyon/Hermits Peak Fire	4/6/22-8/22/22	San Miguel County, Mora County, Taos County	> 25 million
Wildfire	McKinney Fire	7/29/22-9/7/22	Siskiyou County, Northern California	> 25 million
Wildfire	Cedar Creek Fire	8/1/22-present	Central Oregon	> 25 million
Wildfire	Mosquito Fire	9/6/22- present	Northern California, Placer County, El Dorado County	> 25 million
Hurricane	Hurricane Fiona	9/18/22-9/20/22	PR	>3 billion
Hurricane	Ian	9/23/22-10/2/22	Florida and the Carolinas, FL, GA, NC, SC, VA	>110 billion
Hurricane	Hurricane Nicole	11/9/22-11/11/22	FL, GA, SC	>1 billion
Wildfire	Hawaii Wildfire	8/8/23-8/17/23	Hawaii	> 25 million
Hurricane	Hurricane Hilary	8/17/23-8/22/23	West, Southwest United States	> 25 million
Wildfire	Washington Wildfire	8/18/23-8/22/23	Washington	> 25 million
Hurricane	Hurricane Idalia	8/27/23-8/31/23	Southeastern United States	> 25 million
Hurricane	Hurricane Lee	9/14/23-9/17/23	Northeast United States	> 25 million
Tropical Storm	Ophelia	9/22/23-9/26/23	East Coast of the United States	> 25 million

Non U.S. List of Catastrophes For Use in Reporting Catastrophe Data in PR036 and PR100+

Year	Event Type	Begin	End	Event	Country	Affected Area (Detail)	Munich Re NatCATService Insured losses (in original values, US\$m) Criteria: insured losses equal/greater US\$ 25m. Tries to reflect non-US losses only	Swiss Re Sigma: Insured Loss Est. US\$m (mid point shown if range given) Mostly reflect total US and nonUS losses combined.	
2014	Earthquake	07/07/2014		Earthquake	Mexico, Guatemala		N/A	N/A	25+million
2014	Earthquake	04/01/14		Earthquake	Chile		N/A	N/A	100+million
2014	Earthquake	12/02/2014		Earthquake	China		N/A	N/A	350+million
2014	Earthquake	05/04/2014		Earthquake	China		N/A	N/A	80+million
2014	Earthquake	05/05/2014		Earthquake	Thailand		N/A	N/A	62+million
2014	Earthquake	05/24/14		Earthquake	China		N/A	N/A	60+million
2014	Tropical Storm	06/14/14	06/16/14	TS Hagibis	China		N/A	N/A	131+million
2014	Super Typhoon	07/08/14	07/11/14	STY Neoguri	Japan		N/A	N/A	100+million
2014	Super Typhoon	07/15/14	07/20/14	STY Rammasun		Philippines, China, Vietnam	N/A	N/A	570+million
2014	Typhoon	07/22/14	07/24/14	TY Matmo		Taiwan, China, Philippines	N/A	N/A	570+million
2014	Cyclone	01/10/14	01/12/14	CY Ian	Tonga		N/A	N/A	48+million
2014	Cyclone	04/10/14	04/14/14	CY Ita	Australia		N/A	N/A	1+million
2014	Wildfire	Summer 2014		Northwest Territories Fire	Canada	Northwest Territories, Canada			~\$3.6b
2015	Hurricane	08/16/92	08/28/92	Hurricane Andrew	Bahamas	Bahamas			> 25 million
2015	Hurricane	10/20/15	10/24/15	Hurricane Patricia		Central America, Mexico	N/A	N/A	> 25 million
2015	Typhoon	06/26/15	07/13/15	Typhoon Chan-hom (Falcon)		Guam, Northern Mariana Islands, Philippines, Japan, Taiwan, Chian, Korea, Russian Far East	N/A	N/A	> 25 million
2015	Severe Tropical Storm	07/01/15	07/10/15	Severe Tropical Storm Linfa (Egay)		Philippines, Taiwan, China	N/A	N/A	> 25 million
2015	Typhoon	07/02/15	07/18/15	Typhoon Nangka		Marshall Islands, Mariana Islands and Japan	N/A	N/A	> 25 million
2015	Typhoon	07/29/15	08/12/15	Typhoon Soudelor (Hanna)		Mariana Islands, Japan, Philippines, Taiwan, Eastern China and South Korea	N/A	N/A	> 25 million
2015	Typhoon	08/13/15	08/30/15	Typhoon Goni (Ineng)		Mariana Islands, Japan, Philippines, Taiwan, China, Russia and Korea	N/A	N/A	> 25 million
2015	Severe Tropical Storm	09/06/15	09/11/15	Severe Tropical Storm Etau		Japan, Russian Far East	N/A	N/A	> 25 million
2015	Typhoon	09/19/15	09/30/15	Typhoon Dujuan (Jenny)		Ryukyu Islands, Taiwan, East China	N/A	N/A	> 25 million
2015	Typhoon	09/30/15	10/05/15	Typhoon Mujigae (Kabayan)		Philippines, Vietnam and China	N/A	N/A	> 25 million
2015	Typhoon	10/12/15	10/21/15	Typhoon Koppu (Lando)		Northern Mariana Islands, Philippines, Taiwan, Ryukyu Islands	N/A	N/A	> 25 million
2015	Typhoon	12/03/15	12/08/15	Storm Desmond		Ireland, Isle of Man, United Kingdom, Iceland, Norway and Sweden	N/A	N/A	> 25 million
2015	Hurricane	09/28/15	10/15/15	Hurricane Joaquin		Caribbean Islands, Portugal	N/A	N/A	> 25 million
2015	Earthquake	04/27/15		Earthquake	Nepal		N/A	N/A	> 25 million
2015	Earthquake	09/22/15		Earthquake	Chile		N/A	N/A	> 25 million
2015	Wildfire	11/25/15	12/02/15	Pinery Bushfire	Australia	Lower Mid North, Light River, West Barossa, South Australia, Australia			\$75m
2015	Wildfire	12/25/15		Wye River, Separation Creek bushfires,	Australia	Great Ocean Road region of Victoria, Australia			~\$110m
2016	Hurricane	08/28/16	09/06/16	Hurricane Hermine		Dominican Republic, Cuba, The Bahamas	N/A	N/A	> 25 million
2016	Tropical Cyclone	02/16/16	02/22/16	TC Winston		South Pacific Islands	N/A	N/A	> 25 million
2016	Earthquake	02/06/16		Earthquake	Taiwan	Asia	N/A	N/A	> 25 million
2016	Earthquake	01/03/16		Kaohsiung EQ	India, Bangladesh, Myanmar	Asia	N/A	N/A	> 25 million
2016	Earthquake	02/14/16		Christchurch EQ	New Zealand	Oceania	N/A	N/A	> 25 million
2016	Earthquake	04/14/16	04/16/16	Kumamoto EQs	Japan	Asia	N/A	N/A	> 25 million
2016	Earthquake	04/16/16		Ecuador EQ	Ecuador	South America	N/A	N/A	> 25 million

Non U.S. List of Catastrophes For Use in Reporting Catastrophe Data in PR036 and PR100+

2016	Tropical Cyclone	05/14/16	05/23/16	CY Roanu	Sri Lanka, India, Bangladesh, China	Asia	N/A	N/A	> 25 million
2016	Earthquake	08/24/16		Italy EQ	Italy	Europe	N/A	N/A	> 25 million
2016	Tropical Cyclone	09/14/16	09/16/16	STY Meranti	China, Taiwan, Philippines	Asia	N/A	N/A	> 25 million
2016	Tropical Cyclone	07/08/16	07/12/16	STY Napatark	China, Taiwan	Asia	N/A	N/A	> 25 million
2016	Tropical Cyclone	09/26/16	09/29/16	TY Megi	Taiwan, China	Asia	N/A	N/A	> 25 million
2016	Earthquake	09/10/16		Kagera EQ	Tanzania, Uganda	Africa	N/A	N/A	> 25 million
2016	Tropical Cyclone	08/29/16	09/01/16	TY Lionrock	China, Japan, South Korea	Asia	N/A	N/A	> 25 million
2016	Tropical Cyclone	09/19/16	09/22/16	TY Malakas	Japan, China	Asia	N/A	N/A	> 25 million
2016	Tropical Cyclone	08/18/16	08/20/16	TS Dianmu	China, Vietnam	Asia	N/A	N/A	> 25 million
2016	Tropical Cyclone	07/31/16	08/03/16	TY Nidia	China, Philippines Vietnam	Asia	N/A	N/A	> 25 million
2016	Tropical Cyclone	08/02/16	08/10/16	HU Earl	Belize, Mexico, Caribbean Islands	Caribbean Islands, Mexico and Central America	N/A	N/A	> 25 million
2016	Tropical Cyclone	08/22/16	08/23/16	TS Mindulle	Japan	Asia	N/A	N/A	> 25 million
2016	Tropical Cyclone	09/06/16	09/08/16	HU Newton	Mexico	North America (non-U.S.)	N/A	N/A	> 25 million
2016	Tropical Cyclone	10/04/16	10/07/16	STY Chaba	Japan, Korea	Asia	N/A	N/A	> 25 million
2016	Tropical Cyclone	10/16/16	10/22/16	STY Haima	Philippines, China	Asia	N/A	N/A	> 25 million
2016	Tropical Cyclone	10/14/16	10/20/16	TY Sarika	Philippines, China, Vietnam	Asia	N/A	N/A	> 25 million
2016	Earthquake	10/26/16		Central Italy EQ	Italy	Europe	N/A	N/A	> 25 million
2016	Earthquake	10/27/16		Central Italy EQ	Italy	Europe	N/A	N/A	> 25 million
2016	Earthquake	10/21/16		Tottori	Japan	Asia	N/A	N/A	> 25 million
2016	Hurricane	09/28/16	10/10/16	Hurricane Matthew		Caribbean Islands and Eastern Canada	N/A	N/A	> 25 million
2016	Hurricane	08/28/16	09/06/16	Hurricane Hermine		Dominican Republic, Cuba, The Bahamas	N/A	N/A	> 25 million
2016	Wildfire	01/06/16		Waroona-Yarloop Bushfire	Western Australia				~\$71.25m
2016	Wildfire	05/01/16	05/26/16	Canada Wildfire	Canada	Fort McMurray			\$3.52b
2016	Wildfire	11/22/16	11/27/16	November 2016 Israel Fires	Israel	Various regions in Israel, mainly in Haifa, Judean Mountains and the Sharon Plain			>\$25m
2017	Earthquake	01/18/17		Earthquake	Italy	Europe	N/A	N/A	> 25 million
2017	Earthquake	01/28/17		Earthquake	China	Asia	N/A	N/A	> 25 million
2017	Earthquake	02/10/17		Earthquake	Philippines	Asia	N/A	N/A	> 25 million
2017	Earthquake	03/27/17		Earthquake	China	Asia	N/A	N/A	> 25 million
2017	Cyclone	03/28/17	04/05/17	CY Debbie	Australia	Queensland, New South Wales, New Zealand	N/A	N/A	> 25 million
2017	Earthquake	05/11/17		Earthquake	China	Asia	N/A	N/A	> 25 million
2017	Typhoon	07/29/17	07/31/17	TY Nesat & TS Haitang	China, Taiwan, Philippines	Asia	N/A	N/A	> 25 million
2017	Typhoon	08/07/17	08/09/17	Typhoon Noru	Japan	Asia	N/A	N/A	> 25 million
2017	Earthquake	08/08/17		Earthquake	China	Asia	N/A	N/A	> 25 million
2017	Typhoon	08/23/17	08/24/17	TY Hato	China	Macau, Hong Kong	N/A	N/A	> 25 million
2017	Typhoon	08/25/17	08/28/17	TY Pakhar	China	Asia	N/A	N/A	> 25 million
2017	Hurricane	08/25/17	09/02/17	Hurricane Harvey		Caribbean Islands and Central America	N/A	N/A	> 25 million
2017	Hurricane	08/30/17	09/16/17	Hurricane Irma		Caribbean Islands and Cape Verde	N/A	N/A	> 25 million
2017	Hurricane	09/05/17	09/26/17	Hurricane Jose		Caribbean Islands and Eastern Canada	N/A	N/A	> 25 million
2017	Hurricane	09/16/17	10/03/17	Hurricane Maria		Caribbean Islands, UK, France and Spain	N/A	N/A	> 25 million
2017	Earthquake	09/07/17		Earthquake		Mexico, Guatemala	N/A	N/A	> 25 million
2017	Earthquake	09/19/17		Earthquake	Mexico	Mexico City	>200	N/A	> 25 million
2017	Hurricane	10/04/17		Hurricane Nate		Central America, Cayman Islands, Cuba Yucatan Peninsula	N/A	N/A	> 25 million
2017	Wildfire	06/06/17		Knysna Fires	South Africa	Knysna region of the Western Cape			~\$146m
2017	Wildfire	07/01/17	08/01/17	British Columbia Wildfires	Canada	British Columbia			>\$78m
2017	Wildfire	10/15/17	10/16/17	Iberian Wildfires	Portugal	Northern Portugal and Northwestern Spain			~\$210m
2018	Earthquake	02/06/18		Earthquake	Taiwan				> 25 million
2018	Earthquake	02/16/18		Earthquake	Mexico				> 25 million
2018	Cyclone	02/09/18	02/20/18	CY Gita	Tonga, Fiji, Samoa, New Zealand				> 25 million

Attachment One-A
Capital Adequacy (E) Task Force
3/17/24

Non U.S. List of Catastrophes For Use in Reporting Catastrophe Data in PR036 and PR100+

2018	Earthquake	02/26/18		Earthquake	Papua New Guinea				> 25 million
2018	Earthquake	03/05/18		Earthquake	Papua New Guinea				> 25 million
2018	Cyclone	03/17/18		CY Marcus					> 25 million
2018	Tropical Storm	05/23/18	05/27/18	Tropical Storm Mekunu	Yamen, Oman , Saudi Arabia				> 25 million
2018	Tropical Storm	06/02/18	06/07/18	Tropical Storm Ewiniar	Vietnam, China, Taiwan, Philippines and Ryukyu Islands	Guangdong Province, Jiangxi, Fujian, Zhejiang Provinces, and Hainan Island.			> 25 million
2018	Earthquake	06/18/18		Earthquake	Japan				> 25 million
2018	Super Typhoon	07/10/18	07/12/18	STY Maria	China, Taiwan, Guam and Japan	Fujian province, Yantze River Basin, Japan's Ryukyu Islands			> 25 million
2018	Tropical Storm	07/17/18	07/24/18	TS Sonh-Tinh	Vietnam, China, Laos	Japan, Russian Far East			> 25 million
2018	Tropical Storm	07/22/18	07/25/15	TS Ampil	China	Jiangsu, Zhejiang, Shandong, and Hebei			> 25 million
2018	Typhoon	07/27/18	08/03/18	TY Jongdari	Japan, China				> 25 million
2018	Earthquake	08/05/15	08/09/18	Earthquake	Indonesia				> 25 million
2018	Tropical Storm	08/09/18	08/15/18	TS Yagi	Philippines, China	Zhejiang, Anhui, Jiangsu and Shandong Provinces.			> 25 million
2018	Tropical Storm	08/13/18	08/19/18	TS Bebinca	China	Hong Kong, Guangdong and Hainan			> 25 million
2018	Typhoon	08/16/18	08/18/18	TY Rumbia	China	Shanghai, Jiangsu, Zhejiang, Anhui, Shandong and Henan			> 25 million
2018	Typhoon	08/23/18	08/25/18	TY Soulik	Japan, South Korea, China and Russia	Haenam County, South Jeolla Province			> 25 million
2018	Typhoon	09/04/18	09/05/18	RY Jebi	Japan, Mariana Islands, Taiwan, Japan, Russian Far East and Artic				> 25 million
2018	Earthquake	09/06/18		Earthquake	Japan	Hokkaido			> 25 million
2018	Super Typhoon	09/15/18	09/18/18	STY Mangkhut	N. Mariana Islands, Philippines, China and Hong Kong				> 25 million
2018	Hurricane	Leslie	09/23/18	Hurricane Leslie	Azores, Bermuda, Europe	Azores, Bermuda, Madeira, Iberian Peninsula, France			> 25 million
2018	Hurricane	10/07/18	10/16/18	Hurricane Michael	Central American, Yucatan Peninsula, Cayman Islands, Cuba, Atlantic, Canad				> 25 million
2018	Wildfire	May-18	Aug-18	Sweden Wildfires	Sweden	ranging from north of Arctic Circle to the southern County of Scania.			>\$87m
2018	Wildfire	Jul-18		Greece Wildfires	Greece	Attica, Greece			~38.1m
2019	Cyclone	05/03/19	05/05/19	Cyclone Fani	India, Bangladesh				>500 million
2019	Earthquake	06/17/19		Earthquake	China				> 25 million
2019	Tropical Storm	08/01/19	08/08/19	Tropical Storm Wipha	China, Vietnam				> 25 million
2019	Typhoon	08/09/19	08/11/19	Typhoon Lekima	China				> 855 million
2019	Typhoon	08/15/19	08/16/19	Typhoon Krosa	Japan				>25 million
2019	Hurricane	08/31/19	09/07/19	Hurricane Dorian	Caribbean, Bahamas, Canada				>1 billion
2019	Typhoon	09/05/19	09/08/19	Typhoon Lingling	Japan, China, Korea				>5.78 billion
2019	Typhoon	09/08/19	09/09/19	Typhoon Faxai	Japan				> 7 billion
2019	Hurricane	09/19/19	09/22/19	Hurricane Humberto	Bermuda				>25+ million
2019	Hurricane	09/17/19	09/26/19	Hurricane Lorenzo	Portugal				>25+ million
2019	Earthquake	11/26/19		Earthquake	Albania				>25+ million
2019	Cyclone	11/08/19	11/11/19	Cyclone Matmo (Bulbul)	India, Bangladesh				>25+ million
2019	Typhoon	10/01/19	10/02/19	Typhoon Hagibis	Japan				> 7 billion
2019	Earthquake	12/18/19		Earthquake	Philippines				>25+ million
2019	Wildfire	Sep-19	Mar-20	Australian Bushfires	New South Wales, Queensland, Victoria, South Australia, Western Australia, Tasmania and Northern Territory				~910 million
2020	Earthquake	03/22/20		Earthquake	Croatia				>25+ million
2020	Cyclone	04/01/20	04/11/20	Cyclone Harold	Solomon Islands, Canuatu, Fiji, Tonga				> 25+ million
2020	Tropical Storm	05/31/20		Tropical Storm Amanda	El Salvador, Guatemala, Honduras				> 25+ million
2020	Tropical Storm	06/01/20	06/05/20	Tropical Storm Cristobal	Mexico, Guatemala, El Salvador				150 million
2020	Hurricane	07/25/20	07/27/20	Hurricane Hanna	Mexico				350 million
2020	Hurricane	07/28/20	08/01/20	Hurricane Isaias	Caribbean, Canada				> 3 billion
2020	Hurricane	08/22/20	08/25/20	Hurricane Laura	Caribbean				> 4 billion
2020	Typhoon	05/15/20	05/22/20	Typhoon Amphan	India, Bangladesh, Sri Lanka				15 billion
2020	Tropical Storm	06/03/20	06/04/20	Tropical Storm Nisarga	India				> 25+ million
2020	Typhoon	08/03/20	08/04/20	Typhoon Hagupit	China, Taiwan				> 100+ million

Non U.S. List of Catastrophes For Use in Reporting Catastrophe Data in PR036 and PR100+

2020	Hurricane	10/05/20	10/12/20	Hurricane Delta	Jamaica, Nicaragua, Cayman Island, Yucatan Peninsula			> 2 billion
2020	Hurricane	10/24/20	10/30/20	Hurricane Zeta	Cayman Islands, Jamaica, Central America, Yucatan Peninsula, Ireland, United Kingdom			> 1.5 billion
2020	Cyclone	04/01/20	04/11/20	Cyclone Harold	Solomon Islands, Canuatu, Fiji, Tonga			> 25+ million
2020	Hurricane	10/31/20	11/14/20	Hurricane Eta	Colombia, Jamaica, Central America, Cayman Islands, Cuba, The Bahamas			> 7.9 billion
2020	Hurricane	11/14/20	11/19/20	Hurricane Iota	ABC Islands, Colombia, Jamaica, Central America			> 1.4 billion
2020	Typhoon	11/22/20	11/23/20	Typhoon Goni	Philippines, Vietnam, Cambodia, Laos			> 400+ million
2020	Typhoon	11/08/20	11/15/20	Typhoon Vamco	Philippines, Vietnam, Laos, Thailand			> 400+ million
2020	Wildfire	10/04/20		Lake Ohau Fire	New Zealand	Northwest of Lake Ohau Village		~\$25m
2020	Wildfire	02/05/21		Perth Hills Wildfire	Australia	Shire of Mundaring, Shire of Chittering, Shire of Northam City of Swan		~\$63m
2021	Earthquake	01/14/21	01/14/21	West Sulawesi	Indonesia			> 58.1 million
2021	Earthquake	02/13/21	02/13/21	Fukushima Prefecture Offshore	Japan			1.3 billion
2021	Tropical Cyclone	05/17/21		Tropical Cyclone Tautae	India			> 25+ million
2021	Tropical Storm	06/19/21	06/23/21	Tropical Storm Claudette	Oaxaca, Veracruz, Atlantic Canada			> 25+ million
2021	Earthquake	06/21/21	06/21/21	China	Yunnan Dali			> 25+ million
2021	Earthquake	06/21/21	06/21/21	China	Southern Qinghai			> 25+ million
2021	Hurricane	07/01/21	07/14/21	Elsa	Lesser Antilles, Greater Antilles, Venezuela, Colombia, Atlantic Canada, Greenland, Iceland			50 million
2021	Typhoon	07/16/21	07/31/21	In-fa (Fabian)	Philippines, Ryukyu Islands, Taiwan, China, North Korea			> 25+ million
2021	Tropical Storm	08/11/21	08/20/21	Fred	Lesser Antilles, Greater Antilles, Southern Quebec, The Maritimes			25 million
2021	Hurricane	08/13/21	08/21/21	Grace	Lesser Antilles, Greater Antilles, Yucatan Peninsula, Central Mexico			513 million
2021	Earthquake	08/14/21	08/14/21		Haiti			1 billion
2021	Hurricane	08/26/21	09/04/21	Ida	Venezuela, Colombia, Jamaica, Cayman Islands, Cuba, Atlantic Canada			> 250 million
2021	Earthquake	09/07/21	09/07/21	Guerrero	Mexico			200 million
2021	Earthquake	09/16/21			China			> 25+ million
2021	Hurricane	09/12/21	09/18/21	Nicholas	Yucatan Peninsula, Tamaulipas			1.1 billion
2021	Hurricane	09/10/21	09/11/21	Larry	Canada			80 million
2021	Cyclone	10/02/21	10/04/21	Cyclone Shaheen	Oman, Iran, India, Pakistan, United Arab Emirates, Saudi Arabia, Yemen			> 25+ million
2021	Earthquake	10/07/21	10/07/21		Japan			> 25+ million
2021	Tropical Storm	10/10/21	10/14/21	Tropical Storm Kompasu	Philippines, Hong Kong, China			245 million
2021	Earthquake	10/16/21	10/16/21		Indonesia			> 25+ million
2021	Tropical Cyclone	10/24/21	11/02/21	Apollo	Italy, Malta, Tunisia, Algeria, Libya, Turkey			> 25+ million
2021	Tropical Storm	10/31/21	11/07/21	Wanda	Atlantic Canada, Bermuda, Azores			> 25+ million
2021	Earthquake	11/14/21	11/14/21		Iran			> 25+ million
2021	Tropical Cyclone	12/14/21	12/18/21	Rai (Odette)	Caroline Islands, Palau, Philippines			> 25+ million
2022	Wildfire	01/15/22	02/28/22	Corrientes	Corrientes Province, Argentina			> 25+ million
2022	Earthquake	03/16/22		Fukushima Earthquake	Japan			2.8 billion
2022	Tropical Storm	04/08/22	04/12/22	Megi	Philippines			>25+ million
2022	Typhoon	08/28/22	09/07/22	Hinnamnor	Japan, Taiwan, Philippines, South Korea, Russian, Far East			>25+ million
2022	Earthquake	09/05/22		Luding Earthquake	Luding County in Sichuan province			>25+ million
2022	Hurricane	09/14/22	09/28/22	Fiona	Leeward Islands, Puerto Rico, Dominican Republic, Lucayan Archipelago, Bermuda, Eastern Canada, Saint Pierre and Miquelon, Greenland			660 million
2022	Hurricane	09/23/22	10/02/22	Ian	Trinidad and Tobago, Venezuela, Colombia, ABC Islands, Jamaica, Cayman Islands, Cuba			> 110 billion
2022	Hurricane	10/07/22	10/10/22	Julia	Trinidad and Tobago, Venezuela, ABC Islands, Colombia, Nicaragua, El Salvador, Honduras, Guatemala, Panama, Mexico			>400 million

Draft: 3/20/2024

Health Risk-Based Capital (E) Working Group
Virtual Meeting
February 22, 2024

The Health Risk-Based Capital (E) Working Group of the Capital Adequacy (E) Task Force met Feb. 22, 2024. The following Working Group members participated: Steve Drutz, Chair (WA); Matthew Richard, Vice Chair, and Aaron Hodges (TX); Wanchin Chou and Sarah Mu (CT); Kyle Collins (FL); Tish Becker (KS); Danielle Smith (MO); Margaret Garrison (NE); Michael Laverdiere and Tom Dudek (NY); and Diana Sherman (PA). Also participating was: Tom Botsko (OH).

1. Adopted its Nov. 8, 2023, Minutes

Drutz said the Working Group met Nov. 8, 2023. During this meeting, the Working Group took the following action: 1) adopted its July 25, 2023, minutes; 2) adopted proposal 2023-11-H (XR014 Fee-For-Service and Other Risk Revenue- Medicare and Medicaid); 3) exposed the American Academy of Actuaries (Academy) Health Care Receivables Presentation; 4) heard an update from the Academy on the H2-Underwriting Risk Review; 5) discussed pandemic risk; 6) discussed the Risk Evaluation Ad Hoc Group; and 7) discussed questions on the 2022 health risk-based capital (RBC) statistics.

Smith made a motion, seconded by Becker, to adopt the Working Group's Nov. 8 (*see NAIC Proceedings – Fall 2023, Capital Adequacy (E) Task Force*) minutes. The motion passed unanimously.

2. Exposed Proposal 2024-09-CA

Drutz said proposal 2024-09-CA is related to the investment income adjustment in the underwriting risk factors for the comprehensive medical, Medicare supplement, and dental and vision underwriting factors. The investment yield for the six-month U.S. Department of the Treasury (Treasury Department) bond in January ranged from 5.18% to 5.24%, which is included in the proposal. Drutz said that based on the guidance adopted in 2022, any adjustments will be rounded up to the nearest 0.5%, so a 5.5% adjustment was utilized in the factors.

Drutz reminded participants that this proposal will affect all lines of business and suggested that the Working Group expose it first and then refer it to the Capital Adequacy (E) Task Force to re-expose for all lines of business.

Hearing no objections, the Working Group exposed proposal 2024-09-CA for a 32-day comment period ending March 25.

3. Discussed Comments Received on the Academy's Health Care Receivables Presentation

Drutz said the Academy's Health Care Receivables presentation was exposed at the July 25 meeting, and one comment letter was received from UnitedHealth Group (UHG). Jim Braue (UHG) summarized the comment letter (Attachment Two-A) and discussed its four key points: 1) degree of aggregation of non-pharmacy health care receivables; 2) inclusion of blue blank data; 3) entities with zero collections; and 4) weighting of data points. Braue suggested that the non-pharmacy health care receivables be aggregated and the tiered factor applied to the aggregated amount so there is a single break point for the non-pharmacy categories. Braue said that those companies for whom the receivables are more financially significant will put more effort into collecting them, and companies for whom these receivables are trivial will not put as much expense and effort into collecting them. He said that instead of using each of these receivables as a data point, they could be weighted by their dollar amount,

but even that may not truly represent what is going on because the dollar amount must be viewed relative to the size of the company. Braue said UHG proposes using a weighting system of the data points based on the relationship of the dollar amount of the receivable to the dollar amount of the company's surplus. This would identify how important the receivables are to the company's surplus if those amounts are not collected. He said UHG felt this would provide a truer picture of how likely the company is to collect the receivable.

Kevin Russell (Academy) said that the Academy could aggregate the non-pharmacy health care receivables to see what effect that has. He asked if an aggregated approach would require a structure change to the formula. Crystal Brown (NAIC) said the cleanest and most transparent approach would be a structure change to add a subtotal line for which to apply the factor. David Quinn (Academy) said the proposed factors presented were developed and applied individually, and then the results were shown in the aggregate. He said the breakpoint was \$10 million for non-pharmacy rebate health care receivables, and most companies do not have \$10 million in those other receivables combined. Quinn said maybe 10% of the companies had more than \$10 million. He said that applying the factors individually or combined will yield similar results. Quinn said the reason that they did it by individual line and then looked at the aggregate results for non-pharmacy health care receivables was structural. He said the year-to-year reporting of the health care receivables is stable, so it was not a statistical credibility issue; it was in relation to the existing structure. Russell said that the Academy could also exclude the blue blank data.

Quinn said that each year, there are about 750 companies that report health care receivables in the orange and blue blank, and about 3% are blue blank companies. He said that they do hold an above-average amount of pharmaceutical health care receivables, so even though there are about 3% of the companies, about 20% of the pharmaceutical rebate health care receivables, and a smaller amount of non-pharmacy receivables (about 5%) are reported in the blue blank. Quinn said the analysis looks at how many companies successfully collect on the health care receivable; it is a count of companies with successful collection. He said that since the blue blank makes up only about 3% of those counts, excluding them will have a trivial effect on the analysis. Quinn said that the underlying simulations that came up with the proposed factors did exclude the zero-reporting companies. He said if there was a receivable in the prior year to be collected on and if something was collected, those companies were counted because the Academy was targeting somewhere between 90–95% successful collection under the proposed factors. Russell said the Academy did not have the surplus amounts within the data provided, and traditionally, the calculations had been made on an equal weight. Russell asked if the Working Group wanted the Academy to look at the weighting of data points.

Drutz asked Braue how this could be practically incorporated into the formula. Braue said there are two pieces to it, and working it into the formula would be difficult and require the factors to be calculated in a different way. He said the thought was that the factors would be calculated on that basis and then applied in the same fashion, recognizing that the factors would be most appropriate for the companies with the most significant receivables. He said for some of the trivial receivables—those that are presumably small relative to surplus—the factor would be understated and would not have any real impact on the result. Braue said the thought was that weighting those factors would provide a clearer picture of the collection rates for the receivables that were most significant from a solvency standpoint and less appropriate for receivables where there was not a significant solvency risk.

The Academy agreed to revise the analysis and presentation to address the aggregation of non-pharmacy health care receivables and remove blue blank data. Braue agreed that the Academy's explanation addressed the zero-reporting entities. NAIC staff will set up a call to discuss the weighting of data points with Russell, Quinn, Braue, Drutz, and Richard to determine what type of analysis would be needed. Drutz asked if the Working Group had missed the deadline for 2024. Brown said it depended on how the Working Group wanted to move forward. If the Working Group wanted to apply the factor to an aggregate amount for non-pharmacy health care receivables, it would require a structure change, and the deadline for 2024 was passed. However, if the Working Group only wanted to change the factors and keep the existing structure, the factors would have to be exposed by April 30.

4. Discussed Pandemic Risk

Drutz said the Working Group has discussed whether pandemic risk should be included in the health RBC formula over the last several calls. He said this included a discussion on the previously included interrogatories as well as a presentation on personal consumption expenditures before, during, and after COVID-19. Drutz said a review of the 2014 interrogatories on pandemic and biological risk revealed that only nine companies allocated surplus for pandemic and biological risks, and only seven companies model for it. He said the seven companies were made up of two groups; one group ensured reserves were adequate under a multitude of scenarios, including pandemic risk, and used Monte Carlo simulations to do so. Drutz said the other group made a provision for adverse claims deviation with factors including a moderate pandemic using the Centers for Disease Control and Prevention (CDC) and state health department information. Drutz said the other two companies allocated a component of surplus for pandemic or biological risks but did not use modeling. He said that based on the trends that the Working Group saw from the COVID-19 pandemic, companies did not experience significant losses during the pandemic, as people were not having elective procedures. He said this pent-up demand was later reflected in the subsequent years. Drutz asked Working Group members if RBC can adequately address pandemic risk or if this would be better addressed through the analysis and/or exam processes. Smith said she was unsure if pandemic risk is included in the *Financial Analysis Handbook* or the *Financial Condition Examiners Handbook*. She said it was listed as a concern on the Solvency Monitor Risk Alert but removed in the fall of 2023.

Drutz suggested that the Working Group draft a referral letter to the Financial Analysis Solvency Tools (E) Working Group and the Financial Examiners Handbook (E) Technical Group about how pandemic risk may be best addressed in the analysis and exam process. The Working Group agreed to draft the referral letter and remove pandemic risk from the working agenda.

5. Adopted its Working Agenda

Drutz summarized the updates to the Working Group's 2024 working agenda: 1) line X1 was updated to add exposure of proposal 2024-09-CA; 2) lines X3-X6 were revised to update the expected completion date; 3) line X4 was updated to remove the inquiry item on the Health Care Receivables; and 4) line X7 was deleted based on the discussion of item 4 of today's agenda.

Sherman made a motion, seconded by Smith, to adopt the Working Group's 2024 working agenda (Attachment Twelve). The motion passed unanimously.

6. Heard an Update from the Academy on the H2 – Underwriting Risk Review

Steve Guzski (Academy) said the Academy is continuing its work on the three tracks: Track 1 is the structure redesign on pages XR013 and XR014; Track 2 is the development of the tiered factors; and Track 3 is the redesign of the managed care credit on page XR018 and XR019. He said Track 2 is engaging in modeling various lines of business, has developed the initial results, and continues to refine those. Guzski said Track 2 meets on at least a weekly basis and that it is still working on final timelines.

Having no further business, the Health Risk-Based Capital (E) Working Group adjourned.

SharePoint/NAIC Support Staff Hub/Committees/E CMTE/CADTF/2024-1-Spring/HRBCWG/2-22-24 minutesTPR.docx

UNITEDHEALTH GROUP

Corporate Finance – Actuarial Services Division
185 Asylum Street, CityPlace I • Hartford, CT 06103

November 29, 2023

Mr. Steven Drutz, Chair
Health Risk-Based Capital (E) Working Group
National Association of Insurance Commissioners
1100 Walnut Street, Suite 1500
Kansas City, MO 64106-2197

Via electronic mail to Crystal Brown.

Re: November 8, 2023, Academy presentation on Health Care Receivables.

Dear Mr. Drutz:

I am writing on behalf of UnitedHealth Group with regard to the November 8, 2023, presentation by the American Academy of Actuaries on “Health Care Receivables (HCR): Current and Proposed H3 Factors,” as exposed for comment by your Working Group, also on November 8. We appreciate having had the opportunity to ask questions regarding the presentation during the Working Group’s November 8, 2023, conference call, and we thank the Academy’s representative for his thoughtful responses.

As a follow-up to that conversation, there are four areas of concern that we would like to address in this letter, as indicated by the headings below.

Degree of aggregation of non-pharmacy HCRs.

There are six categories of HCRs reported in the Annual Statement. The Academy’s presentation indicated that a single category, pharmacy rebate receivables, accounts for some 60-70% of the total amount of HCRs. The other five categories (which we will refer to collectively as “non-pharmacy HCRs”) ranged from about 1% of the total to about 11% of the total.

The current H3 factors for HCRs were originally proposed in the Academy’s April 15, 2016, letter regarding a “Recommendation on Credit Risk Factors for Health Care Receivables.” The analysis that supported the April 15, 2016, recommendation grouped the non-pharmacy HCRs together, in order to achieve a sufficient volume of data. At the time, we expressed some concern about this grouping, as it seemed that different categories of HCRs were likely to have differing collection experience; in particular, one might suppose that an entity would have better experience for HCRs where the entity had an opportunity to consider a provider’s credit quality before creating the receivable (e.g., loans and advances) versus those where there was no such

opportunity (e.g., claim overpayments). However, we recognized that as a practical matter, it might be necessary to combine categories of HCRs in order to obtain a credible volume of data.

In the analysis presented on November 8, 2023, a single set of tiered factors was proposed for all of the non-pharmacy HCRs, and the factors were chosen to achieve a certain percentage of collection ratios greater than 100%. However, the collection ratios were calculated separately for each non-pharmacy category, and the breakpoints between the tiered factors are intended to be applied separately to each non-pharmacy category. It seems to us that this approach is internally inconsistent. The reason for calculating separate collection ratios and applying separate breakpoints would be to capture differing experience among the non-pharmacy categories. However, by applying the same factors and breakpoints to each category, the formula clearly would not be accomplishing that differentiation.

This approach to aggregation also does not reflect how the relative size of an entity's receivables might impact its collection activity. For example, suppose an entity has \$10 million of claim overpayment receivables, relating primarily to three hospitals; and \$100,000 dollars of risk-sharing receivables, relating to two medical groups. It seems reasonable that the entity might focus more of its collection efforts on the \$10 million of claim overpayments than on the \$100,000 of risk-sharing receivables; and as a result, while it might achieve a 90% collection rate for the claim overpayments, its collection rate for risk-sharing might be only 40%. The Academy's current approach would treat those as two separate data points of 40% and 90% (averaging to 65%), while from the entity's standpoint, its collection facility is achieving an 89.5% collection rate. It would therefore seem more appropriate to aggregate the non-pharmacy HCRs for each entity for the purposes of calculating the collection ratios. Then, the factors and breakpoint should be determined in such a way so that, applied to the non-pharmacy HCRs in aggregate for each entity, they would achieve the desired success rate among collection ratios (as calculated on an aggregate basis).

Inclusion of Blue Blank data.

Most of the data used in the Academy's analysis came from entities that file their financial statements using the Health Annual Statement format (the "Orange Blank"). However, beginning with 2021, data were also available from entities that file using the Life, Accident & Health Annual Statement format (the "Blue Blank").

We do have some concerns about the inclusion of the Blue Blank data. If a Blue Blank filer is primarily a writer of medical insurance, then it seems reasonable to suppose that its collection experience will be comparable to that of an Orange Blank filer. However, if a Blue Blank filer's business is primarily life insurance and/or annuities, and medical insurance represents only a small portion of its business, it is possible that the collection of health care receivables will not receive the same level of attention and dedication of resources, resulting in poorer collection experience.

If the new H3 factors were going to be applied to Orange Blank and Blue Blank entities alike, it would be appropriate to base the factors on the combined experience of both types of filers. However, as discussed on the November 8, 2023, conference call, these H3 factors will not become part of the Life Risk-Based Capital formula that is applicable to Blue Blank filers. It therefore seems inappropriate to use the Blue Blank experience in the analysis if that produces a

materially different result from the Orange Blank experience, which is directly relevant to the affected entities.

On the November 8, 2023, conference call, the Academy's representative indicated that the Academy had not analyzed the differences, if any, between Orange Blank collection experience and Blue Blank collection experience. We believe that before factors based on the combined experience are adopted, such an analysis should be performed, to ensure that the Blue Blank experience is not materially distorting the results.

Entities with zero collections.

For the smallest size category of receivables (less than \$1 million in size) in both the pharmacy and non-pharmacy categories, the proposed factors would achieve a lower level of success (percentage of collection ratios equal to 100% or greater) than for the two larger size categories. This could potentially be mitigated by adding a third tier of higher factors for the very smallest receivables; however, the Academy considered and rejected that approach. The Academy noted that there are a significant number of small receivables associated with collections of zero dollars, which would have required a very much higher factor for that size of receivable; and applying such a high factor to all of the smallest receivables did not seem justified, because of the possibility that many of the zero-dollar collections were the result of reporting issues, not genuinely bad collection experience.

There are three reasons why the collections associated with a particular receivable might be zero:

- (a) The entity genuinely collected no part of the receivable, and does not expect to collect any part in the future;
- (b) the entity did collect part or all of the receivable, but the collection data could not easily be extracted from its data systems, so that the collections could not be reported; or,
- (c) the entity did collect part or all of the receivable, and the failure to report any collections was simply an error of omission.

If the reason for reporting zero dollars of collections is (b) or (c), then those data points should be excluded from the analysis. At this point, the reason for any given entity cannot be determined with certainty, so it is not possible to tell the degree of distortion caused by including the inappropriate data points (if any). However, it would be useful to see an analysis that omits all of the zero-dollar collections. The final H3 factors could be set between the two extremes (using all zero-dollar collections and no zero-dollar collections) using judgment; or, perhaps, by contacting a sample of the zero-dollar reporters, the NAIC might be able to get some idea as to the proportion resulting from reason (a) above versus reasons (b) and (c).

Weighting of data points.

As noted in each of the first two sections above, an entity's collection efforts might quite reasonably depend on the relative importance of the receivable. Giving equal weight to each data point tends to obscure this fact. The Academy's current analysis, as we understand it, would give the same weight to the collection experience for a \$100 receivable as to the experience for a \$100 million receivable. Nor is absolute size the only relevant criterion; Entity A may have a receivable only half as large as Entity B's, but if Entity B is twenty times the size of Entity A, then the receivable is much more significant to Entity A.

In our May 20, 2016, comments on the Academy's April 15, 2016, letter cited above, we suggested the following with regard to weighting.

Accordingly, it is necessary to consider the relative importance of these receivables to each company that holds them. It seems reasonable to suppose — subject, of course, to confirmation from the data at hand — that the more important a receivable is to a company, the more effort will be expended on properly estimating the receivable (where estimation is necessary) and the more effort will be expended on actually collecting the receivable. The appropriate weighting to reflect that consideration would not be the absolute size of the receivable, since a company could have a receivable twice as large as another's but be less affected by it because that company is twenty times the size of the other. A more appropriate weighting would be the size of the receivable as a percentage of the company's capital and surplus. That weighting would more directly reflect how important the collection of the receivable is to the company's solvency.

We recommend that the Academy's analysis be redone using this method of weighting, for both the pharmacy rebate receivables and the non-pharmacy HCRs. While this approach might understate the H3 factor for the least material receivables, by definition those receivables will be less relevant to solvency, and such understatement would not put solvency at risk.

Conclusion.

In summary, we recommend the following:

1. All the non-pharmacy HCR receivables should be aggregated for purposes of calculating collection ratios, determining the H3 factors, and determining and applying the factor breakpoints.
2. Blue Blank data should be excluded from the analysis. At the very least, a separate analysis of Blue Blank versus Orange Blank data should be performed, to determine whether the Blue Blank data are materially biasing the result.
3. An analysis should be performed excluding entities that report zero collections for non-pharmacy HCRs.

4. The data points in the various analyses should be weighted to reflect the relevant importance of each data point to entity solvency.

We would be happy to discuss these comments with you and the Working Group.



James R. Braue
Senior Director, Actuarial Services
UnitedHealth Group

cc: Crystal Brown, NAIC
Tracy Arney, UnitedHealth Group

Draft: 3/28/24

Life Risk-Based Capital (E) Working Group
Phoenix, Arizona
March 17, 2024

The Life Risk-Based Capital (E) Working Group of the Capital Adequacy (E) Task Force met in Phoenix, AZ, March 17, 2024. The following Working Group members participated: Philip Barlow, Chair (DC); Ben Slutsker, Vice Chair (MN); Sanjeev Chaudhuri (AL); Thomas Reedy (CA); Wanchin Chou (CT); Jason Reynolds (FL); Mike Yanacheak (IA); Vincent Tsang (IL); William Leung (MO); Michael Muldoon (NE); Jennifer Li (NH); Seong-min Eom (NJ); Bill Carmello (NY); Andres Schallhorn (OK); and Rachel Hemphill (TX). Also participating was: Peter Weber (OH).

1. Adopted its Jan. 25, 2024, and 2023 Fall National Meeting Minutes

The Working Group met Jan. 25, 2024. During this meeting, it took the following action: 1) exposed the American Council of Life Insurers' (ACLI's) repurchase agreement proposal for a 30-day public comment period; 2) exposed a proposal to add a line for total adjust capital (TAC) adjustment for non-admitted affiliates for a 30-day public comment period; and 3) exposed a proposal to add a line to schedule BA mortgages for omitted asset valuation reserve (AVR) for a 30-day public comment period.

Chou made a motion, seconded by Yanacheak, to adopt the Working Group's Jan. 25, 2024 (Attachment Three-A) and Dec. 2, 2023 (*see NAIC Proceedings – Summer 2023, Capital Adequacy (E) Task Force*) minutes. The motion passed unanimously.

2. Received Updates from its Subgroups

A. GOES (E/A) Subgroup

Yanacheak provided an update on the Generator of Economic Scenarios (GOES) (E/A) Subgroup. He said there was a large amount of discussion during the Life Actuarial (A) Task Force's session during the Spring National Meeting on the Subgroup's work to make decisions on key properties of the scenario generator, which include: 1) moving forward with a correlation-based approach for the relationship between expected equity returns and interest rates, rather than the structural linkage present in the base Conning equity model. The correlation approach, which was recommended by the American Council of Life Insurers (ACLI), will also be paired with revised equity acceptance criteria; and 2) using the Conning corporate model for bond fund returns.

The American Academy of Actuaries (Academy) had recommended an alternative corporate model that was fully documented. However, regulators on the Subgroup largely agreed that they wanted a model that would benefit from Conning's continued research and development. Additionally, Conning expanded access to the detailed technical documentation to all (non-competitor) companies that sign a nondisclosure agreement, which resolved some of the regulator concerns around documentation. Yanacheak said that with the key items resolved along with others, Conning now has the guidance needed to recalibrate the GOES and produce new scenario sets for use in an unaggregated field test expected to run from late March to the end of June. Scenario sets will be released as soon as possible for review by regulators and interested parties. Relevant statistics from the scenario sets will be discussed during an upcoming meeting of the Subgroup. If confirmed then by the Subgroup, unaggregated field test participants can then begin their testing. Upon completion of the field testing, companies will share their results confidentially in regulator-to-regulator discussion. The NAIC and its consultant, Oliver Wyman, will also perform model office analysis and share the results of that testing in public meetings. Comments were also received on a revised set of GOES acceptance criteria from the Academy, the ACLI, and others.

Some of the commenters pushed for additional acceptance criteria. However, Life Actuarial (A) Task Force members noted a desire to move forward with a more concise set of acceptance criteria, noting that it could make sense to add additional criteria as part of an ongoing governance process later on.

B. Longevity Risk (E/A) Subgroup

Eom provided an update on the Longevity Risk (E/A) Subgroup. The Subgroup has not met since the 2023 Fall National Meeting. However, it will resume meetings once the currently exposed VM-22 principle-based reserving (PBR) methodology is finalized and adopted to develop and recommend longevity risk factor(s) for the product(s) that were excluded from the application of the current longevity risk factors.

C. Variable Annuities Capital and Reserve (E/A) Subgroup

Weber provided an update on the Variable Annuities Capital and Reserve (E/A) Subgroup. He said that although the Subgroup has been idle for a long time, it will be starting up work, which will be focused on the reserve side for now.

3. Heard a Presentation from the Academy on C-3 risks

Link Richardson (Academy) provided an update on the Academy's work on C-3 risks. He said the Academy is looking for feedback from state insurance regulators on the basics before putting this work into specific recommendations. He presented the Academy's methodology, considerations, and suggestions (Attachment Three-B). He discussed the alignment of the C-3 approaches between Phase I and Phase II, which were implemented at different times and have some significant differences that the Academy believes would make sense to reduce or eliminate. He discussed the key differences, which include: 1) scope; 2) scenarios; 3) metric; 4) models;

5) default costs; 6) assumptions; 7) interim reserves; 8) discounting; and 9) factor-based floor versus floor on reserves but not on risk-based capital (RBC). Richardson said the Academy would like to meet on this to go into more detail. Barlow said this project has been off and on for many years but is very important. He said the Academy's work is appreciated, so a meeting will be scheduled to provide the feedback the Academy is looking for.

4. Re-Exposed the ACLI's Repurchase Agreement Proposal

Barlow said one comment letter was received in response to the January exposure of the ACLI's repurchase agreement proposal. He also noted that the Working Group had requested input from the Statutory Accounting Principles (E) Working Group, which suggested that the Life Risk-Based Capital (E) Working Group defer consideration of this proposal.

Brian Bayerle (ACLI) said a point had been raised with respect to wording in the exposure regarding a dedicated reinvestment portfolio. After more discussion, he said it did seem more appropriate that it was not necessarily a separate portfolio, but a separately identifiable pool of assets. Therefore, the ACLI is asking for a re-exposure with the updated language. He asked the Working Group to consider the possibility of adoption for 2024 if there is an update from the Statutory Accounting Principles (E) Working Group and if they might agree that it would make sense to move forward while finalizing their guidance.

The Working Group agreed to re-expose the ACLI's repurchase agreement proposal for a 30-day public comment period April 15.

5. Heard a Presentation from the Academy on Covariance

Paul Navratil (Academy) said covariance is something the Academy believes is a potential area the Working Group may want to consider (Attachment Three-C). He said part of the background of the discussion is there have been a lot of reviews and updates to individual factors within the life RBC formula, and the correlation between those factors is one of the items that has not been holistically reviewed. He discussed the rationale for why the Working Group may want to take this up in the spirit of wanting to have a regular maintenance schedule, which has been discussed in the past, for items within the life RBC formula. He said the current correlation is also fairly simple. Every correlation within the formula right now, with the exception of longevity and mortality, which were recently added, is either 0% or 100%. Therefore, it certainly seems possible that a more refined and more useful approach could be achieved without tremendous additional complexity.

Navratil said it is possible that changes and impacts, particularly to individual company levels could be material, which could make it more useful as a tool for state insurance regulators. While there is historical data that is available and will be used to inform any work or recommendations, he said there would certainly be elements where significant judgment would need to go into a proposal. He said the Academy will also want to be aware of other competing priorities that may be before the Working Group and, even if the Working Group believes this is work to pursue, it is also the right time to look at it.

Barlow said he believes this is work that should be done as it has not been reviewed since originally created, except for a couple of tweaks. He said the Working Group will schedule a meeting to discuss this in more detail and provide the Academy with the feedback needed to move forward.

6. Discussed Other Matters

Julie Gann (NAIC) presented a referral from the Statutory Accounting Principles (E) Working Group on reporting changes for collateral loans and the potential impacts to both the AVR and the life RBC formula (Attachment Three-D). The Working Group directed NAIC staff to review the potential impacts and to draft an initial response to the referral.

Having no further business, the Life Risk-Based Capital (E) Working Group adjourned.

SharePoint/NAIC Support Staff Hub/Committees/Committee Folders/E CMTE/CADTF/2024_1Spring/LRBC/Life RBC 3-17-24 Minutes.docx

Draft: 3/4/24

Life Risk-Based Capital (E) Working Group
Virtual Meeting
January 25, 2024

The Life Risk-Based Capital (E) Working Group of the Capital Adequacy (E) Task Force met Jan. 25, 2024. The following Working Group members participated: Philip Barlow, Chair (DC); Thomas Reedy (CA); Lei Rao-Knight (CT); Vincent Tsang (IL); Mike Yanacheak (IA); Fred Andersen and Ben Slutsker (MN); William Leung (MO); Michael Muldoon (NE); Jennifer Lee (NH); Seong-min Eom (NJ); Amanda Fenwick (NY); Rachel Hemphill (TX); and Tomasz Serbinowski (UT).

1. Discussed the American Council of Life Insurer's (ACLI) Repurchase Agreements Proposal

Brian Bayerle (American Council of Life Insurers—ACLI) said the proposal had been discussed last year but the ACLI wanted to provide a walkthrough the proposal again as a refresher for the Working Group. He noted the proposal included the proposal form, instruction changes and changes to the RBC blanks. Martin Mair and Alex Strickler (MetLife) presented an overview of the repurchase agreement proposal. They discussed the: 1) conforming program criteria; 2) instruction enhancements; 3) reporting enhancements and 4) proposed general interrogatory enhancements. The Working Group agreed to expose the proposal for a 30-day public comment period and directed NAIC staff to forward the referral (Attachment Three-A1) to the Statutory Accounting Principles (E) Working Group and the Capital Adequacy (E) Task Force to those groups.

2. Discussed Proposal to Add Line for Total Adjusted Capital (TAC) Adjustment for Non-Admitted Affiliates

Dave Fleming (NAIC) said the proposal adds a line to LR033, Calculation of Total Adjusted Capital, to address the treatment of non-admitted insurance affiliates. This treatment was adopted as part of proposal 2022-09-CA, the revised treatment of affiliated investments. This line was omitted from the life structure change but was done for 2023 by including it in an existing line. This proposal makes no change in the treatment but makes the life formula consistent with the other RBC formulas. The Working Group agreed to expose the proposal for a 30-day public comment period.

3. Discussed Proposal to Add Line to Schedule BA Mortgages for Omitted Asset Valuation Reserve (AVR) Line

Fleming said the proposal adds a line to LR009 to specifically address line 44 of the Asset Valuation Reserve (AVR) Equity Component. This AVR line was not included in the LR009 changes made with the mortgage methodology change in 2013. This proposal does not include a factor but facilitates the application of one specific to this category if appropriate. The Working Group agreed to expose the proposal for a 30-day public comment period.

Having no further business, the Life Risk-Based Capital (E) Working Group adjourned.



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March 8, 2024

Philip Barlow
Chair, NAIC Life Risk-Based Capital (E) Working Group (LRBC)

Re: Exposure of the ACLI RBC Repurchase Agreement (Repo) Proposal (2024-03-L)

Dear Chair Barlow:

The American Council of Life Insurers (ACLI) appreciates the LRBC Working Group's consideration and exposure of our proposal to reduce the repo charge to 0.2% for programs that meet "conforming program criteria" through the General Interrogatories, including identification of a reinvestment pool funded by conforming repo programs.

Following conversations with regulators regarding our previous suggestions on February 23, 2024, ACLI has decided to amend our proposal slightly to leave the word "dedicated" within the RBC Instructions while specifying that the primary conforming requirement should be to identify a "pool of" dedicated reinvested assets. Within the Background section, the change would appear as such:

- To qualify for a "conforming" securities lending program, insurers must attest that their program conforms to appropriate operational and investment risk guidelines and that the collateral margin applied to transactions is within the industry standard. The primary "conforming" requirement is to identify a **pool of dedicated reinvestment portfolioed assets** to match the securities lending liability.

In a similar vein, we also recommend the following change in the ACLI proposal section:

1. Establish "conforming program criteria" for repo, similar to securities lending. Reporting insurers must attest that they have **identified a pool of dedicated reinvestedment** assets to

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acli.com

support the repo liability and enhance their statutory reporting so that regulators can validate these attestations.

Thank you once again for the consideration of our proposal and we look forward to future discussions with regulators on this topic.

Sincerely,

A handwritten signature in cursive script that reads "Colin Masterson". The signature is written in black ink and is positioned to the right of a large, stylized initial "B" that appears to be part of the signature or a separate mark.

cc: Dave Fleming, NAIC



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Non-Variable Annuity Principle-Based Reserving (PBR) Framework Update

Annuity Reserves & Capital Subcommittee

September 6, 2023

Academy Webinar

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Agenda

- **Intro and General Overview**
 - Chris Conrad, MAAA, FSA, Chairperson, Annuity Reserves & Capital Subcommittee
- **C-3 Risk-Based Capital**
 - Link Richardson, MAAA, FSA, CERA - Member, Economic Scenario Subcommittee and Annuity Reserves & Capital Subcommittee
- **Updated Draft Framework**
 - Andrew Jenkins, MAAA, FSA, Co-Vice Chairperson, Annuity Reserves & Capital Subcommittee
 - Bruce Friedland, MAAA, FSA, Co-Vice Chairperson, Annuity Reserves & Capital Subcommittee
- **Q&A**

Timeline

- **Timeline is tentative due to dependency on Generator of Economic Scenarios (GOES) Initiative**
- Fall 2023: Exposure of Standard Projection Amount; VM-31 Drafting Group Meetings and Exposure
- Early 2024: Discussion of Comments Received on Exposures; Field Test Prep
- Summer 2024: Field Test
- Fall 2024/Early 2025: Compile and Discuss Results of Field Test; Resolve Outstanding Items from Field Test
- Early 2025: Life Actuarial (A) Task Force (LATF) Discussion of Comments
- Mid 2025: LATF, Life Insurance and Annuities (A) Committee and Exec and Plenary Adoption
- **Target 1/1/26 Effective Date**

Requirements for Principle-Based Reserves for Non-Variable Annuities— *An Overview of the Current Draft*

Annuity Reserves & Capital Subcommittee

Academy Webinar

Scope and Effective Date

Products In-Scope

Account Value Based Annuities

- Deferred Annuities (SPDA & FPDA)
- Multi-Year Guarantee Annuities (MYGA)
- Fixed Indexed Annuities (FIA)
- Two-tiered Annuities
- Guarantees/Benefits/Riders on Contracts in scope

Payout Annuities

- Single Premium Immediate Annuities (SPIA)
- Deferred Income Annuities (DIA)
- Term certain Payout Annuities
- Pension Risk Transfer Annuities (PRT)
- Structured Settlement Contracts (SSC)
- Longevity Reinsurance

Products Out-of-Scope

- Guaranteed Investment Contracts (GICs)
- Synthetic GICs
- Stable Value Contracts
- Funding Agreements
- Contracts or benefits that are subject to VM-21 (such as variable annuities and RILAs)

Contract Application

- New Business: 3yr optional implementation period
- Valuation dates on or after January 1, 2026?

Reserve Methodology

- A. Aggregate Reserve:** The sum of the Stochastic Reserve (SR), the Deterministic Reserve (DR) for contracts utilizing the Deterministic Certification Option, plus the reserve for contracts valued under VM-A and VM-C that satisfy the Exclusion Test and do not elect to calculate the SR.
- B. Impact of Reinsurance:** Components of the Aggregate Reserve shall be determined net of any reinsurance cash flows meeting statutory requirements to qualify as reinsurance. A pre-reinsurance reserve will also need to be calculated.
- C. The Standard Projection Amount (SPA):** The Academy could support an SPA disclosure.
- D. The SR :**
1. The SR shall be determined based on asset and liability projections over a broad range of stochastically generated projection scenarios using prudent estimate assumptions.
 2. The SR amount for any group of contracts shall be determined as CTE70 of the scenario reserves.
 3. The reserve may be determined in aggregate across various groups of contracts within each Reserving Category as a single model segment.
 - a. Groups of contracts within different Reserving Categories may not be aggregated together in determining the SR.
 - b. The Reserving Categories are classified as: i. Payout Annuities ii. Accumulation Annuities, and iii. Longevity Reinsurance

Reserve Methodology (cont.)

- E. Stochastic Exclusion Test:** Passing contracts may be valued using the requirements of VM-A and VM-C. Contracts with significantly different risk profiles should not be combined when performing the exclusion testing.
- F. Allocation of the Aggregate Reserve to Contracts:** The allocation methodology is described in Section 13 and is based on an Actuarial PV method. The approach uses a “CSV plus” methodology where any additional amounts would be added to a contract’s existing cash surrender value (CSV).
- G. Prudent Estimate Assumptions:** The company shall establish prudent estimate assumptions for each risk factor. Relevant experience shall be reviewed annually and assumptions updated as needed.
- H. Approximations, Simplifications, and Modeling Efficiency Techniques:** “proposed language” ... A company may use simplifications, approximations, and modeling efficiency techniques to calculate the SR and/or the additional standard projection amount required by this section if the company can demonstrate that the use of such techniques does not understate the reserve by a material amount, and the expected value of the reserve calculated using simplifications, approximations, and modeling efficiency techniques is not less than the expected value of the reserve calculated that does not use them.

C-3 Methodology Considerations and Suggestions

Annuity Reserves & Capital Subcommittee

Academy Webinar

C-3 Methodology Considerations and Suggestions

Align C-3 Approaches between Phase 1 and Phase 2

- Existing differences in C-3 scenarios and metrics are a result of staggered implementation of C-3 phases
- Intent of 2015 C-3 Field Test was to converge scenarios and metrics. Convergence was deferred pending completion of VM-21
- Both Phase 1 and Phase 2 scenarios have acknowledged shortcomings. Moving to updated, consistent scenarios would improve assessment of C-3 risks
- Moving to consistent levels of conservatism in assumptions would produce better evaluations of aggregate legal entity risk
- Successive slides will describe differences and make suggestions for framework convergence. The intent of this deck is to suggest alternatives that would be practical to test in the next round of ESG field testing or in VM-22 field testing
- In general, the C-3 Phase 2 framework has been more recently reviewed and extensively tested. Thus, it should be the primary choice for convergent methodology, except as needed to accommodate products and models from the current or expanded Phase 1

Key differences between C-3 Phase 1 and Phase 2 frameworks

- 1) **Scope** – Fixed Annuities versus Variable Annuities
- 2) **Scenarios** – fixed 6.55% Median Reversion Point (MRP), versus much lower formulaic MRP
- 3) Weighted 92nd through 98th percentile **metric**, versus 25% of (CTE 98 minus reserve)
- 4) Cash Flow Testing (CFT) **models** versus Principle-Based Reserve (PBR) models
- 5) Expected **default costs** versus prescribed CTE 70 default costs. No Asset Valuation Reserve (AVR) in either Phase
- 6) CFT Moderately Adverse **assumptions** versus PBR Prudent Estimate assumptions
- 7) Formulaic **interim reserves** versus Working Reserve, originally Cash Surrender Value, now zero
- 8) One-year Treasury **discounting** versus Net Asset Earned Rate (NAER) or Direct Iteration
- 9) Factor-based **floor** versus floor on reserves but not on RBC

Scope Considerations

Include all products with significant Asset-Liability Management (ALM) risk, and possibly all material products

- Phase 1 currently applies to all Non-Indexed Fixed Annuities, including group and individual, and deferred and payout. VM-22 is being expanded to include Fixed Indexed Annuities. Additional considerations around prospective application of VM-22 will be discussed in the Models section
- Phase 2 includes all Variable Annuities, both new and existing business
- Conceptually, it would make sense to require C-3 testing for all products that fail the Stochastic Exclusion Test (SET) for reserves. Allowing and even encouraging the inclusion of products that pass an SET would be consistent with the RBC objective of developing aggregate legal entity risk measures and would also be consistent with the scope of Cash Flow Testing (CFT). In light of the deferral of the C-3 Phase 3 recommendation for Life products, extending C-3 testing to include all Life products may need to be a future effort
- Phase 1 does include Single Premium Life, presumably due to concerns about ALM risk. This condition could be retained, pending future work on expanding the scope to include all products

Scenario and Metric Considerations

Align Scenarios Across Phases

- Phase 1 scenarios have a high, fixed Median Reversion Point (MRP) and thus are light on low interest rate scenarios
- Phase 1 scenarios do not include equity returns
- Phase 2 scenarios have a formulaic MRP that is heavily weighted toward very recent rates. In conjunction with the model structure and parameters, overall scenario volatility is too low and does not cover a wide enough range of interest rates
- Updated stochastic scenarios will likely address all of these issues

Align Metrics

- The Weighted 92nd through 98th percentile metric of Phase 1 was found to produce very similar results to the then current CTE 90 metric of Phase 2, in the 2015 Field Test
- The newer 25% of (CTE 98 minus reserve) of Phase 2 was selected at least partly to ensure that hedging would be more consistently beneficial to C-3 requirements, versus the prior CTE 90 metric
- Updated interest rate scenarios may reasonably be expected to increase Phase 1 requirements. Moving to the 25% of (CTE 98 minus reserve) metric could help both to mitigate a scenario-based increase and encourage hedging

Model Considerations

Allow use of both CFT and PBR models

- Phase 1 uses CFT models, while Phase 2 uses PBR models
- Since PBR does not yet apply to products in C-3 Phase 1 testing, companies will generally not have PBR models for these products. Thus continuing the use of CFT models for Phase 1 products is a practical choice
- Prospective application of VM-22 updates will lead to the creation of PBR models for new business but will not require the creation of PBR models for existing business
- It is likely that very few PBR models have interim reserve calculation capabilities, especially since Working Reserves are now set to zero. This topic will be discussed further on the Interim Reserve slide
- Some adjustments to assumptions may be necessary to improve alignment of the levels of conservatism in PBR and CFT models. Possible adjustments will be discussed on upcoming slides

Default Cost, AVR and C-1 RBC Considerations

Align Default Cost Treatment Across Phases

- Phase 1 uses Expected Default Costs. The exclusion of the AVR was considered to add appropriate conservatism, as AVR was commonly used in CFT when Phase 1 originated. AVR is now commonly excluded from CFT, in light of the RBC change to exclude from Total Adjusted Capital (TAC) any AVR used in CFT
- Phase 2 uses PBR CTE 70 default costs and also excludes AVR
- Recent C-1 RBC updates essentially assume that reserves cover halfway between Expected and CTE 70 Default Costs. Thus C-3 Phase 2 is double-counting the portion of CTE 70 Default Costs that is covered in C-1 RBC
- Changing C-3 Phase 1 to use CTE 70 Default Costs would increase the double-counting. Allowing the use of assets backing allocated AVR, in C-3 testing, could mitigate this double-counting until C-1 RBC charges are updated to assume that reserves or C-3 RBC requirements cover CTE 70 Default Costs
- In summary, the suggestion is to use CTE 70 Default Costs in all C-3 testing, and to include assets backing the AVR until such time as C-1 RBC is updated
- Double-counting of RBC on general account equity-oriented assets included in C-3 testing could be addressed in a similar manner, by including assets in C-3 testing to back the allocated AVR for the relevant equity-oriented assets

Moderately Adverse and Prudent Estimate Assumptions

Align Level of Conservatism Across Phases

- Phase 1 uses CFT models, which use moderately adverse assumptions. ASOP No. 22 defines Moderately Adverse Conditions as “Conditions that include one or more unfavorable, but not extreme, events that have a reasonable probability of occurring during the testing period.” There is no explicit level of conservatism defined, but moderately adverse is often viewed as about one standard deviation, or about an 84th percentile for a Normal distribution
- Phase 2 uses PBR Prudent Estimate assumptions. Where explicitly defined, these assumptions are set at a CTE 70 level of conservatism. This is about an 88th percentile for a Normal distribution and is a still higher percentile for risk elements with skewed distributions, such as default costs
- Since default costs would use CTE 70 assumptions and equity returns would be based on stochastic scenarios, a required statement that other Phase 1 assumptions are at or above an 84th percentile level of conservatism would likely be adequate for CFT models to be appropriate for updated C-3 Phase 1 purposes

Discounting

Recommend Phase 2 approach

- Phase 1 uses one-year Treasury rate discounting. Reinvestment strategies are typically longer durations and lower quality, both of which tend to increase yields. Thus Phase 1 present values are likely to be larger than the amount of additional assets needed to eliminate a given deficiency
- Phase 2 allows discounting at Net Asset Earned Rates (NAERs), which likely produces better estimates of the amount of additional assets needed to eliminate a deficiency than does Phase 1 discounting
- Phase 2 also allows Direct Iteration, which specifically solves for the amount of additional assets needed to eliminate a deficiency. However, Direct Iteration complicates the determination of present values for projection points other than the one with the largest deficiency.
- Suggestion is to use Phase 2 discounting rules and develop present value determinations for Direct Iteration

Floors

Possible future enhancements

- Phase 1 has a floor based on an assumed duration mismatch and an assumed interest rate change. Companies can qualify for half of the factor-based floor with adequate C-3 testing results
- Phase 2 has a Standard Projection Amount floor on reserves. C-3 requirements can be zero with adequate testing results
- Should an RBC floor be developed for Phase 2, or should the existing floor be eliminated for Phase 1?

Next Steps

- Discuss suggestions and develop them into recommendations for desired topics
- Create field test instructions consistent with finalized recommendations, to be used in the upcoming fixed annuity reserve and capital field testing currently scheduled for 2024

Appendices

- . Practical Difficulties for PBR Interim Reserves
- . Areas for Future Research and Enhancements

Interim Reserves

Practical difficulties exist

- Many companies do not have functionality in their PBR models to calculate interim reserves
- VM-22 updates may include consideration of this topic
- Most companies run 1,000 scenarios for VM-21. Producing interim reserves will likely require significant reductions in numbers of scenarios, especially for the "inner loop" where interim reserves would be calculated, but possibly also for the "outer loop" in which valuation date reserves are determined
- The time horizon for C-3 RBC testing is significantly longer than for other RBC elements, often 50 years or more. Reducing this to perhaps 10 years, with sound reserve estimations, could help to facilitate the production of interim reserves and thus interim surplus positions
- The long time horizon of C-3 testing creates an implicitly higher level of conservatism over shorter time horizons. The lack of interim reserves in Phase 2 may tend to offset some of this excess conservatism
- It may be necessary or desirable to continue the separation of C-3 Phases until progress is made on interim reserve estimations. Models that produce interim reserves could be included in Phase 1, while models without interim reserves could be in Phase 2. A 10 year framework could be tested now for C-3 Phase 1 and in the future for C-3 Phase 2

Areas for Future Research and Enhancements

Possible topics:

- . Correlation treatment
- . Interim reserves for PBR products
- . Practical techniques to produce sound estimates of stochastic results for large numbers of scenarios
- . Expansion to include Life products

Questions?

Please enter your question(s) in the
“Ask A Question” box on your screen.

Thank You

For more information, please contact

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LRBC Correlation

Life Risk-Based Capital discussion

Paul Navratil, MAAA, FSA

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Agenda

2

The agenda for this discussion is to:

1. Introduce covariance within LRBC as topic for possible review
2. Align on guiding principles
3. Share preliminary thoughts on potential correlation structure
4. Outline data elements that could inform a recommendation
5. Gather feedback on next steps

Background

3

- The Life Risk Based Capital Working Group has reviewed and made updates to many areas of the LRBC formula in recent years to maintain the effectiveness of LRBC as a regulatory tool to identify potentially weakly capitalized insurers
- The calculation of each individual risk factor within LRBC has been reviewed and/or updated since the introduction of formula in the 1990s
- A holistic review of correlation of risks within the formula has not yet been undertaken
 - In 2001, the C1-cs component was created with separate covariance from C-1o
 - In 2021, C-2b longevity risk was introduced, including correlation with mortality C-2a
- Except for longevity and mortality risk, all correlations within LRBC are either 0% or 100%
- The scope of this discussion is initially focused on correlation between C-risks within LRBC; an extension of this effort could also consider correlation within individual C-risks (such as within C-1o)

Rationale for Review of Covariance Within LRBC

4

Due for regular maintenance review

- Every C-factor within LRBC has been individually reviewed in recent years; covariance between C-factors is due for a routine review to maintain the effectiveness of LRBC

Current approach is simplistic

- Except for C-2b longevity, which was recently added, every correlation within LRBC is either 0% or 100%; a more refined approach could be considered that improves effectiveness without adding undue complexity

Impact to effectiveness of LRBC could be material

- Changes to covariance could improve the effectiveness of RBC in differentiating between companies with concentration or diversification of risks

Guiding Principles

5

Consistent measure of aggregate company risk

- An unbiased view of risk aggregation supports the regulatory objective to identify potentially weakly capitalized companies and provides consistent differentiation between companies with concentration or diversification of risks

Consistent with targeted statistical safety level of RBC

- Target a correlation approach that is consistent with a CAL RBC that is approximately 95th percentile over a multiyear horizon
- Recognize that correlations may not be linear across all outcomes

Practical to implement

- Avoid false precision in both methodology and numerical values: maintain simple linear correlation approach with appropriate rounding of correlation factors

Potential Structure

6

Linear correlation between major risk categories expressed as a correlation matrix

	<u>Credit</u> C-1o, C-3b	<u>Equity Market</u> C-1cs, C-3c	<u>Interest Rate</u> C-3a	<u>Insurance</u> C-2a, C-2b	<u>Business</u> C-4a, C-4b
Credit	1				
Equity Market	TBD %	1			
Interest Rate	TBD %	TBD %	1		
Insurance	TBD %	TBD %	TBD %	1	
Business	TBD %	TBD %	TBD %	TBD %	1

Nested correlation used to combine C risks that fall within each major risk category

- C-2 Insurance Risk today is the result of nested correlation matrix between C-2a mortality and C-2b longevity

	<u>Mortality C-2a</u>	<u>Longevity C-2b</u>
Mortality C-2a	1	-25%
Longevity C-2b	-25%	1

Calibration Approach

7

Historical data would inform calibration between market risks

- 40+ years of historical data is readily available on credit losses, equity markets, and interest rates
- Expect to consider multiple methods to proxy statutory losses using available market data over different time horizons
- Historical data could also be used to consider correlations between asset classes within C-10 (real estate, mortgages, credit)

Lack of historical data on insurance and business risk would require greater reliance on theory and judgment

- Emerging experience from COVID-19 may provide a data point to consider on insurance risk
- Challenging to develop these correlations based entirely on historical data

Existing Covariance Within LRBC

8

RBC after Covariance Before Operational Risk =

$$\mathbf{C0 + C4a + \text{Square Root of } [(C1o + C3a)^2 + (C-1cs + C-3c)^2 + (C2)^2 + (C3b)^2 + C4b)^2]}$$

Initial Observations

9

- 100% correlations are higher than in other regulatory frameworks
 - Credit and Interest Rate risks correlated at 100% compared to 50% for IAIS
- Many 0% correlations are lower than in other regulatory frameworks
 - Credit and Market at 0% compared to 25% for IAIS
 - Insurance with both Credit and Market at 0% compared to 25% for IAIS
- It is possible that some correlation factor changes would increase RBC while others would decrease RBC. The objective is to improve differentiation between companies with concentration vs. diversification of risks.

Next Steps

10

- Analysis of historical data
- Complete a correlation structure to include all existing C-factors
- Consider structure that could reflect correlation within C-1o
- Develop preliminary correlation factors and rationale for discussion
- Assess potential impacts

Questions

11

- Paul Navratil, MAAA, FSA
Chairperson, Life Capital Adequacy Committee

- Amanda Barry-Moilanen
Life Policy Analyst
American Academy of Actuaries
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MEMORANDUM

TO: Philip Barlow, Chair of the Life Risk-Based Capital (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: February 29, 2024
RE: Collateral Loan Reporting Changes – SAPWG Actions Feb. 20, 2024

On Feb. 20, 2024, the Statutory Accounting Principles (E) Working Group (SAPWG) considered agenda item *2023-28: Collateral Loan Reporting*, which proposed to expand collateral loan disclosures and Schedule BA reporting lines in accordance with the type of collateral supporting the collateral loan pursuant to *SSAP No. 21R—Other Admitted Assets*. During this call the Working Group took the following actions:

- 1) Adopted a new disclosure to detail the collateral loans admitted and nonadmitted by type of underlying collateral. This disclosure is required for year-end 2024 and a blanks proposal is being sponsored to facilitate data capturing for 2024 reporting.
- 2) Exposed revised Schedule BA reporting lines to require allocation of collateral loans based on the underlying collateral. With this exposure, the Working Group specifically requested comments from regulators and industry on whether collateral loans backed by certain types of collateral should flow through the Asset Valuation Reserve (AVR) for risk-based capital (RBC) impact. With this request, a referral was directed to the Life Risk-Based Capital (E) Working Group (LRBCWG) to request feedback on the proposed reporting lines and the potential to map certain collateral loans to AVR for RBC purposes.

With the discussion that occurred on Feb. 20, 2024, it was identified that collateral loans do not currently flow through AVR. From historical review, the exclusion from AVR has been attributed to a 1990 intercompany survey where it was identified that collateral loans were very small risks and a small proportion of total portfolio value. Collateral loans were originally captured on Schedule C, and when that schedule was eliminated and the reporting moved to Schedule BA, a change to flow through AVR was not incorporated. Currently all investments reported as collateral loans, regardless of the underlying collateral that supports the loan, receive the same 0.0680 life RBC factor charge.

It has been identified that some reporting entities are currently reporting certain collateral loans in the Schedule BA “non-registered private fund” reporting category allocated by underlying collateral so that they flow through AVR for RBC impact. The discussion on Feb. 20, 2024, noted that this reporting causes consistency concerns, and the regulator’s need for comparable financial information is paramount in determining an insurer’s financial condition.

Washington, DC 444 North Capitol Street NW, Suite 700, Washington, DC 20001-1509 p | 202 471 3990

Kansas City 1100 Walnut Street, Suite 1500, Kansas City, MO 64106-2197 p | 816 842 3600

New York One New York Plaza, Suite 4210, New York, NY 10004 p | 212 398 9000

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To improve overall reporting, the SAPWG is sponsoring blank changes to eliminate and clarify the purpose of certain reporting lines on Schedule BA. These changes include eliminating the “non-registered private fund” category and clarifying that such funds shall be reported in the “joint ventures, partnerships, or limited liability companies” reporting category. The sponsored blank revisions further clarify the types of investments permitted for reporting in certain categories with inclusion of an explicit statement that investments shall be reported in the appropriate dedicated reporting line, and if such a line does not exist for a specific investment, it shall be reported as an “Any Other Asset.” These changes are captured in the Blanks (E) Working Group proposal 2023-12BWG that also details the new reporting lines for the non-bond debt securities in response to the bond project. This proposal is exposed for comment until April 23, 2024.

Although efforts to improve consistent reporting are underway, with the overall increase in collateral loans and actions by industry to report certain loans in categories that flow through AVR to reflect the underlying asset risk, this referral requests feedback from the LRBCWG on the allocation of collateral loans through AVR. Key elements to highlight for LRBCWG potential consideration include:

- An approach that maps reporting of certain collateral loans through existing AVR categories may not necessitate extensive RBC changes. Rather, specific reporting lines would map through the blank reporting process to the identified AVR category and flow through automatically to the RBC schedule. If this approach is taken, the RBC revisions could potentially be limited to clarifying the items that continue to flow through to the existing collateral loan line.
- If an approach to map certain collateral loans through existing AVR categories is supported, information is requested on which collateral loans should be given this treatment. For example, information received from industry has indicated that “warehouse loans¹” with mortgage loan collateral have been reported as “non-registered private funds” with underlying characteristics of mortgage loans. This reporting facilitates a “look-through” RBC treatment whereby the mortgage RBC criteria is applied to the mortgage loans underlying the warehouse loan. Although this reporting has likely resulted in a more desirable RBC impact than the collateral loan classification, industry has continued to report loans backed by LLC interests as collateral in the collateral loan category, where look-through treatment would be less favorable. By reporting these items as collateral loans, the RBC factor was 0.0680 in comparison to a 0.3000 charge that could occur² if reported based on the underlying collateral. Ultimately, feedback is requested on whether loans backed by certain types of collateral should be treated differently through AVR as well as comments on when loans backed by certain types of collateral should be treated differently than other collateral loans.
- The existing collateral loan RBC factor is believed to have been established without much analysis, but rather reflects a blended rate of RBC charges. This was likely supported due to the historical small risk and population of collateral loans. From assessments of 2022 data, collateral loans make up a significant portion of assets at some companies, and it is anticipated that a significant number of collateral loans are backed by LLC interests. Unfortunately, underlying collateral data is limited to what is discernable from a review of the description captured in Schedule BA and only captures what was reported as collateral loans and not within another reporting category. The Working Group’s adoption of a new 2024 disclosure and reporting clarifications shall assist in providing improved information on the population of collateral loans,

¹ For reference, a “warehouse loan” is a loan to an originator of financing products (e.g. mortgage loans, consumer loans, middle market corporate loans, etc.) that is secured by the assets being originated. It is a temporary form of financing often used to “warehouse” the underlying collateral until sufficient scale is achieved to allow the collateral to be securitized.

² It is worth noting that there would typically be some level of overcollateralization when comparing the amount of loan and the underlying value of the LLC collateral.

and the underlying collateral that backs loans if the LRBCWG believes it is appropriate to complete a more detailed analysis of this asset category for RBC purposes.

Consistent with the prior referral dated Jan. 17, 2024, the SAPWG will continue to keep the LRBCWG informed of the discussions involving collateral loans. The proposed reporting lines for collateral loans are exposed at SAPWG until April 19, 2024, and are detailed within. As noted, this exposure specifically requests comments on whether collateral loans backed by certain types of collateral should flow differently through AVR for RBC impact. The SAPWG will share information received from this exposure with the LRBCWG to assist with further discussion, but also welcomes initial responses from the LRBCWG on this inquiry as well as the proposed reporting lines.

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).

February 20, 2024, SAPWG Exposed Schedule BA Collateral Loan Reporting Changes:

Collateral Loans – Reported by Qualifying Investment Collateral that Secures the Loan

Bonds and Asset-Backed Securities (SSAP No. 26R & SSAP No. 43R)	
Unaffiliated.....	
Affiliated.....	
Preferred Stocks (SSAP No. 32R)	
Unaffiliated.....	
Affiliated.....	
Common Stocks (SSAP No. 30R)	
Unaffiliated.....	
Affiliated.....	
Mortgage Loans (SSAP No. 37R)	
Unaffiliated.....	
Affiliated.....	
Real Estate (SSAP No. 40R)	
Unaffiliated.....	
Affiliated.....	
Joint Venture, Partnerships or Limited Liability Companies (SSAP No. 48)	
Fixed Income Investments (Unaffiliated)	
Fixed Income Investments (Affiliated)	
Common Stocks (Unaffiliated)	
Common Stocks (Affiliated)	
Real Estate (Unaffiliated)	
Real Estate (Affiliated)	
Mortgage Loans (Unaffiliated)	
Mortgage Loans (Affiliated)	

Other (Unaffiliated)
Other (Affiliated)

Other Investment Category

Cash, Cash Equivalent and Short-Term Investments (Unaffiliated)
Cash, Cash Equivalent and Short-Term Investments (Affiliated)

Other Long-Term Invested Assets (Unaffiliated)
Other Long-Term Invested Assets (Affiliated)

Non-Collateral Loans

Related Party / Affiliated Loans.....
All Other Non-Collateral Loans.....

Cc: Julie Gann, Robin Marcotte, Jake Stultz, Jason Farr, Wil Oden, Crystal Brown, Dave Fleming, Eva Yeung, Maggie Chang

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3/17/24

Draft: 3/20/24

Property and Casualty Risk-Based Capital (E) Working Group
and the Catastrophe Risk (E) Subgroup
Phoenix, Arizona
March 17, 2024

The Property and Casualty Risk-Based Capital (E) Working Group of the Capital Adequacy (E) Task Force met in Phoenix, AZ, March 17, 2024, in joint session with the Catastrophe Risk (E) Subgroup of the Property and Casualty Risk-Based Capital (E) Working Group of the Capital Adequacy (E) Task Force. The following Working Group members participated: Tom Botsko, Chair (OH); Wanchin Chou, Vice Chair (CT); Rolf Kaumann (CO); Virginia Christy (FL); Sandra Darby and Vanessa Sullivan (ME); Melissa Robertson and Tim Vigil (NM); Will Davis (SC); and Miriam Fisk (TX). The following Subgroup members participated: Wanchin Chou, Chair (CT); Virginia Christy, Vice Chair (FL); Rolf Kaumann (CO); Travis Grassel (IA); Sandra Darby and Vanessa Sullivan (ME); Melissa Robertson and Tim Vigil (NM); Tom Botsko (OH); Will Davis (SC); and Miriam Fisk (TX). Also participating were: John Rehagen (MO); Christian Citarella (NH); John Tudino, Nicholas Illuzzi, and Ted Hurley (RI).

1. Adopted the Working Group and Subgroup’s Jan. 30, 2024; Jan. 29, 2024; and 2023 Fall National Meeting Minutes

Botsko said the Working Group and Subgroup conducted an e-vote that concluded Jan. 30, 2024, to adopt proposal 2023-16-CR (2023 U.S. and Non-U.S. Catastrophe Risk Event Lists), which the Working Group and Subgroup had exposed for a seven-day public comment period that ended Jan. 23.

Botsko said the Catastrophe Risk (E) Subgroup met Jan. 29, 2024. During this meeting, the Subgroup took the following action: 1) exposed proposal 2023-17-CR (Climate Scenario Analysis) for a 30-day public comment period that ended Feb. 28; 2) discussed severe convective storm peril impact analysis; 3) discussed wildfire peril impact analysis; and 4) heard updates on the Geographic Concentration Ad Hoc Subgroup.

Davis made a motion, seconded by Darby, to adopt the Working Group and Subgroup’s Jan. 30, 2024 (Attachment Four-A); Jan. 29, 2024 (Attachment Four-B); and Dec. 2, 2023, (*see NAIC Proceedings – Fall 2023, Capital Adequacy (E) Task Force*) minutes. The motion passed unanimously.

2. Adopted Proposal 2023-13-CR (Cat Risk Insurance Program Interrogatory)

Chou said the purpose of this proposal is to collect additional information from insurers on the structure of their catastrophe reinsurance program on an annual confidential basis. He stated that the Working Group and Subgroup exposed this proposal for a 60-day public comment period that ended Jan. 30, 2024. He also stated that the Subgroup received one comment letter during the exposure period, and the proposal was revised accordingly. Chou said the interrogatories in this proposal are intended for all property and casualty (P/C) filers that are exposed to natural catastrophe perils and are not limited to earthquake, hurricane, wildfire, and the associated RCAT exemptions. Insurance entities that participate in group reinsurance programs may respond to the interrogatory at a group level. Rehagen commented that the revised disclosures in the material reflect the supported changes from the Reinsurance (E) Task Force and provide some basic information that the Task Force may need to look at further. He said the Reinsurance (E) Task Force supports this proposal with the revised exhibit. Joseph Sieverling (Reinsurance Association of America—RAA) said the joint trades support state insurance regulators’ need to understand insurers’ natural catastrophe risk exposure and the reinsurance programs

Draft Pending Adoption

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3/17/24

designed to mitigate these risks on a confidential basis. He stated that joint trades support the updated exhibit in the materials.

Chou asked whether the members, interested state insurance regulators, and interested parties have any other immediate questions regarding this proposal. Without hearing any questions, Chou recommended adopting the proposal.

Christy made a motion, seconded by Grassel, to adopt proposal 2023-13-CR (Attachment Seven). The motion passed unanimously.

3. Adopted Proposal 2024-01-P (Schedule P Short Tails)

Botsko said that on Feb. 21, 2024, the Blanks (E) Working Group adopted proposal 2023-16BWG, which changes Schedule P short-tail lines to show 10 years of data beginning in 2024 reporting. He stated that the Schedule P risk-based capital (RBC) formulas will need to be updated to reflect the changes in the annual statement. Botsko said the Property and Casualty Risk-Based Capital (E) Working Group exposed proposal 2024-01-P for a 30-day public comment that ended Feb. 24, 2024. No comments were received.

Chou made a motion, seconded by Darby, to adopt proposal 2024-01-P (Attachment Ten). The motion passed unanimously.

4. Adopted Proposal 2023-14-P (Pet Insurance)

Botsko said proposal 2023-14-P would remove pet insurance from the inland marine line of business and add a new line of business to PR035, PR038, PR123, PR223, PR700, and PR701 to be consistent with the change in the annual statement. He stated that the Working Group and Subgroup exposed this proposal for a 60-day public comment period at the 2023 Fall National Meeting. No comments were received.

Darby made a motion, seconded by Davis, to adopt proposal 2023-14-P (Attachment Eight). The motion passed unanimously.

5. Adopted Proposal 2023-15-CR (Convective Storm for Information Purposes Only Structure)

Chou said this proposal provides the structure change for adding severe convective storm as one of the catastrophe perils for informational purposes only in the Rcat component. He stated that the Working Group and Subgroup exposed this proposal for a 60-day public comment period at the 2023 Fall National Meeting. No comments were received.

Kaumann made a motion, seconded by Grassel, to adopt proposal 2023-15-CR (Attachment Nine). The motion passed unanimously.

6. Adopted the Working Group and Subgroup's Working Agenda

Botsko summarized the changes of the Subgroup's 2024 working agenda, which included the following substantial changes: 1) changing the expected completion date to "2025 Summer" in item P5; 2) adding a hyperlink for the referral to the American Academy of Actuaries (Academy) in item P3; and 3) adding two items for the Subgroup and one item for the Working Group in the "New Item" section.

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Davis made a motion, seconded by Kaumann, to adopt the Working Group and Subgroup's working agenda. The motion passed unanimously.

7. Exposed Proposal 2024-10-P (Other Health Line)

Botsko said proposal 2024-10-P would address the current double-counting issue for companies with stop-loss premium, as the stop loss premium is expected to be entered on line 9 of PR019.

The Working Group and Subgroup agreed to expose proposal 2023-10-P (Attachment Four-C) for a 30-day public comment period ending April 16.

8. Re-Exposed Proposal 2023-17-CR (Climate Scenario Analysis)

Chou said that, as discussed in the last Subgroup meeting Jan. 29, 2024, the purpose of this proposal is to gather time horizon information to provide an estimate of climate change for hurricane and wildfire. He stated that this information is intended to be useful for state insurance regulators holding conversations with insurers that may have a greater degree of risk for these perils. Steve Broadie (American Property Casualty Insurance Association—APCIA) addressed the group and expressed his concerns regarding: 1) the data being collected and how it would be used; 2) the significant costs associated with this proposal; and 3) the lack of clarity on what state insurance regulators would consider to be a “problematic” risk level. He expressed his understanding that this information would not be used for any additional Rcat charges. Dan Daveline (NAIC) said the Solvency Workstream of the Climate and Resiliency (EX) Task Force believes this information would be valuable for comparing the information that is currently available in the RBC formula. He also stated that the Solvency Workstream anticipated this proposal would be adopted unless some concrete proposals were put forth. Once the other comments were addressed, Broadie returned to say he supported another exposure period and would provide a formal comment letter.

Ralph Blanchard (Retired) said he did not believe the current design of the proposal would be able to identify concentration due to: 1) the probable maximum loss (PML) amounts shown possibly being from different locations; 2) the reinsurance programs in place not having been updated for year 2040 and year 2050 event curves; 3) the major source of catastrophe loss growth being growth in exposures; 4) any mitigation efforts or changes possibly not be reflected; and 5) inflation not being captured in the proposal. Eli Russo (NAIC) commented that in reviewing approximately 300 Own Risk and Solvency Assessment (ORSA) files every year, there is very little disclosure of any quantification of climate risk. Also, only larger companies are required to file ORSA; therefore, it cannot provide a full picture of the companies' exposure and climate risk. Chou recommended that the Working Group and Subgroup re-expose this proposal for a 22-day public comment period, which would allow the interested parties to think practically to determine whether there are alternatives to make the information more useful to the state insurance regulators. He said another meeting will be scheduled next month to further consider this proposal.

Without hearing any objections, the Working Group and Subgroup agreed to re-expose proposal 2023-17-CR (Attachment Four-D) for a 22-day public comment period ending April 8.

9. Discussed Convective Storm and Wildfire Impact Analysis

Draft Pending Adoption

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3/17/24

Chou said that, as indicated during the last Subgroup meeting Jan. 29, 2024, the vendor modelers collaborated to create a synthetic industry exposure database. Each modeler ran the industry exposure database through their respective models to obtain the average annual loss (AAL) and exceedance probability (EP) curve loss output by the sub-perils such as hail, tornado, and straight-line wind, and several key geographies across the U.S. He also stated that the members of the Model Review Ad Hoc Group held separate meetings with Karen Clark & Company (KCC) and Moody's RMS to discuss their convective storm model results since the last Subgroup meeting. Chou also indicated meetings with Verisk Analytics and CoreLogic will be scheduled shortly. Findings will be shared with the Subgroup in April.

Chou also said that because the previous wildfire impact analysis was only reviewed by a few state insurance regulators last year, the Subgroup decided to invite the modelers to conduct another in-depth analysis of wildfire and share model results with the states that have signed nondisclosure agreements (NDAs). He anticipated that the wildfire impact analysis would begin in May.

10. Exposed Underwriting Risk Factors and Investment Income Adjustment Factors

Botsko said he would like to express his appreciation for the Academy's hard work on this project. As indicated in the factor attachment, he recommended: 1) that the reserve factors for product and international lines and the premium factor for the financial mortgage and guarantee line be capped from the indicated factors, as these factors had some significant increases; and 2) implementing both reserve and premium factors over two years: halfway for 2024 reporting and the full indicated with the capped lines in 2025 reporting. Botsko encouraged all interested parties to consider this recommendation and provide feedback prior to the next meeting.

Without hearing any objections, the Working Group and Subgroup agreed to expose the: 1) 50% indicated change with capped international and product liability lines in 2024, and 100% indicated change with capped international and product liability lines in 2025 for reserve factors; and 2) 50% indicated change with capped financial mortgage guaranty line in 2024, and 100% indicated change with capped financial mortgage guaranty line in 2025 for premium factors (Attachment Four-E) for a 30-day public comment period ending April 16.

Botsko said the Working Group and the Subgroup plan to meet in April to continue the discussion.

Having no further business, the Property and Casualty Risk-Based Capital (E) Working Group and the Catastrophe Risk (E) Subgroup adjourned.

SharePoint/NAIC Support Staff Hub/ Member Meetings/E Cmte/CADTF/2024-Spring/PCRBCWG

Draft: 2/1/24

Property and Casualty Risk-Based Capital (E) Working Group
and Catastrophe Risk (E) Subgroup
E-Vote
January 30, 2024

The Property and Casualty Risk-Based Capital (E) Working Group of the Capital Adequacy (E) Task Force conducted an e-vote with the Catastrophe Risk (E) Subgroup of the Property and Casualty Risk-Based Capital (E) Working Group of the Capital Adequacy (E) Task Force that concluded Jan. 30, 2024. The following Working Group members participated: Tom Botsko, Chair (OH); Wanchin Chou, Vice Chair (CT); Charles Hale (AL); Mitchell Bronson (CO); Sandra Darby (ME); Melissa Robertson (NM); Alexander Vajda (NY); Will Davis (SC); and Miriam Fisk (TX). The following Subgroup members participated: Wanchin Chou, Chair (CT); Mitchell Bronson (CO); Travis Grassel (IA); Sandra Darby (ME); Melissa Robertson (NM); Alexander Vajda (NY); Tom Botsko (OH); Andrew Schallhorn (OK); Will Davis (SC) and Miriam Fisk (TX).

1. Adopted the Updated 2023 U.S. and Non-U.S. Catastrophe Risk Event Lists

The Working Group and the Subgroup conducted an e-vote to consider adoption of proposal 2023-16-CR (2023 U.S. and Non-U.S. Catastrophe Risk Event Lists).

Bronson made a motion, seconded by Davis, to adopt the 2023 U.S. and non-U.S. catastrophe risk event lists (Attachment One-A). The motion passed unanimously.

Having no further business, the Property and Casualty Risk-Based Capital (E) Working Group and the Catastrophe Risk (E) Subgroup adjourned.

SharePoint/NAIC Support Staff Hub/ Member Meetings/E Cmte/CADTF/2024-1-Spring/Cat Risk Email Vote 013024

Draft: 2/13/24

Catastrophe Risk (E) Subgroup
Virtual Meeting
January 29, 2024

The Catastrophe Risk (E) Subgroup of the Property and Casualty Risk-Based Capital (E) Working Group of the Capital Adequacy (E) Task Force met Jan. 29, 2024. The following Subgroup members participated: Wanchin Chou, Chair, Qing He, Amy Waldhauer, Olha Trofymenko, and Jack Broccoli (CT); Virginia Christy, Vice Chair (FL); Mitchell Bronson (CO); Travis Grassel (IA); Melissa Robertson (NM); Harriette Resnick, Alexander Vajda, Rajesh Bhandula, Gloria Huberman, Christopher Esteban, and HauMichael Ying (NY); Tom Botsko and Dale Bruggeman (OH); and Miriam Fisk and Monica Avila (TX). Also participating were: Giovanni Muzzarelli and Kara Voss (CA); Stephen Flick (DC); Adrienne Lupo (DE); Bruce Sartain (IL); Greg Ricci (MD); Brock Bubar (ME); Danielle Smith and Julie Lederer (MO); Maria Morcelo (PR); Liz Ammerman (RI); Zuhairah Tillinghast (VA); and Steve Drutz (WA).

1. Exposed Proposal 2023-17-CR (Climate Scenario Analysis)

Dan Daveline (NAIC) said the Solvency Workstream of the Climate and Resiliency (EX) Task Force was tasked with considering the development of climate scenario analyses. The Solvency Workstream held three public panels on this topic in 2022, and in 2023, the Workstream learned that commercial catastrophe (CAT) modelers have products known as “Climate Conditioned Catalogs” that reflect adjusted frequency and severity for certain time horizons, such as 2040 or 2050, that, if compared side by side with existing risk-based capital (RBC) data in PR027, would provide an estimate of climate change for hurricane and wildfire. He also stated that this information is intended to be useful for state regulators holding conversations with insurers that may have a greater degree of risk for these perils. Daveline also stated that this proposal is only for informational purposes. The Workstream has no desire to require reporting companies to hold capital up to specific levels. At this point, the Workstream has received two comment letters. Daveline said a meeting is scheduled in the near future to discuss these comments, as well as the proposal. The Workstream will provide updates to the Subgroup once the discussions have concluded.

Botsko asked whether there is a time frame to collect this information in the RBC formula. Daveline said this question will have to be considered by the state insurance regulators going forward. Botsko reminded the Subgroup that companies will be exempted from filing these proposed pages if they receive PR027 filing exemption (FE). Daveline agreed.

Steve Broadie (American Property Casualty Insurance Association—APCIA) said the APCIA appreciates the opportunity to work with the Solvency Workstream and the Subgroup on an ongoing basis. Chou asked whether the members, interested state insurance regulators, and interested parties have any other immediate questions regarding this proposal. Without hearing any questions, Chou recommended exposing this proposal for a 30-day public comment period. This proposal will continue to be discussed during the Spring National Meeting.

The Subgroup agreed to expose proposal 2023-17-CR for a 30-day public comment period ending Feb. 28.

2. Discussed Severe Convective Storm Peril Impact Analysis

Chou said that, like wildfire peril, the vendor modelers collaborated to create a synthetic industry exposure database. The Model Review Ad Hoc Group vetted the methodology and assumptions for the impact analysis, and no meaningful concerns or issues were identified. In addition, Chou stated that the next step for the vendor modelers is to run the industry exposure database through their respective models to obtain the average annual

loss (AAL) and exceedance probability (EP) curve loss output by the sub-perils such as hail, tornado, and straight-line wind, and several key geographies across the U.S. Lastly, Chou said separate meetings with the individual vendor modelers to discuss the analysis results will be scheduled soon.

3. Discussed Wildfire Peril Impact Analysis

Chou said, as mentioned during the 2023 Fall National Meeting, the previous impact analysis was only reviewed by a few state insurance regulators last year, so the Subgroup plans to: 1) have another in-depth review with those states that have signed the nondisclosure agreements (NDAs); and 2) work with vendor modelers to review and update their impact analysis later this year. However, he stated that the current focus for the Subgroup is on the severe convective storm peril impact analysis. The wildfire peril impact analysis will be performed after the severe convective storm peril impact analysis is completed.

4. Heard Updates on the Geographic Concentration Ad Hoc Subgroup

Chou said the Geographic Concentration Ad Hoc Subgroup met Jan. 10, 2024, and Dec. 13, 2023. During its Jan. 10 meeting, the Ad Hoc Subgroup invited AM Best to provide a brief presentation on its rating process. Chou said its process went through 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 on Jan. 31. Chou said another meeting would be scheduled to discuss the Ad Hoc Subgroup's next step after the Jan. 31 meeting. He also said findings will be reported to the upstream Ad Hoc Group in the future. During its Dec. 13 meeting, Christy 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 they evaluate companies in Florida and Louisiana. That information helped the members better understand how to appropriately address the geographic concentration risk in the RBC formula.

5. Discussed Other Matters

Chou said the Subgroup will meet jointly with the Property and Casualty Risk-Based Capital (E) Working Group during the Spring National Meeting. He stated that currently, the Subgroup is exposing proposal 2023-13-CR (Disclosures for Catastrophe Reinsurance Program) and proposal 2023-15-CR (Convective Storm for Informational Purposes Only Structure) for a 60-day public comment period ending Jan. 30. Chou encouraged all interested parties to submit comments prior to the ending date, as the Subgroup plans to consider both proposals during the Spring National Meeting. In addition, he mentioned that the Property and Casualty Risk-Based Capital (E) Working Group and the Subgroup adopted proposal 2023-16-CR (2023 U.S. and non-U.S. Catastrophe Risk Event Lists) on Jan. 29, and it has been forwarded to the Capital Adequacy (E) Task Force for consideration on Jan. 31.

Having no further business, the Catastrophe Risk (E) Subgroup adjourned.

SharePoint/NAIC Support Staff Hub/Member Meetings/Fall 2023 National Meeting/Task Forces/CapAdequacy/Cat Risk SG/01-28propertycatsg.docx 2024

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>CONTACT PERSON: <u>Eva Yeung</u></p> <p>TELEPHONE: <u>816-783-8407</u></p> <p>EMAIL ADDRESS: <u>eyeung@naic.org</u></p> <p>ON BEHALF OF: <u>P/C RBC (E) Working Group</u></p> <p>NAME: <u>Tom Botsko</u></p> <p>TITLE: <u>Chair</u></p> <p>AFFILIATION: <u>Ohio Department of Insurance</u></p> <p>ADDRESS: <u>50 West Town Street, Suite 300</u> <u>Columbus, OH 43215</u></p>	<p style="text-align: center;">FOR NAIC USE ONLY</p> <p>Agenda Item # <u>2024-10-P</u> Year <u>2024</u></p> <p style="text-align: center;">DISPOSITION</p> <p>ADOPTED:</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>EXPOSED:</p> <p><input type="checkbox"/> TASK FORCE (TF) _____</p> <p><input checked="" type="checkbox"/> WORKING GROUP (WG) <u>03/17/24</u></p> <p><input type="checkbox"/> SUBGROUP (SG) _____</p> <p>REJECTED:</p> <p><input type="checkbox"/> TF <input type="checkbox"/> WG <input type="checkbox"/> SG _____</p> <p>OTHER:</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 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 included the following changes:

- 1) Add "in part" to the Line 25 Annual Statement Source.
- 2) Update Column 1, Line 25 to "Company Record".

The reason for the change is to eliminate the double-counting issue for those companies that have stop-loss premium as the stop loss premium is expected to be entered on Line 9 of PR019.

Additional Staff Comments:

**** This section must be completed on all forms.**

Revised 2-2023

HEALTH PREMIUMS PR019

	Annual Statement Source	(1) Statement Value	Factor	(2) RBC Requirement
<u>Medical Insurance Premium - Individual</u>				
(1) Comprehensive (Medical and Hospital)	Earned Premium (Schedule H Part 1 Column 3 Line 2)	0	†	XXX
(2) Medicare Supplement	Earned Premium (Schedule H Part 1 Column 7 Line 2 in part)	0	†	XXX
(3) Dental & Vision	Earned Premium (Schedule H Part 1 Columns 9 + 11 Line 2 in part)	0	†	XXX
(3.1) Stand-Alone Medicare Part D Coverage	Earned Premium (Schedule H Part 1 Line 2 in part)	0	†	XXX
(3.2) Supplemental Benefits within Stand-Alone Part D Coverage (Claims Incurred)	Company Records	0	0.500	0
(3.3) Medicaid Pass-Through Payments Reported as Premium	Company Records	0	0.020	0
(4) Hospital Indemnity and Specified Disease	Earned Premium (Schedule H Part 1 Line 2 in part)	0	0.035 *	0
(5) AD&D (Maximum Retained Risk Per Life 0)	Earned Premium (Schedule H Part 1 Line 2 in part)	0	‡	0
(6) Other Accident	Earned Premium (Schedule H Part 1 Line 2 in part)	0	0.050	0
<u>Medical Insurance Premium - Group and Credit</u>				
(7) Comprehensive (Medical and Hospital)	Earned Premium (Schedule H Part 1 Column 5 Line 2)	0	†	XXX
(8) Dental & Vision	Earned Premium (Schedule H Part 1 Columns 9 + 11 Line 2 in part)	0	†	XXX
(9) Stop Loss and Minimum Premium	Earned Premium (Schedule H Part 1 Line 2 in part)	0	¥	0
(10) Medicare Supplement	Earned Premium (Schedule H Part 1 Column 7 Line 2 in part)	0	†	XXX
(10.1) Stand-Alone Medicare Part D Coverage (see instructions for limits)	Earned Premium (Schedule H Part 1 Line 2 in part)	0	†	XXX
(10.2) Supplemental benefits within Stand-Alone Part D Coverage (Claims Incurred)	Company Records	0	0.500	0
(10.3) Medicaid Pass-Through Payments Reported as Premium	Company Records	0	0.020	0
(11) Hospital Indemnity and Specified Disease	Earned Premium (Schedule H Part 1 Line 2 in part)	0	0.035 *	0
(12) AD&D (Maximum Retained Risk Per Life 0)	Earned Premium (Schedule H Part 1 Line 2 in part)	0	‡	0
(13) Other Accident	Earned Premium (Schedule H Part 1 Line 2 in part)	0	0.050	0
(14) Federal Employee Health Benefit Plan	Earned Premium (Schedule H Part 1 Column 13, Line 2)	0	0.000	0
<u>Disability Income Premium</u>				
(15) Noncancellable Disability Income - Individual Morbidity	Earned Premium (Schedule H Part 1 Column 21 Line 2 in part)	0	‡	0
(16) Other Disability Income - Individual Morbidity	Earned Premium (Schedule H Part 1 Column 21 Line 2 in part)	0	‡	0
(17) Disability Income - Credit Monthly Balance Plans	Earned Premium (Schedule H Part 1 Column 21 Line 2 in part)	0	‡	0
(18) Disability Income - Group Long-Term	Earned Premium (Schedule H Part 1 Column 21 Line 2 in part)	0	‡	0
(19) Disability Income - Credit Single Premium with Additional Reserve	Earned Premium (Schedule H Part 1 Column 21 Line 2 in part)	0	‡	0
(20) Disability Income - Credit Single Premium without Additional Reserve	Earned Premium (Schedule H Part 1 Column 21 Line 2 in part)	0	‡	0
(21) Disability Income - Group Short-Term	Earned Premium (Schedule H Part 1 Column 21 Line 2 in part)	0	‡	0
<u>Long-Term Care</u>				
(22) Noncancellable Long-Term Care Premium - Rate Risk**	Earned Premium (Schedule H Part 1 Column 23 Line 2 in part)	0	0.100	0
(23) Other Long-Term Care Premium ‡ ‡	Earned Premium (Schedule H Part 1 Column 23 Line 2 in part)	0	0.000	0 ‡ ‡
<u>Health Premium with Limited Underwriting Risk</u>				
(24) ASC Business with Premium Revenue	Earned Premium (Schedule H Part 1 Line 2 in part)	0	0.000	0
<u>Other Health</u>				
(25) Other Health	Earned Premium (Schedule H Part 1 Column 25 Line 2 in part)	0	0.120	0
(26) Total Earned Premiums	Sum of Lines (1) through (25)	0		0
C(1), L(26) should equal Schedule H Part 1 Column 1 Line 2				
(27) Additional Reserves for Credit Disability Plans	Company records	0	§	
(28) Additional Reserves for Credit Disability Plans, prior year	Company records	0	§	

† The premium amounts in these lines are transferred to PR020 Underwriting Risk – Premium Risk for Comprehensive Medical, Medicare Supplement, Dental & Vision and Stand-Alone Medicare Part D Coverage Lines (1.1) and (1.2) for the calculation of risk-based capital. The premium amounts are included here to assist in the balancing of total health premium. If managed care arrangements have been entered into, the company may also complete PR021 Underwriting Risk – Managed Care Credit. In which case, the company will also need to complete PR012 Health Credit Risk in the formula. If there are amounts in any of lines (1), (2), (3), (7), (8) or (10) on page PR019 Health Premiums, the company will also be directed to complete the Health Administrative Expense portion of PR023.

‡ The two tiered calculation is illustrated in the risk-based capital instructions for PR019 Health Premiums.

‡ ‡ The balance of the RBC requirement for Long Term Care - Morbidity Risk is calculated on Page PR023. The premium is shown to allow totals to check to Schedule H.

* If there is premium included on either or both of these lines, the RBC value in Column (2) will include 3.5% of such premium and \$50,000 (included in the line with the larger premium).

** The factor applies to all Noncancellable premium.

§ These amounts are used to adjust the premium base for single premium credit disability plans that carry additional tabular reserves.

¥ A factor of .350 will be applied to the first \$25,000,000 in Column (1), Line (9) and a factor of .250 will be applied to the remaining premium in excess of \$25,000,000.

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

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"/> 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 |

<p style="text-align: right;">DATE: <u>1/23/24</u></p> <p>CONTACT PERSON: <u>Dan Daveline</u></p> <p>TELEPHONE: _____</p> <p>EMAIL ADDRESS: <u>ddaveline@naic.org</u></p> <p>ON BEHALF OF: <u>Solvency Workstream of the Climate & Resiliency (EX) Task Force</u></p> <p>NAME: _____</p> <p>TITLE: _____</p> <p>AFFILIATION: _____</p> <p>ADDRESS: _____</p>	<p style="text-align: center;">FOR NAIC USE ONLY</p> <p>Agenda Item # <u>2023-17-CR</u> Year <u>2024</u></p> <hr/> <p style="text-align: center;">DISPOSITION</p> <p>ADOPTED:</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>EXPOSED:</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>01/29/2024 03/17/24</u></p> <p>REJECTED:</p> <p><input type="checkbox"/> TF <input type="checkbox"/> WG <input type="checkbox"/> SG _____</p> <p>OTHER:</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 checked="" 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)

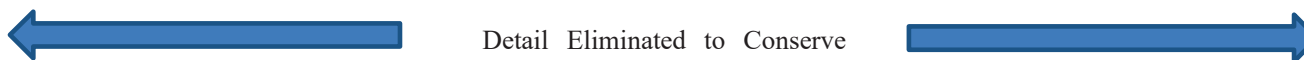
The Solvency Workstream of the Climate & Resiliency (EX) Task Force was tasked with considering the development of climate scenario analysis. The workstream held three public panels on the topic in 2022 and in 2023 learned that commercial CAT modelers have products known as "Climate Conditioned Catalogs" that reflect adjusted frequency and severity for certain time horizons (e.g. 2040 or 2050) that if compared side by side with existing RBC data in PR027 would provide an estimate of climate change for hurricane and wildfire. The information is intended to be useful for domestic regulators holding conversations with insurers that may have a greater degree of risk levels for these perils.

Additional Staff Comments:

** This section must be completed on all forms.

Revised 2-2023

**CALCULATION OF CATASTROPHE RISK CHARGE RCAT
PR027A, PR027B, PR027C, PR027, PR027B2, PR027C2 AND PR027INT**



DISCLOSURE OF CLIMATE CONDITIONED CAT EXPOSURE
PR027B2, PR027C2

These disclosures aim at collecting the impact of climate related risks on the modeled losses for the perils of hurricane and wildfire that have been used in PR027B and PR027C respectively. The intent of these disclosures is for informational purposes only and not to determine a new RCAT charge. The impact should be estimated using the following specific instructions:

- Representative Concentration Pathway (RCP) represents a set of projections that are meant to serve as an input for climate modeling, pattern scaling and atmospheric chemistry modeling. For purposes of these instructions, companies should utilize an RCP of 4.5 (or equivalent SSP).
- The impact should be assessed separately under two-time horizons 2040 and 2050.
- Assume a static in-force book of business at year end (no changes to book of business, to reinsurance strategy or to total insured value (TIV) inflation over the projected time horizon).
- The impact can be modeled using either a Climate Conditioned Catalog developed by a commercial CAT model vendor or equivalent view of climate risk internally developed by the insurer or that is the result of adjustments made by the insurer to vendor provided catalogs to represent the own view of climate risk.

The same basic information is required to be completed for this PR027B2 and PR027C2 as the previous pages PR027B and PR027C, including specifically as follows:

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.

In addition, the insurer should provide the following information about the view of climate risk used to determine the climate conditioned modeled losses under each time horizon:

- If a Climate Conditioned Catalog developed by a commercial CAT model vendor is used, provide name and version of the catalog.
- If it is internally developed by the company, provide a brief description of assumptions/adjustments made.

CALCULATION OF CATASTROPHE RISK CHARGE FOR HURRICANE PR027B

Hurricane	Reference	<u>Modeled Losses</u>			
		(1) <u>Direct and Assumed</u>	(2) <u>Net</u>	3† <u>Ceded Amounts Recoverable</u>	(4)†† <u>Ceded Amounts Recoverable with zero Credit Risk Charge</u>
(1) Worst Year in 50	Company Records				
(2) Worst Year in 100	Company Records				
(3) Worst Year in 250	Company Records				
(4) Worst Year in 500	Company Records				
(5) Worst Year in 1000	Company Records				
				(5) Y/N	
(6) Has the company reported above, its modeled hurricane losses using an occurrence exceedance probability (OEP) basis?					
	<u>Reference</u>		<u>Amount</u>	<u>Factor</u>	<u>RBC Requirement (C(6) * Factor)</u>
(7) Net Hurricane Risk	L(2) C(2)		0	1.000	0
(8) Contingent Credit Risk for Hurricane Risk	L(2) C(3) - C(4)		0	0.018	0
(9) Total Hurricane Catastrophe Risk (AEP Basis)	If L(6) C(5) = "N", L(9) C(6) = L(7) C(7)+ L(8) C(7), otherwise "0"		0	1.000	0
(10) Total Hurricane Catastrophe Risk (OEP Basis)	If L(6) C(5) = "Y", L(10) C(6) = L(7) C(7)+ L(8) C(7), otherwise "0"		0	1.000	0
(11) Total Hurricane Catastrophe Risk	L(9) C(7) + L(10) C(7)				0

Lines (1)-(5): 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, CoreLogic, RMS, KCC, the ARA HurLoss Model, or the Florida Public Model for hurricanes; 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.

**CALCULATION OF CATASTROPHE RISK CHARGE FOR WILDFIRE PR027C
(For Informational Purposes Only)**

Wildfire	Reference	<u>Modeled Losses</u>			
		(1) <u>Direct and Assumed</u>	(2) <u>Net</u>	3† <u>Ceded Amounts Recoverable</u>	(4)†† <u>Ceded Amounts Recoverable with zero Credit Risk Charge</u>
(1) Worst Year in 50	Company Records				
(2) Worst Year in 100	Company Records				
(3) Worst Year in 250	Company Records				
(4) Worst Year in 500	Company Records				
(5) Worst Year in 1000	Company Records				
				(5) Y/N	
(6) Has the company reported above, its modeled wildfire losses using an occurrence exceedance probability (OEP) basis?					
		<u>Reference</u>	<u>Amount</u>	<u>Factor</u>	<u>RBC Requirement (C(6) * Factor)</u>
(7) Net Wildfire Risk		L(2) C(2)	0	1.000	0
(8) Contingent Credit Risk for Wildfire Risk		L(2) C(3) - C(4)	0	0.018	0
(9) Total Wildfire Catastrophe Risk (AEP Basis)		If L(6) C(5) = "N", L(9) C(6) = L(7) C(7)+ L(8) C(7), otherwise "0"	0	1.000	0
(10) Total Wildfire Catastrophe Risk (OEP Basis)		If L(6) C(5) = "Y", L(10) C(6) = L(7) C(7)+ L(8) C(7), otherwise "0"	0	1.000	0
(11) Total Wildfire Catastrophe Risk		L(9) C(7) + L(10) C(7)			0
<u>Disclosure in lieu of model-based reporting:</u>				(8)	(9)
(12) For a company qualifying for the exemption under PR027INT C (10), complete 11a through 11c below:				<u>Direct and Assumed</u>	<u>Net</u>
a. Provide the company's gross and net 1-in-100-year wildfire 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 wildfire risk.					

Lines (1)-(5): 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; 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.

DISCLOSURE OF CLIMATE CONDITIONED CAT EXPOSURE FOR HURRICANE PR027BI
 (For Informational Purposes Only)

Hurricane	Reference	Climate Conditioned Modeled Losses for 2040		
		(1) Direct and Assumed	(2) Net	3† Ceded Amounts Recoverable
(1) Worst Year in 50	Company Records			
(2) Worst Year in 100	Company Records			
(3) Worst Year in 250	Company Records			
(4) Worst Year in 500	Company Records			
(5) Worst Year in 1000	Company Records			

View of climate risk used

(6) If a Climate Conditioned Catalog developed by a commercial CAT model vendor is used, provide name and version of the catalog

(7) If it is internally developed by the company, provide a brief description of assumptions/adjustments made

Lines (1)-(5): Modeled losses to be entered on these lines are to be calculated using the same commercial vendor-catastrophe model, or combination of models used to calculate the CAT Risk Charge.

† 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).

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

DISCLOSURE OF CLIMATE CONDITIONED CAT EXPOSURE FOR HURRICANE PR027BII
 (For Informational Purposes Only)

Hurricane	Reference	Climate Conditioned Modeled Losses for 2050		
		(1) Direct and Assumed	(2) Net	3† Ceded Amounts Recoverable
(1) Worst Year in 50	Company Records			
(2) Worst Year in 100	Company Records			
(3) Worst Year in 250	Company Records			
(4) Worst Year in 500	Company Records			
(5) Worst Year in 1000	Company Records			
View of climate risk used				
(6) If a Climate Conditioned Catalog developed by a commercial CAT model vendor is used, provide name and version of the catalog				
(7) If it is internally developed by the company, provide a brief description of assumptions/adjustments made				

Lines (1)-(5): Modeled losses to be entered on these lines are to be calculated using the same commercial vendor-catastrophe model, or combination of models used to calculate the CAT Risk Charge.

† 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).

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

DISCLOSURE OF CLIMATE CONDITIONED CAT EXPOSURE FOR WILDFIRE PR027CI
 (For Informational Purposes Only)

Wildfire	Reference	Climate Conditioned Modeled Losses for 2040		
		(1) Direct and Assumed	(2) Net	3† Ceded Amounts Recoverable
(1) Worst Year in 50	Company Records			
(2) Worst Year in 100	Company Records			
(3) Worst Year in 250	Company Records			
(4) Worst Year in 500	Company Records			
(5) Worst Year in 1000	Company Records			

View of climate risk used

(6) If a Climate Conditioned Catalog developed by a commercial CAT model vendor is used, provide name and version of the catalog

(7) If it is internally developed by the company, provide a brief description of assumptions/adjustments made

Lines (1)-(5): Modeled losses to be entered on these lines are to be calculated using the same commercial vendor catastrophe model, or combination of models used to calculate the CAT Risk Charge.

† 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).

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

DISCLOSURE OF CLIMATE CONDITIONED CAT EXPOSURE FOR WILDFIRE PR027CII
 (For Informational Purposes Only)

Wildfire	Reference	Climate Conditioned Modeled Losses for 2050		
		(1) Direct and Assumed	(2) Net	3† Ceded Amounts Recoverable
(1) Worst Year in 50	Company Records			
(2) Worst Year in 100	Company Records			
(3) Worst Year in 250	Company Records			
(4) Worst Year in 500	Company Records			
(5) Worst Year in 1000	Company Records			

View of climate risk used

(6) If a Climate Conditioned Catalog developed by a commercial CAT model vendor is used, provide name and version of the catalog

(7) If it is internally developed by the company, provide a brief description of assumptions/adjustments made

Lines (1)-(5): Modeled losses to be entered on these lines are to be calculated using the same commercial vendor catastrophe model, or combination of models used to calculate the CAT Risk Charge.

† 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).

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

	H/F	PPA	CA	WC	CMP	MPL OCCUR RENCE	MPL CLMS MADE	SL	OL	FIDELIT Y/ SURET Y	SPECIA L PROPE RTY	AUTO PHYSIC AL DAMAG E	OTHER (INCLU D CREDIT ,A&H)	FINANC IAL / MORTG AGE GUARA NTY	INTL	REIN. PROPE RTY & FINANC IAL LINES	REIN. LIABILI TY	PL	WARRA NTY
PR017 (Reserve Factors)																			
Line 4 Factors (Current)	0.213	0.179	0.276	0.344	0.494	0.383	0.276	0.304	0.531	0.371	0.246	0.155	0.220	0.179	0.359	0.415	0.656	0.802	0.371
Line 4 Factors Alternative 1 (indicated Aug. 23 Academy Paper)	0.226	0.205	0.360	0.382	0.475	0.271	0.172	0.401	0.496	0.586	0.272	0.137	0.225	0.146	1.083	0.319	0.596	1.377	0.355
Line 4 Factors Alternative 2 (50% indicated change)	0.220	0.192	0.318	0.363	0.485	0.327	0.224	0.353	0.514	0.479	0.259	0.146	0.223	0.163	0.721	0.367	0.626	1.090	0.363
Line 4 Factors Alternative 3 (50% indicated change with capped Intl & PL)	0.220	0.192	0.318	0.363	0.485	0.327	0.224	0.353	0.514	0.479	0.259	0.146	0.223	0.163	0.514	0.367	0.626	1.014	0.363
Line 4 Factors Alternative 4 (100% indicated change with capped Intl & PL)	0.226	0.205	0.360	0.382	0.475	0.271	0.172	0.401	0.496	0.586	0.272	0.137	0.225	0.146	0.669	0.319	0.596	1.226	0.355
Expense Ratio (Uncapped)	0.289	0.228	0.286	0.262	0.356	0.255	0.255	0.338	0.304	0.500	0.301	0.232	0.256	0.341	0.439	0.267	0.267	0.330	0.258
Adjustment for Investment Income (current)	0.938	0.928	0.911	0.830	0.876	0.865	0.883	0.890	0.852	0.940	0.966	0.976	0.967	0.926	0.874	0.901	0.838	0.841	0.940
Adjustment for Investment Income (indicated Aug. 23 Academy Paper)	0.951	0.937	0.926	0.783	0.898	0.861	0.896	0.884	0.864	0.908	0.954	0.978	0.936	0.916	0.889	0.913	0.793	0.847	0.961
Adjustment for Investment Income (50% indicated change)	0.945	0.933	0.919	0.807	0.887	0.863	0.890	0.887	0.858	0.924	0.960	0.977	0.952	0.921	0.882	0.907	0.816	0.844	0.951
Adjustment for Investment Income (50% indicated change with capped Intl & PL)	0.945	0.933	0.919	0.807	0.887	0.863	0.890	0.887	0.858	0.924	0.960	0.977	0.952	0.921	0.878	0.907	0.816	0.843	0.951
Adjustment for Investment Income (100% indicated change with capped Intl & PL)	0.951	0.937	0.926	0.783	0.898	0.861	0.896	0.884	0.864	0.908	0.954	0.978	0.936	0.916	0.881	0.913	0.793	0.844	0.961
Risk Charge (Current)	0.138	0.094	0.162	0.116	0.309	0.196	0.127	0.161	0.304	0.289	0.204	0.127	0.180	0.092	0.188	0.275	0.388	0.515	0.289
Risk Charge (50% indicated change with capped Intl & PL)	0.152	0.112	0.211	0.099	0.317	0.145	0.089	0.200	0.299	0.366	0.209	0.120	0.163	0.071	0.329	0.240	0.326	0.697	0.296
Risk Charge (100% indicated change with capped Intl & PL)	0.166	0.129	0.259	0.082	0.325	0.094	0.050	0.238	0.293	0.440	0.213	0.112	0.147	0.050	0.470	0.204	0.267	0.879	0.302
PR018 (Premium Factors)																			
Line 4 Factors (Current)	0.936	0.969	1.01	1.044	0.883	1.668	1.13	0.922	1.013	0.854	0.863	0.836	0.935	1.598	1.234	1.17	1.322	1.263	0.854
Line 4 Factors Alternative 1 (indicated Aug. 23 Academy Paper)	0.930	0.970	1.014	1.037	0.873	1.394	1.146	0.894	0.993	0.657	0.795	0.835	0.926	2.431	1.476	0.973	1.183	1.194	0.985
Line 4 Factors Alternative 2 (50% indicated change)	0.933	0.970	1.012	1.041	0.878	1.531	1.138	0.908	1.003	0.756	0.829	0.836	0.931	2.015	1.355	1.072	1.253	1.229	0.920
Line 4 Factors Alternative 3 (50% indicated change with capped FMG)	0.933	0.970	1.012	1.041	0.878	1.531	1.138	0.908	1.003	0.756	0.829	0.836	0.931	1.805	1.355	1.072	1.253	1.229	0.920
Line 4 Factors Alternative 4 (100% indicated change with capped FMG)	0.930	0.970	1.014	1.037	0.873	1.394	1.146	0.894	0.993	0.657	0.795	0.835	0.926	2.012	1.476	0.973	1.183	1.194	0.985
Adjustment for Investment Income (current)	0.954	0.925	0.89	0.839	0.896	0.767	0.827	0.898	0.816	0.904	0.949	0.971	0.947	0.884	0.905	0.893	0.777	0.774	0.904
Adjustment for Investment Income (indicated Aug. 23 Academy Paper)	0.966	0.937	0.903	0.833	0.921	0.795	0.863	0.924	0.837	0.922	0.957	0.979	0.958	0.902	0.925	0.919	0.811	0.801	0.972
Adjustment for Investment Income (50% indicated change)	0.960	0.931	0.897	0.836	0.909	0.781	0.845	0.911	0.827	0.913	0.953	0.975	0.953	0.893	0.915	0.906	0.794	0.788	0.938
Adjustment for Investment Income (50% indicated change with capped FMG)	0.96	0.931	0.897	0.836	0.909	0.781	0.845	0.911	0.827	0.913	0.953	0.975	0.953	0.888	0.915	0.906	0.794	0.788	0.938
Adjustment for Investment Income (100% indicated change with capped FMG)	0.966	0.937	0.903	0.833	0.921	0.795	0.863	0.924	0.837	0.922	0.957	0.979	0.958	0.891	0.925	0.919	0.811	0.801	0.972
Risk Charge (Current)	0.182	0.125	0.185	0.138	0.148	0.534	0.189	0.166	0.130	0.272	0.120	0.044	0.142	0.754	0.556	0.312	0.295	0.307	0.030
Risk Charge (50% with capped FMG)	0.185	0.131	0.193	0.132	0.154	0.450	0.216	0.165	0.133	0.189	0.091	0.047	0.143	0.943	0.679	0.238	0.262	0.297	0.121
Risk Charge (100% indicated change with capped FMG)	0.188	0.137	0.201	0.126	0.160	0.363	0.244	0.164	0.135	0.105	0.062	0.050	0.143	1.134	0.804	0.162	0.227	0.286	0.215

*5% minimum risk charge

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Draft: 4/1/24

Risk-Based Capital Investment Risk and Evaluation (E) Working Group
Phoenix, Arizona
March 17, 2024

The Risk-Based Capital Investment Risk and Evaluation (E) Working Group of the Capital Adequacy (E) Task Force met in Phoenix, AZ, March 17, 2024. The following Working Group members participated: Philip Barlow, Chair (DC); Thomas Reedy, Vice Chair (CA); Wanchin Chou (CT); Carolyn Morgan and Jane Nelson (FL); Carrie Mears and Kevin Clark (IA); Vincent Tsang (IL); Roy Eft (IN); Fred Andersen (MN); Debbie Doggett (MO); Lindsay Crawford and Andrea Johnson (NE); Jennier Li (NH); Bob Kasinow and Bill Carmello (NY); Dale Bruggeman and Tom Botsko (OH); Jamie Walker and Rachel Hemphill (TX); Doug Stolte (VA); Steve Drutz (WA); and Amy Malm (WI). Also participating was: Andrew Schallhorn (OK).

1. Adopted its 2023 Fall National Meeting Minutes

Eft made a motion, seconded by Botsko, to adopt the Working Group's Dec. 2, 2023, minutes (*see NAIC Proceedings – Fall 2023, Capital Adequacy (E) Task Force*). The motion passed unanimously.

2. Received Updates from the Valuation of Securities (E) Task Force and Statutory Accounting Principles (E) Working Group

Mears said the Valuation of Securities (E) Task Force exposed revisions to its proposal, which describes the process the Securities Valuation Office (SVO) should utilize when identifying potential issues with individual ratings on the securities reviews. This has been referred to as the discretion proposal and as part of the investment framework from the Financial Condition (E) Committee. The Task Force received comments in January that included additional constructive feedback it would like to incorporate into the final amendment. The Task Force discussed key thematic responses to comments and staff recommendations on how some can be addressed as they prepare another revision. The Task Force reiterated to interested parties that insurers would receive full transparency into any analysis done by the SVO in its review. It also reiterated that the discretion proposals were meant to provide an avenue for the SVO when identifying individualized issues and not to address broader asset class issues, as they already have mechanisms for those purposes.

In relation to this current proposal, the Task Force also supports the current request from the Financial Condition (E) Committee to draft a request for proposal (RFP) as the first step in establishing a broader due diligence process when rating agencies apply to be a credit rating provider (CRP). The Task Force anticipates this process to be a primary mechanism to inform its reliance on CRPs, and the discretion proposal in place would be used in conjunction with that. Some commenters noted they should defer the discretion proposals as they work through aspects of the framework before the Task Force. It noted in its materials that it is a reasonable consideration but also noted that establishing the discretion process will take approximately one to two years before it can be implemented. Therefore, it expects to move forward with that process and concur with the framework discussions at the Financial Condition (E) Committee.

Mears said the current road map is for the state insurance regulators to walk through the constructive feedback received in the last round of comment letters and work with staff to expose a final draft before the Summer National Meeting. They also received an update on the collateralized loan obligation (CLO) modeling process from a structured security group at the Task Force's meeting. Eric Kolchinsky (NAIC) noted that they have been working

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diligently with interested parties and getting feedback on the process. They hope to run a set of stress scenarios based on some of this feedback. In addition, they have been working very closely with the American Academy of Actuaries (Academy). Mears said the timeline will be extended to year-end 2025.

Bruggeman said the Statutory Accounting Principles (E) Working Group adopted revisions to *Statement of Statutory Accounting Principle (SSAP) No. 93—Low-Income Housing Tax Credit Property Investments* and *SSAP No. 94R—Transferable and Non-Transferable State Tax Credits*. Additionally, revisions in *SSAP No. 21R—Other Admitted Assets* were adopted to incorporate a new measurement method for residual interests. Revisions to update *SSAP No. 97* were also adopted. One blanks proposal is upcoming in May for approval with regard to some Schedule BA items. Revisions to *SSAP No. 26R—Bonds* were re-exposed to expand the transparency of reporting for collateral loans on Schedule BA to allow for quick identification of the type of collateral that supports admittance of collateral loans and define debt issued by funds operations.

3. Heard an Update from the Academy on its Workstreams and Planned Review of the Oliver Wyman Residual Tranche Study

Stephen Smith (Academy) discussed three current workstreams with comparable attributes: a review of rating methodologies from rating providers and a review of the residual tranche study. Hemphill asked Smith about the Oliver Wyman report and the Academy's conclusions. Smith said the review will be structured into six sections (one for each principle). Whether C-1 is relevant depends on how much the study aligns with the principles. Assumptions or methodology will be noted within the context of alignment with principles. Tsang asked Smith to expand on the comparable attribute candidates of CLOs. Smith said comparable attributes can be used to compare different securities within an asset class. The comparable attribute that risk-based capital (RBC) uses is an NAIC Designation for corporate bonds. The RBC system assumes that if one corporate bond is rated A and another is rated BBB, it is enough information to determine the capital charge. Another example Smith provided is commercial mortgage loans. They are based on two comparable attributes: the loan-to-value and the debt-to-service coverage ratio.

Tsang asked how many attributes there are. Smith said it would start with as many comparable attributes as possible, and then a rule of parsimony is applied to reduce it until as few as possible. It is unknown whether a small number of comparable attributes would still be useful for differentiating risk. Tsang asked about the timing of the Academy's review of the Oliver Wyman report. Smith said the Academy would provide something in early to mid-April.

Mears asked Smith to clarify whether the Academy is reviewing the methodology of the CLO or that of broader asset-backed securities (ABS). Smith said the Academy is trying to get that of the CLO right first, and hopefully, it can expand that as needed later.

4. Discussed Residual Tranche Risk Analysis

Kathy Belfi (Alternative Credit Council—ACC) and David Altmaier (ACC) presented highlights of the residual tranche risk analysis conducted by Oliver Wyman regarding the appropriateness of a residual interim capital charge of 45% for 2024. They asked the Working Group to consider whether an existing 30% charge remains reasonably conservative.

Joe Engelhard (Alternative Investment Management Association—AIMA) provided some context for the analysis. He said a 30% charge is considered reasonably conservative. Stolte asked if Belfi and Altmaier represent a coalition

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of the U.S. insurers. Altmaier said he represents Nassau Financial Group. Belfi said she represents Talcott Financial Group. Stolte asked whether these two companies are private equity controlled. Belfi said Nassau Financial Group is. Altmaier said he is not 100% certain about the ownership structure. Stolte asked Engelhard about AIMA's members. Engelhard said AIMA is a trade association with over 2000 members and includes private equity firms, private credit firms, hedge funds, some insurance members, and other companies. Stolte said RBC is a regulatory tool for state insurance regulators to identify weakly capitalized companies. He strongly believes it is incumbent upon state insurance regulators to have a reasonably conservative charge. Stolte said that in his opinion, ABS residuals act much differently than common stocks.

Clark asked what work was done to determine whether this represents what insurers hold. Engelhard said there were changes to how insurers are supposed to report their holdings of ABS residuals; therefore, it is very hard to determine that.

Carmello expressed his concern regarding a complete loss of value on the residuals. Some companies told him a 100% charge was used in their internal target surplus models. Carmello asked whether the probability of losing all value was part of the study. Engelhard said the answer is yes, and the major point of the study was to study the cash flows over time, subject to very conservative severe stress tests.

Reedy asked for more details about the study's reliance on the experience of corporate bonds during the Great Depression. Engelhard said Oliver Wyman is better positioned to provide a detailed technical answer. He said he would be glad to have Oliver Wyman follow up and explain in much greater detail.

Mears asked how results can be interpreted from a conditional tail expectation (CTE) perspective for structured securities. Hemphill said the same point in the tail for two asset classes should be looked at when the performance of one is compared to the other because they might not have the same scenarios representing the same percentiles. However, she did not see a discussion on this in the report. Engelhard said his understanding is that most NAIC charges were not determined by the three worst stress scenarios based on a very long-term time series. He said Oliver Wyman looked at the length of the study very closely and that it would be best for them to follow up and provide a more detailed answer.

Mariana Gomez-Vock (American Council of Life Insurers—ACLI) said that given the emergence of recent research by Oliver Wyman, the NAIC holistic framework, the complexities associated with ABS, and the potential for multiple RBC factors in just a few years, the ACLI respectfully requests that the Working Group consider granting a temporary, one-year delay in the implementation of the 45% factor for residual tranches. She said the factor is likely to be relatively permanent or at least very long-term for most residual ABS classes that are non-CLOs. Given the permanency of these factors, it is important to get it done right. The delay would give ACLI members more time to collaborate with state insurance regulators and the Academy to ensure that whatever proposal is put forth addresses state insurance regulators' concerns. Issuing a delay would also give time to ensure that the residual factor aligns with the Academy's principles that C-1 requirements for a given tranche should align with that tranche's risk to the extent practical. Similarly, the holistic framework includes a foundational principle that there should be equal capital for equal tail risk. Gomez-Vock said it appears that the Oliver Wyman report may show that the tranche risk can vary considerably across ABS classes.

Barlow said the Working Group determined that the 45% factor is reasonably conservative, and its implementation was delayed at the request of industry last year. He said the Oliver Wyman report does a good job of justifying the 45% factor. He said the RBC factor is a blunt tool that will not be precise for everything. It needs to be reasonably

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conservative, but there is no intent to punish any type of investment. Barlow said he does not think that the Working Group would consider another deferral of the implementation of the 45% factor.

Gomez-Vock said the Oliver Wyman report might justify the 45% for CLOs, but it was unclear that it justified the factor for the other ABS.

Clark said the original exposure for the interim factor last year contemplated the ability to assign three different charges. He said that he believes it was the ACLI's comment letter that supported a single factor. He said it seems to him that the reason for the other delay is that a further break out of the factor is needed.

Gomez-Vock said her understanding of the basis of the comment was that the ACLI was unsure about the process for bifurcating the tranches into different buckets. This was part of the concern and why the ACLI suggested an aggregate factor.

Barlow said he believes the Working Group is interested in continuing to look at this. The Working Group agreed to expose the Oliver Wyman report for a 21-day public comment period.

5. Discussed its Next Steps

Barlow noted a memorandum on projects the Working Group intends to tackle next. A meeting will be scheduled to discuss this further. He said NAIC staff have begun to put together some statistics based on the information in the 2023 annual statements related to the residual tranches. As was done last year, there will be a state insurance regulator version of that report. A version of the report, which does not have company-specific information, will be posted publicly on the website to make it publicly available.

Having no further business, the Risk-Based Capital Investment Risk and Evaluation (E) Working Group adjourned.

SharePoint/NAIC Support Staff Hub/Committees/Committee Folders/E CMTE/CADTF/2024_1Spring/RBCIRE/RBC Investment Risk 3-17-24 Minutes.docx

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-Shahrak 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-Shahrak 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-Shahrak, 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:

Subgroup	Lead	NAIC Staff Support
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

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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.

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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

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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

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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

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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

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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-Shaharak, 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

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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

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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

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.

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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.¹ "No single formula or ratio can give a complete picture of a company's

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

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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-Shaharak (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-Shaharak 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-Shaharak 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

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.¹ “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.

¹ 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

Aug. 28, 2023, Summary Report

<p>Agenda</p> <ul style="list-style-type: none"> • Introductions • What do we mean by Asset Concentration? • Why do we care? • What do we currently have? <ul style="list-style-type: none"> ○ 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? <ul style="list-style-type: none"> ○ What risks are being missed? <ul style="list-style-type: none"> ▪ 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? <ul style="list-style-type: none"> ○ State investment law limits ○ Disclosures via Statutory Accounting and Blanks (note General Interrogatories and Summary Investment Schedules) ○ Exam Handbook procedures
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The following 18 individuals attended the Aug. 28, 2023, Asset Concentration Subgroup call:

Asset Concentration Ad Hoc Subgroup		
Name	State	Company/Organization
Kevin Clark, Co-Chair	IA	
Ed Toy, Co-Chair		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)
Sabrina Wilson		Clearwater Analytics
Jeff Johnson		Global Atlantic Financial Group (GAFG)
Maureen Adolf		Eversheds Sutherland
Husain Bootwala		Guggenheim Partners Investment Management
Crystal Brown		NAIC

RBC RISK EVALUATION AD HOC - ASSET CONCENTRATION SUBGROUP

Eva Yeung		NAIC
Julie Gann		NAIC
Maggie Chang		NAIC
Robin Marcotte		NAIC



Ed Toy (Risk & Regulatory Consulting), co-chair of the Asset Concentration Subgroup, kicked off the meeting with an introduction of the Subgroup members. Based on his former experience as a portfolio manager and current experience as a financial examiner, he had suggested the RBC Risk Evaluation Ad Hoc group look into the topic of asset concentration, and this subgroup was formed.

Toy acknowledged that gap(s) should be identified in asset concentration risk, and the solution may not be in the risk-based capital (RBC) framework. There are multiple venues that could address risk, such as state investment law limits, enhanced disclosures, or enhancement of the *Financial Condition Examiners Handbook* (Handbook).

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

Toy's view/definition of asset concentration is more than just issuer exposure and should expand to asset class exposure. He used exposure to collateralized loan obligations (CLOs) as an example. While the industry is not significantly exposed to CLOs, (~3% of industry invested assets), certain insurance companies have significant exposure to CLOs, even the below-investment-grade tranches of CLOs. Wanchin Chou echoed that the subgroup should not disregard risk based on the notion that the asset class is not material to the industry.

Tom 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 the Capital Adequacy (E) Task Force. From there, the parent groups would reach out to a broader audience to solicit comments.

Toy provided examples of historical instances where additional disclosures were sufficient to deal with the risk identified, such as subprime mortgage loan disclosure around 2008 and security lending disclosures more recently.

Toy reminded the subgroup that the most important reason for why the subgroup is revisiting the RBC framework is to ensure the framework can effectively identify insurance

RBC RISK EVALUATION AD HOC - ASSET CONCENTRATION SUBGROUP

companies with solvency issues. With that in mind, if no solvency issues are created by asset concentration, no further action is deemed necessary.

Maureen Adolf (Eversheds Sutherland) questioned whether RBC is the right tool, given so much more oversight has been instituted since 2008 (e.g., the Financial Analysis [E] Working Group, NAIC Own Risk and Solvency Assessment [ORSA], other enhanced financial disclosures, and regulated financial reviews).

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

Toy asked NAIC staff to follow up on the internal compendium document that summarizes different investment law limits by state.

Jeremy Rosenbaum (Guggenheim Partners Investment Management) expressed his view of the state limits. Most are wide and place outside boundaries on what could be invested. They appear to adopt model laws in some shape and form, e.g., rating category limits and diversification limits are 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 Iowa 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 said he has observed a fair amount of inconsistency across state investment laws.

Steve Drutz asked what prospects, if any, can ensure the 10 largest issuer exposures are being reported accurately. Julie Gann (NAIC) acknowledged that NAIC staff were aware of a disconnect between financial statement disclosure in the form of supplemental investment risk interrogatory (SIRI) and RBC guidance. Gann summarized changes to SIRI that were adopted in 2019/2020, including the exclusion of diversified funds from a look-through approach in identifying top 10 issuers. Clark suggested these action items: (1) determine if any of the adopted changes to SIRI should be brought over to RBC and (2) determine whether additional updates or clarifications are needed, e.g., is the diversified versus non-diversified consideration only applicable to funds or does it also apply to structured securities? 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 helps with interpretation.

Next, Toy spoke about the 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.

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As parting thoughts, Clark asked 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. Sabrina Wilson (Clearwater Analytics) asked if the Subgroup would look into the capital models of other jurisdictions (e.g., Asia-Pacific Economic Cooperation [APEC], the United Kingdom [UK], etc.) Toy was skeptical how useful it would be to refer 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 the U.S. system.

Toy said that he will work with Clark to formulate more specific agenda items going forward and that the cadence of meetings is expected to be every couple of weeks.

RBC RISK EVALUATION AD HOC - ASSET CONCENTRATION SUBGROUP

Sept. 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.**

The following 18 individuals attended the Aug. 28, 2023, Asset Concentration Subgroup call:

Asset Concentration Ad Hoc Subgroup		
Name	State	Company/Organization
Kevin Clark, Co-Chair	IA	
Ed Toy, Co-Chair		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
Sabrina Wilson		Clearwater Analytics
Jeff Johnson		Global Atlantic Financial Group (GAFG)
Maureen Adolf		Eversheds Sutherland
Crystal Brown		NAIC
Eva Yeung		NAIC
Julie Gann		NAIC
Maggie Chang		NAIC
Robin Marcotte		NAIC

No corrections or additions to the Aug. 28, 2023, summary report was proposed by the attendees. No formal adoption of the summary report was deemed necessary.

Ed Toy (Risk & Regulatory Consulting) kicked off the discussion by introducing an inventory of asset concentration considerations (Inventory) put together by the NAIC staff prior to the meeting. The starting point of the inventory was current/existing investment-related disclosures in the statutory annual statements, including footnotes, general interrogatories,

RBC RISK EVALUATION AD HOC - ASSET CONCENTRATION SUBGROUP

and supplemental investment risk interrogatories (SIRI). Toy said while we would not preclude the need to develop additional disclosures or statutory accounting guidance, the most reasonable starting point is the existing disclosures. Maggie Chang (NAIC) briefly walked through the layout of the Inventory.

Clark’s comments on principle-based framework

Alan Morris (American Council of Life Insurers—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 inventory 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. Kevin Clark suggested putting together a flow chart similar to the one presented by the American Academy of Actuaries (Academy) at the Risk-Based Capital Investment Risk and Evaluation (E) Working Group meeting at the 2023 Summer National Meeting at Seattle (the Flow Chart). The key is to lay out principles that would help the Ad Hoc group 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 anything in the Inventory that would pose a solvency risk, even if concentration is identified. For example, concentration in U.S. treasuries or corporate bonds in general is not likely to pose a solvency risk. Once the Flow Chart is developed, the Inventory items should be compared against the Flow Chart and analyzed accordingly. Whether concentration would pose a 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 also agreed that the Flow Chart is an excellent idea. Clark added that the gating factor or first point of the Flow Chart should be whether or not the concentration poses a linear risk.

Toy’s Comments—Sector Concentration and Emerging Asset Risks

Toy provided 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 firsthand the struggle to identify insurers’ exposure to certain sectors (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. However, 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 other sector concentration considerations, which were Property Type of Real Property and Mortgage Loans. These are especially relevant for the 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). The disclosure may need enhancing (e.g., consider disclosure in Blanks). Morris asked whether the framework should be malleable to address emerging risks. Toy agreed that the RBC framework should not be a closed book. He referenced Phil Barlow, chair of the Risk-Based Capital Investment Risk and Evaluation (E)

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Working Group, and his idea of a placeholder for emerging investments in the RBC framework, likely a higher capital charge for the placeholder “bucket.” Clark stressed the importance of having proper disclosure to help identify and scope emerging risks. However, how to get from the point of risk identification to the determination of a new RBC factor would require a framework/thought process, and therefore, developing the flow chart is important.

Other Questions and Comments

Maureen Adolf (Eversheds Sutherland) sought clarification as to whether, based on discussion thus far, certain categories of investments should be eliminated.

Toy responded that he is hesitant to do that, as different circumstances may lead to the conclusion that even concentration in U.S. 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, waiving further actions. That documentation would help take credit for evaluating the risk. However, Clark does not believe we need to list and document every possible asset class.

Sabrina Wilson (Clearwater Analytics) asked if the single name/issuer concentration should be performed at the group/ultimate parent level as opposed to the current instruction requirement at the issuer level.

Toy responded that while the current RBC instruction is not explicitly clear on the aggregation method, he personally believes that for bonds, aggregation should be done at the parent level when the issuer is reliant on the credit of the parent company. The current instruction that requires the use of the first six out of nine digits in the Committee on Uniform Security Identification Procedures (CUSIP) should help with identifying issuer relationships. Another disclosure that would help is legal entity identifier (LEI). However, given the haphazard nature of the insurers’ LEI disclosure, it is going to be eliminated as part of the Bond project. Julie Gann (NAIC) 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.

Wilson asked if the single name/issuer concentration should be performed at the holding company level.

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

Wilson asked if the subgroup should consider look-through in aggregating exposure.

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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. Robin Marcotte (NAIC) stated that SIRI has top 10 asset disclosures that can potentially be leveraged. Chang reminded the group that one of the brainstorm items during the Aug. 28 Subgroup meeting was to align guidance between SIRI and RBC on asset concentration disclosure, and whether or not to look through funds is one of the areas that need alignment.

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.

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

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

Next Steps

1. Meeting attendees were encouraged to review the Inventory and provide feedback on the following:
 - Are there any other potential asset concentration considerations to add?
 - Are you aware of any areas of improvement for 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 a Cayman Islands issuer/trust are not truly "foreign investments." Second, referrals to Blanks may be considered to expand on current foreign investment disclosure if transparency is provided for the country of issuance. The rationale is that solvency risk for investments in developed countries is inherently different than investments in developing countries.)
 - Which items on the Inventory should we prioritize?
2. Botsko suggested adding a column or notation in the Inventory to indicate applicability to which formulas (health, life, property/casualty (P/C), ALL).
3. Clark, Toy, and Chang will start looking into a principle-based framework. (Refer to Clark's comment section.)

RBC RISK EVALUATION AD HOC -ASSET CONCENTRATION SUBGROUP

October 13, 2023, Call Summary Report

<p>Agenda</p> <ol style="list-style-type: none"> 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:

Asset Concentration Ad Hoc Subgroup		
Name	State	Company/Organization
Kevin Clark, Co-Chair	IA	
Ed Toy, Co-Chair		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.

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- 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>

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	<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>
<p>Box C—Do Existing Guardrails Prevent Concentration?</p>	<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>
<p>Box D—Potentially Material to Material Portion of Industry?</p>	<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>
<p>Box E—Can Risk Be Effectively Mitigated Through Other Regulatory Tools?</p>	<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>

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	<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>
<p>Box F—Is There a Systematic and Practical Way to Measure the Risk?</p>	<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>
<p>Box G—Is the Necessary Data Currently Available?</p>	<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"> • Enhancement to the data call; • Improvement of data accessibility; and • Referrals to the Statutory Accounting Principles (E) Working Group and the Blanks (E) Working Group. <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>
<p>Box K—Develop RBC Framework to Capture Risk</p>	<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>

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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.

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October 27, 2023, Summary Report

<p>Agenda</p> <ol style="list-style-type: none"> 1. Opening remarks + administrative matters 2. Receive comments from members <ul style="list-style-type: none"> o ACLI (Attachment A) o Equitable (Attachment B) 3. Walk through revised flow chart (Attachment C) 4. Walk through revised inventory (Attachment D) 5. Other matters
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The following 25 individuals attended the Oct. 27 Asset Concentration Subgroup meeting:

Asset Concentration Ad Hoc Subgroup		
Name	State	Company/Organization
Kevin Clark, Co-Chair	IA	
Ed Toy, Co-Chair		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

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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
Box B—Does a Higher Degree of Correlation of Risk Exist Within the Intended Statistical Safety Level Than Assumed in Determining RBC Factors?	<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>
Box K—Develop RBC Framework to Capture Risk at Respective RBC Working Groups	<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.

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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

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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.


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Appendix – Attachments


ACLIF%20comment%
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Attachment A


Equitable comments
on Flowchart and Inve
Attachment B


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on%20Subgroup%20
Attachment C


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on%20Subgroup%20
Attachment D

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November 16, 2023, Summary Report

<p>Agenda</p> <ol style="list-style-type: none"> 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
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The following 28 individuals attended the Nov. 16, 2023, Asset Concentration Subgroup meeting:

Asset Concentration Ad Hoc Subgroup		
Name	State	Company/Organization
Kevin Clark, Co-Chair	IA	
Ed Toy, Co-Chair		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

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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"> - The year risk-based capital (RBC) was first implemented. - PAFs were developed by an industry group. - The Academy was unable to locate documentation of the legacy PAF methodology.
2010	<ul style="list-style-type: none"> - The NAIC’s C1 Subgroup asked the Academy to review the capital requirements for bonds. - Without proper documentation of the original PAF rationale, Bennett said the Academy’s approach was a “strictly mathematical process”.
2016-2017	<ul style="list-style-type: none"> - The Academy considered alternative methods and recommended a more accurate measure of diversification risk. - 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.
2020-2021	<ul style="list-style-type: none"> - 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. - 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.

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 (96th 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

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of issuers only). The Academy evaluated different potential combinations of break points for PAF and ran 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 ^{Note 1} 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 ^{Note 1}. 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

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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. ^{Note 1}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.

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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
IRBC Dec 11 2016 fin

RBC RISK EVALUATION AD HOC - ASSET CONCENTRATION SUBGROUP

December 19, 2023, Summary Report

Agenda
<ol style="list-style-type: none"> 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
Kevin Clark, Co-Chair	IA	
Ed Toy, Co-Chair		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

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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

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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
<ol style="list-style-type: none"> 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
Kevin Clark, Co-Chair	IA	
Ed Toy, Co-Chair		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.

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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

<p>Agenda</p> <ol style="list-style-type: none"> 1. Opening remarks 2. Flow Chart—Resume walk-through of sector concentration 3. Brainstorm agenda items for future meetings 4. Any other matters
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The following 29 individuals attended the Feb. 15, 2024, Asset Concentration Subgroup meeting:

Asset Concentration Ad Hoc Subgroup		
Name	State	Company/Organization
Kevin Clark, Co-Chair	IA	
Ed Toy, Co-Chair		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.”

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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—*Wanchin Chou (CT) and Tom Botsko (OH)*
- Discuss the Current Florida and Louisiana Companies' Insolvent Issues Related to Geographic Concentration— *Wanchin 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)*

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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, 2023

Agenda

- 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)*

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.

DRAFT

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.

Guidance Criteria Insurance General: Insurers Rating Methodology

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

Assessment	Description
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.

Guidance Criteria Insurance General: Insurers Rating Methodology

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

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.

Guidance Criteria Insurance General: Insurers Rating Methodology

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

Guidance Criteria Insurance General: Insurers Rating Methodology

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.

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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;

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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:

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- Stressed insurance liability outflows are typically defined as: $\{(net\ non\text{-}life\ claim\ reserves + net\ non\text{-}life\ reserve\ charge) / non\text{-}life\ claims\ reserve\ duration\} + net\ property\ catastrophe\ charge + net\ non\text{-}life\ premium\ charge + net\ trade\ credit\ exposure\ charge + 35\%$ (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

Assessment	Description
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.

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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.

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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.

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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

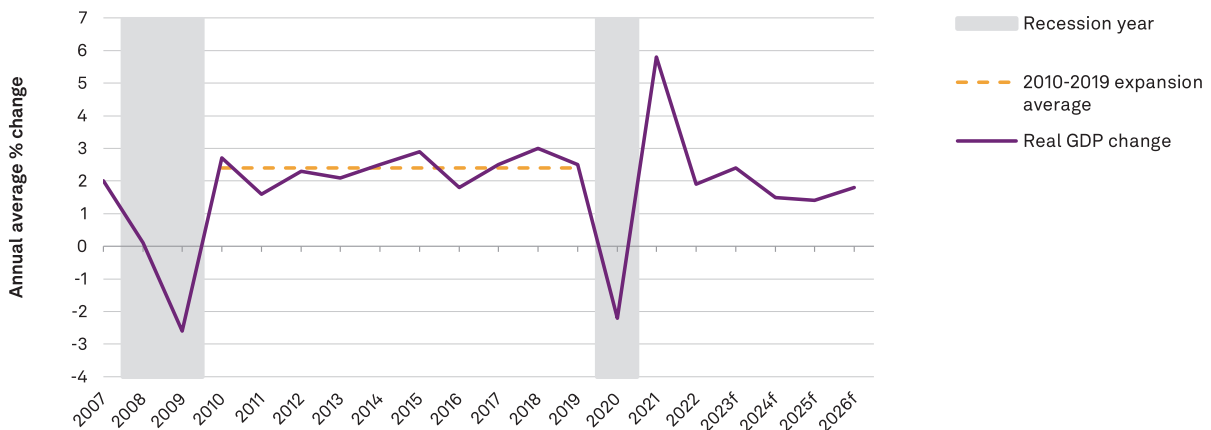
Insurance Industry And Country Risk Assessment: U.S. Life

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&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

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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.

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

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.

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

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

This report does not constitute a rating action.

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

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

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

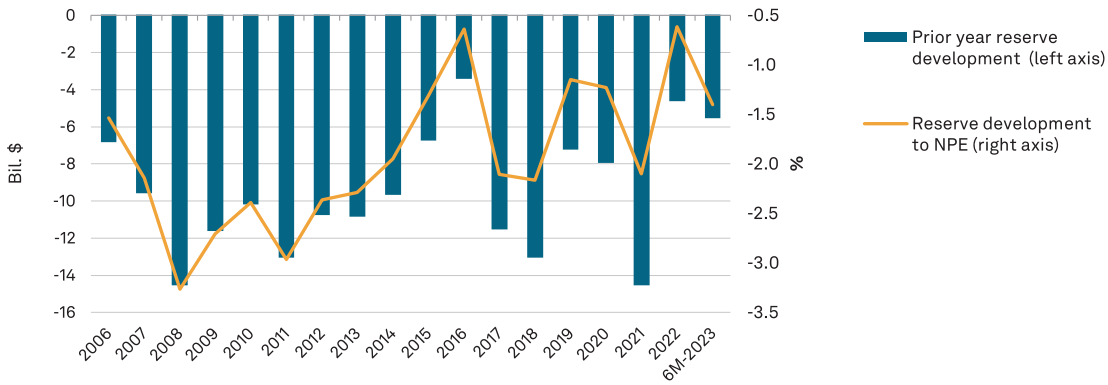


Source - S&P CapitalIQ Pro
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Insurance Industry And Country Risk Assessment: U.S. Property/Casualty

Chart 3

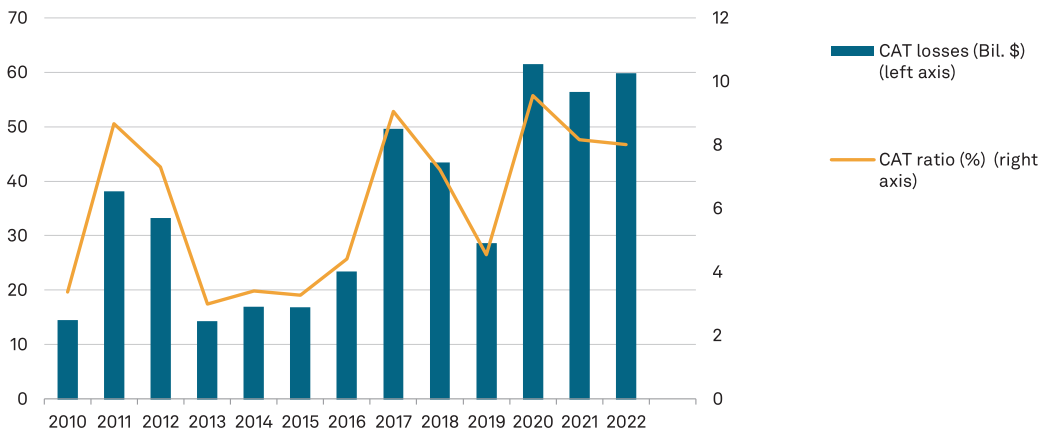
Favorable prior year reserve development



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

Related Criteria

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

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

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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.

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.

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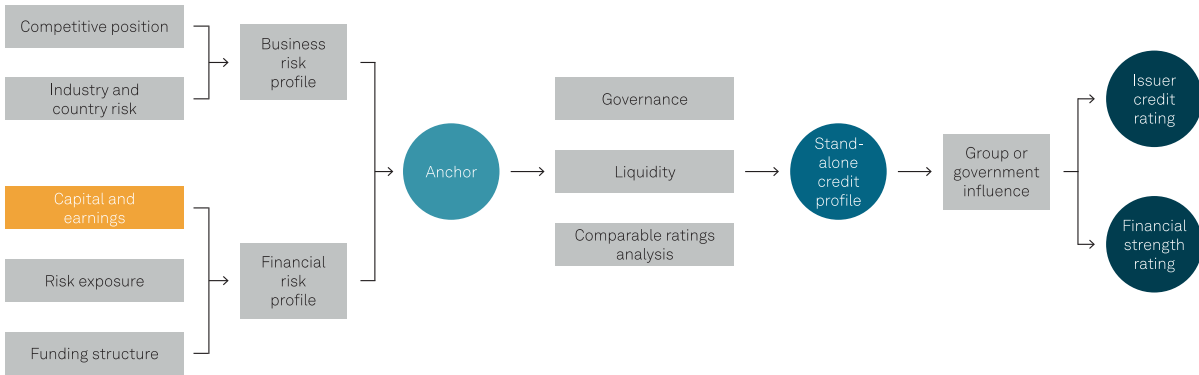
SECTION 1: STRUCTURE OF THE METHODOLOGY

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

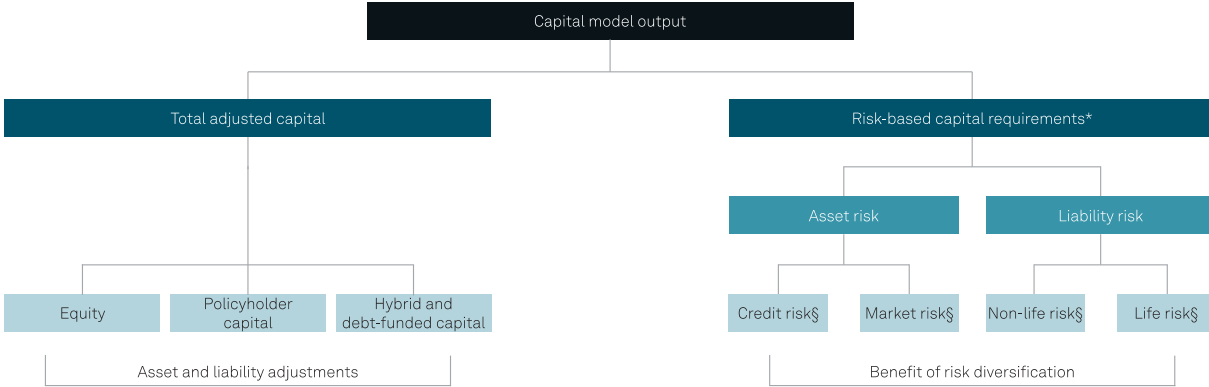


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In our capital analysis, we compare our measure of capital, total adjusted capital (TAC), with our measure of RBC requirements at different stress levels, based on an insurer's risks (see chart 2).

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
= Adjusted common equity (ACE)	
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
= Total adjusted capital (TAC)	

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.

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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

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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

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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);

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- 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.

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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.

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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.

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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.

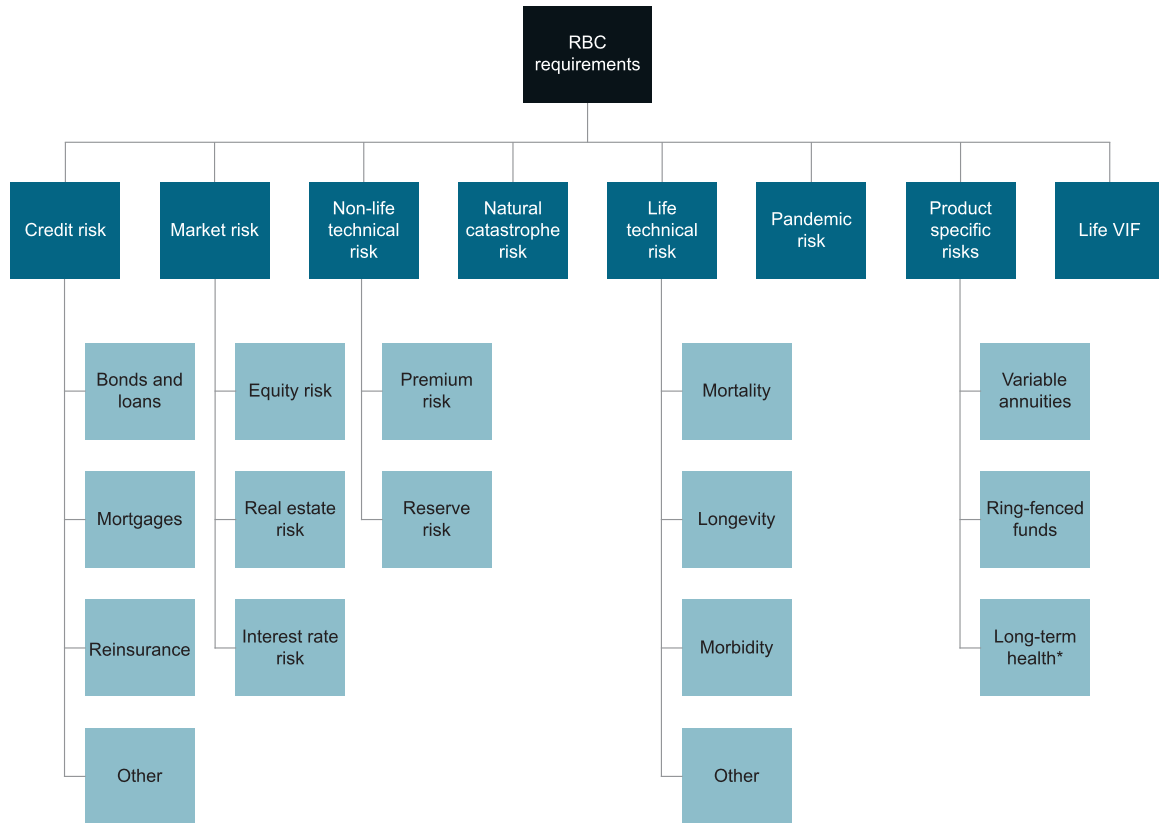
SECTION 3: RISK-BASED CAPITAL REQUIREMENTS

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

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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

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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.

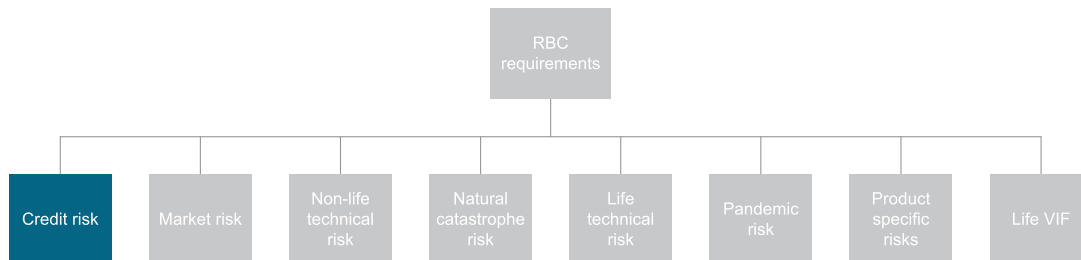
We may also adjust the relevant exposure measure where we determine that it does not adequately reflect the underlying risk. This could be due to factors such as accounting standards, one-off transactions, or nontraditional product structures. For example, if a one-off contract results in negative reported 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

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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

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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%
1 year or less				
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
More than 1 but less than or equal to 5 years				
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
More than 5 but less than or equal to 10 years				
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

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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
More than 10 but less than or equal to 20 years				
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
Over 20 years				
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%
1 year or less				
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

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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
More than 1 but less than or equal to 5 years				
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
More than 5 but less than or equal to 10 years				
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
More than 10 but less than or equal to 20 years				
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
Over 20 years				
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%
1 year or less				
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
More than 1 but less than or equal to 5 years				
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
More than 5 but less than or equal to 10 years				
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

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Table 5

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

(%)	--Capital charges--			
	99.99%	99.95%	99.8%	99.5%
More than 10 but less than or equal to 20 years				
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
Over 20 years				
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%
1 year or less				
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
More than 1 but less than or equal to 5 years				
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
More than 5 but less than or equal to 10 years				
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
More than 10 but less than or equal to 20 years				
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
Over 20 years				
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

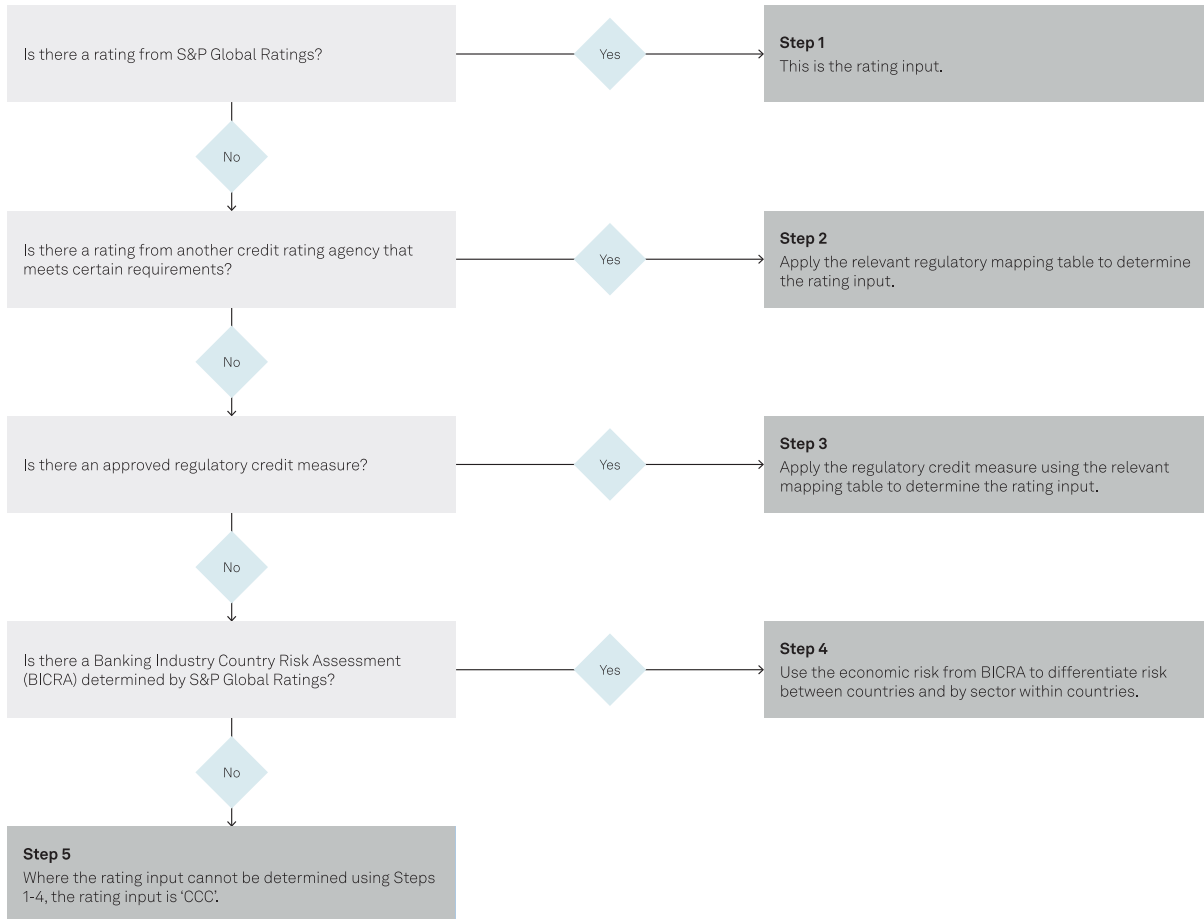
References to ratings include all rating modifiers within the rating category (e.g., 'A' includes bonds rated 'A+', 'A', and 'A-').

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

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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.

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

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.

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

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.

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

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

Confidence Level (%)	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			
99.5%							
	<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
99.8%							
	<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
99.95%							
	<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			
99.99%							
	<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
99.5%			
	<60	1.5	
	60-80	2.0	
	>80	2.4	
			20.0
99.8%			
	<60	1.9	
	60-80	2.5	
	>80	2.8	
			25.0
99.95%			
	<60	2.6	
	60-80	3.1	
	>80	3.4	
			30.0
99.99%			
	<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

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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.

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Table 11

Credit Risk Charges For Bank Deposits

(%)	--Capital charges--			
	99.99%	99.95%	99.8%	99.5%
Sovereign local currency rating				
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.

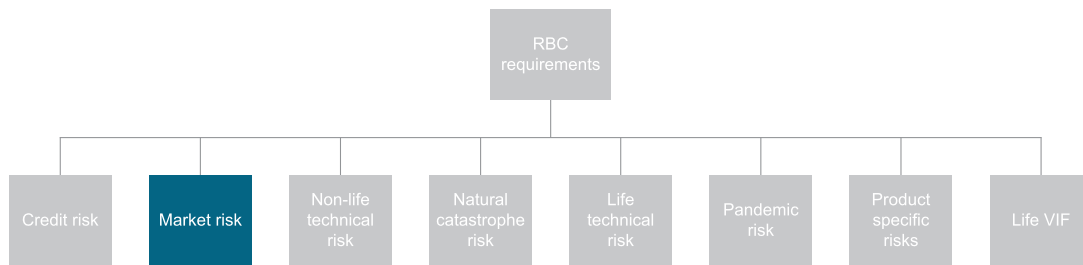
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Table 13

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

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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

(%)		--Capital charges--			
Equity market group		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

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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

(%)		--Capital charges--			
Real estate group		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.

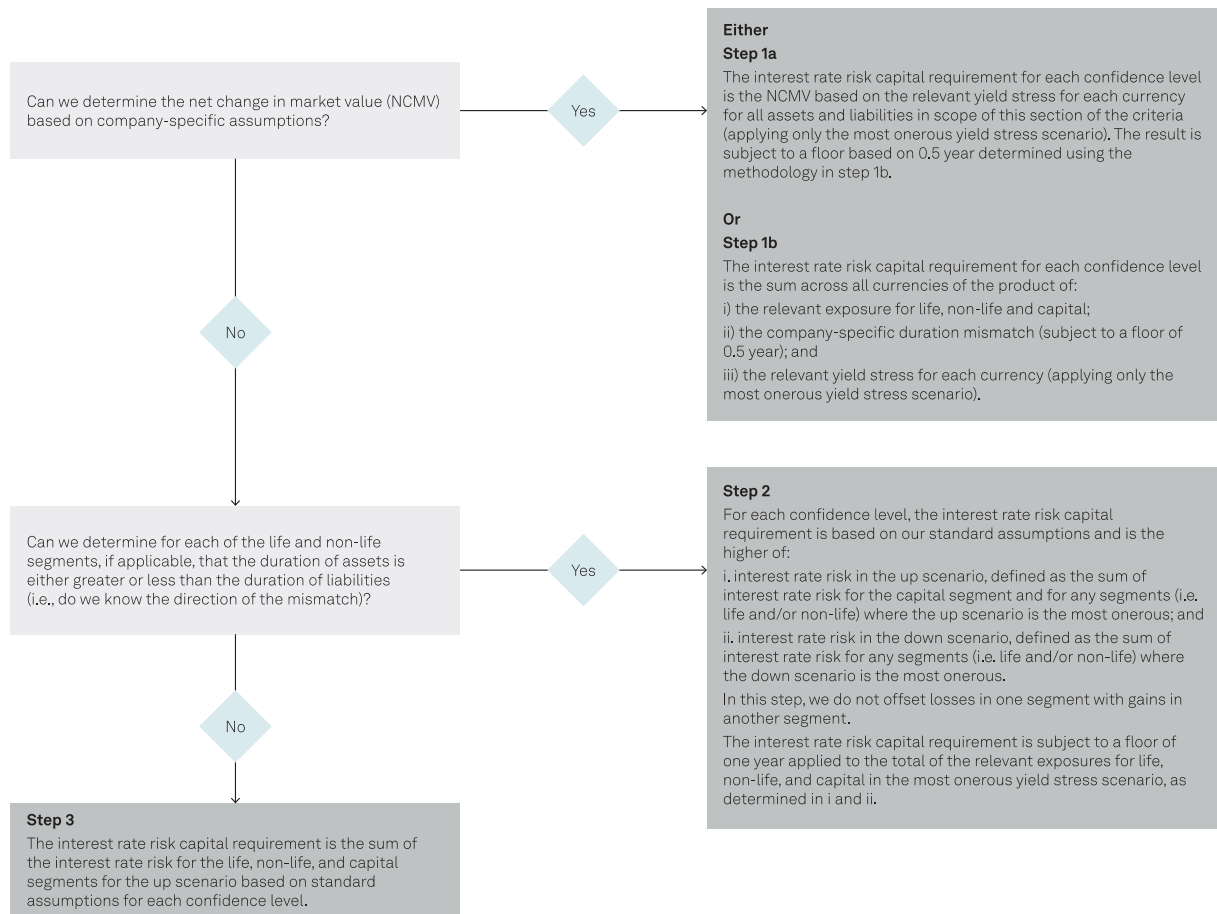
We define the potential economic losses as the net change in market value (NCMV), which we determine for each confidence level. The NCMV captures the net impact of changes in interest rates and systemic credit spreads on the market value of assets and proxy market value of liabilities, factoring in risk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

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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., DV01s), 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.

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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

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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

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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.

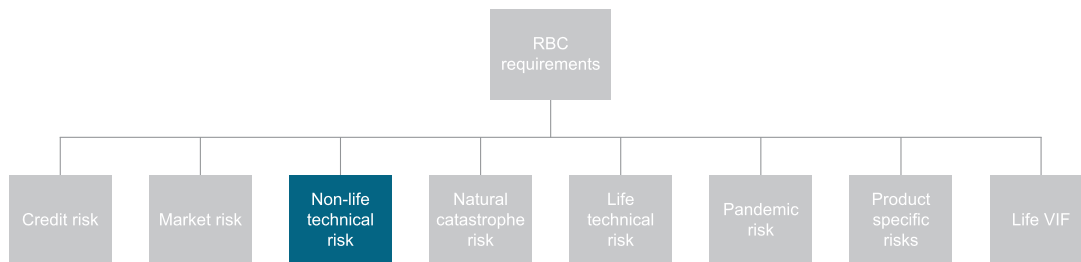
Other assets

Other reported assets not captured in the credit or market risk charges or for which treatment is

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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

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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%
EMEA risks					
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
U.S. risks					
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

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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

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Table 18

Non-Life Premium Risk Charges (Primary And Proportional Reinsurance) (cont.)

Category	--Capital charges--			
	99.99%	99.95%	99.80%	99.50%
Canadian risks				
Liability	49.5	42.0	36.0	30.0
Boiler and machinery	33.0	28.0	24.0	20.0
Commercial property	33.0	28.0	24.0	20.0
Hail	41.3	35.0	30.0	25.0
Personal property	33.0	28.0	24.0	20.0
Auto - liability	33.0	28.0	24.0	20.0
Auto - other	33.0	28.0	24.0	20.0
Auto - personal accident	33.0	28.0	24.0	20.0
Credit	49.5	42.0	36.0	30.0
Credit protection	49.5	42.0	36.0	30.0
Fidelity	41.3	35.0	30.0	25.0
Surety	41.3	35.0	30.0	25.0
Accident and sickness (excluding supplementary health, disability income)†	33.0	28.0	24.0	20.0
Supplementary health	24.8	21.0	18.0	15.0
Aircraft	49.5	42.0	36.0	30.0
Marine	33.0	28.0	24.0	20.0
Marine protection and indemnity§	49.5	42.0	36.0	30.0
Legal expense	49.5	42.0	36.0	30.0
Other approved products	41.3	35.0	30.0	25.0
Title	24.8	21.0	18.0	15.0
Warranty	33.0	28.0	24.0	20.0
Other	99.0	84.0	72.0	60.0
Asia-Pacific risks				
Employers' liability	24.8	21.0	18.0	15.0
General liability	33.0	28.0	24.0	20.0
Professional indemnity	33.0	28.0	24.0	20.0
Public and product liability	41.3	35.0	30.0	25.0
Commercial property	33.0	28.0	24.0	20.0
Domestic property	33.0	28.0	24.0	20.0
Engineering	49.5	42.0	36.0	30.0
Commercial motor - Australia and New Zealand	16.5	14.0	12.0	10.0
Domestic motor - Australia and New Zealand	12.4	10.5	9.0	7.5
Motor - all inclusive	33.0	28.0	24.0	20.0
Motor - Japan and Taiwan	16.5	14.0	12.0	10.0

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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
Latin American risks					
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

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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%
EMEA risks					
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

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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
U.S. risks					
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
Canadian risks					
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

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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
Asia-Pacific risks					
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

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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
Latin American risks					
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

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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).

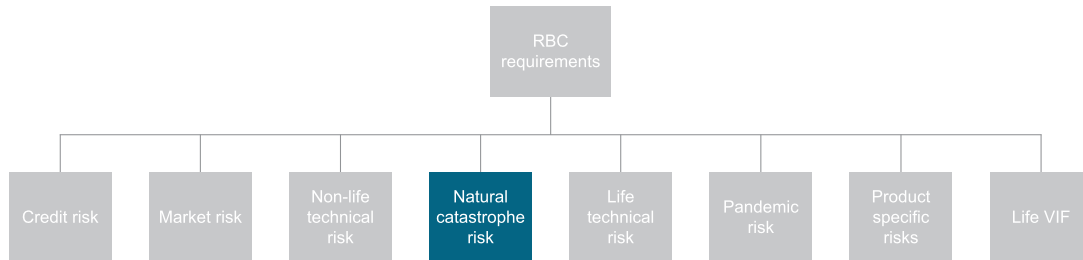
Table 20

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

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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.

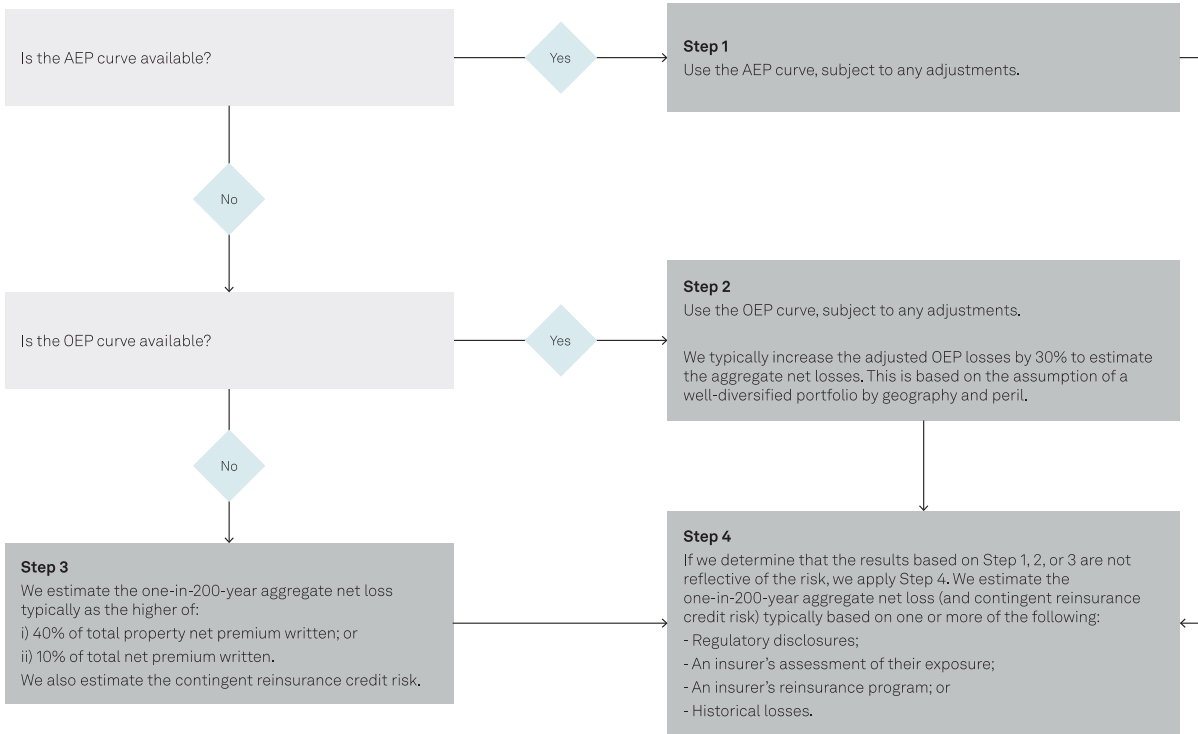
The capital charge covers exposures to global natural disasters including hurricanes (wind), flood, earthquake, tornadoes, winter storms (extratropical cyclones), wildfire, and hail. We expect the loss estimate to capture an insurer's expected exposure over the next year. We include in the loss estimate 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:

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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.

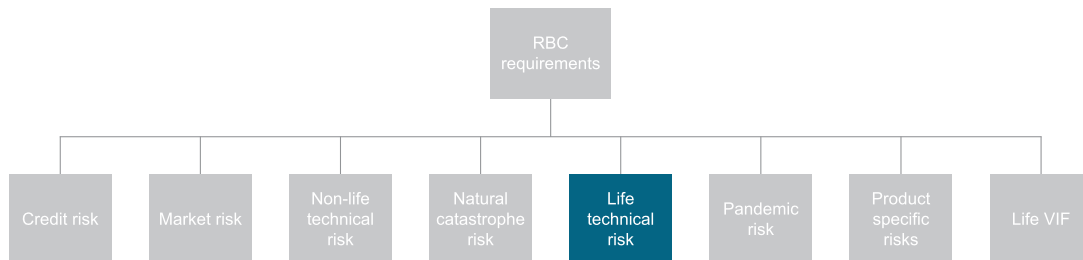
When we apply step 1 or step 2, we usually exclude the natural catastrophe premium (before the expense adjustment) from net written premiums when determining capital requirements for premium risk.

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

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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.

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Table 21

Mortality Risk Capital Charges (Highly Developed Life Markets)

(%)	--Capital charges--			
Net amount at risk	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)

(%)	--Capital charges--			
Net amount at risk	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.

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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.

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Table 25

Morbidity Risk Capital Charges - Disability

(%)	--Capital charges--			
	99.99%	99.95%	99.8%	99.5%
PREMIUM RISK CHARGES*				
Noncancelable disability income				
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
Other individual income				
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
Group long-term				
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
Group short-term				
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
Credit monthly outstanding balance				
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
Credit single premium with UPR				
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
Credit single premium without UPR				
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
Other disability income				
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
RESERVE RISK CHARGES‡				
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.

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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%
U.S.				
Earned premiums	46	41	36	32
Claims*	118	105	91	82
Claims reserves§	14	13	11	10
Non-U.S.				
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

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- 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

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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.

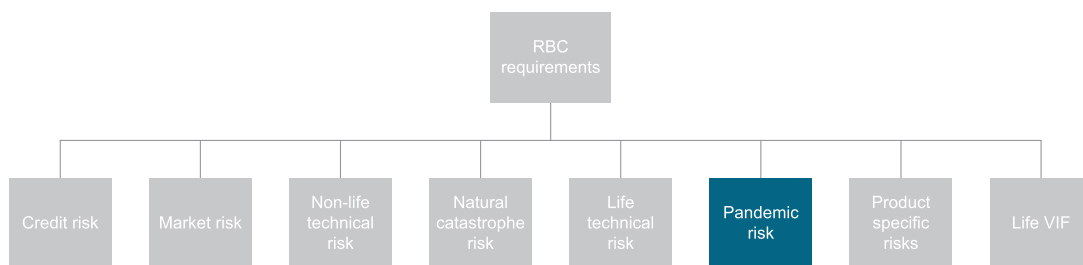
Table 28

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

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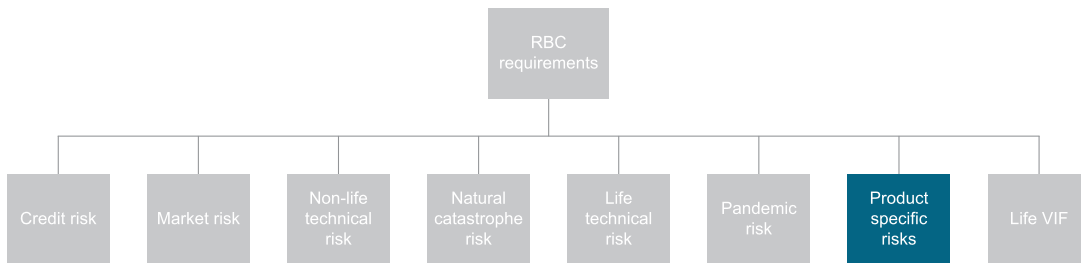
determine the capital charge, we assume 1.5 excess deaths per 1,000 of the insured population at the 99.5% confidence level. We apply this assumption to the same cohort of life insurers used to calibrate our mortality risk charges to determine the amount of excess claims payments. We compare this amount 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);

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- 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.

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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.

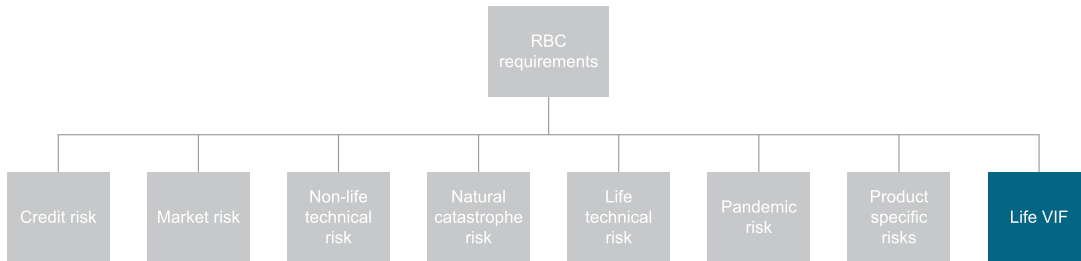
To develop the capital charges, we applied analytical judgment informed by regulatory calibrations and industry data. We implicitly capture in the capital charges the significant risk-mitigating benefits of the premium adjustment mechanism and diversification within life technical risks. We assume a 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

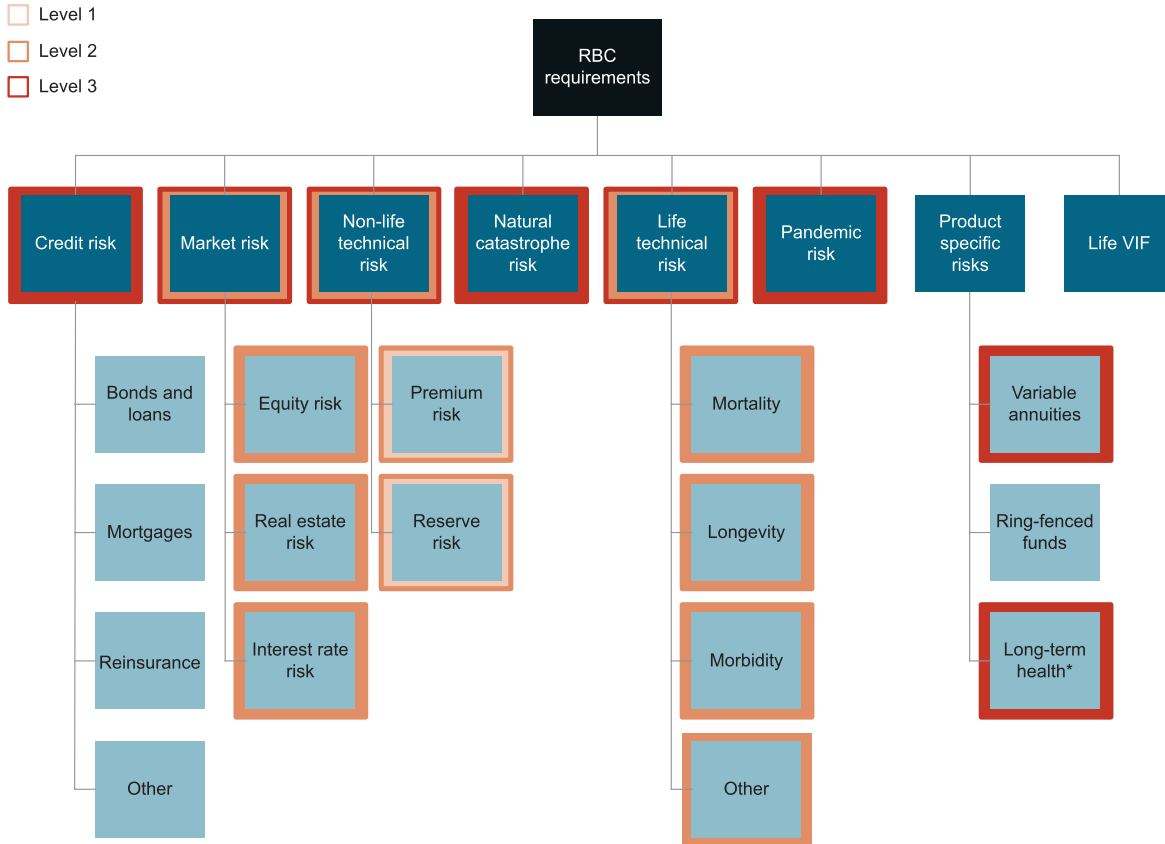
(%)	--Capital charges--			
	99.99%	99.95%	99.8%	99.5%
Value of in-force life business	65	55	45	35

If the elements of VIF that we include in TAC total less than zero, the life VIF capital charge is zero.

SECTION 4: DIVERSIFICATION

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Diversification: levels 1-3



*Long-term health business with aging reserves. Source: S&P Global Ratings. Copyright © 2023 by Standard & Poor's Financial Services LLC. All rights reserved.

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

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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

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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.

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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.
Disability product definitions:	
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: Contractual service margin (IFRS 17); Risk adjustment (IFRS 17); Excess XXX/AXXX reserves (U.S. statutory); Provision for adverse deviations (PfADs); Excess liability reserves (Japanese GAAP); Equalization reserves; Catastrophe reserves; Contingency reserves; Asset valuation reserves (U.S. statutory); and Interest maintenance reserves (U.S. statutory).
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.

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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

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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

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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).

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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

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

- 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.

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

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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

- | | | |
|---|---|---|
| <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 |

<p style="text-align: right;">DATE: <u>September 20, 2023</u></p> <p>CONTACT PERSON: <u>Jake Stultz</u></p> <p>TELEPHONE: _____</p> <p>EMAIL ADDRESS: <u>jstultz@naic.org</u></p> <p>ON BEHALF OF: <u>Reinsurance (E) Task Force</u></p> <p>NAME: <u>John Rehagen (Chair)</u></p> <p>TITLE: <u>Director, Insurance Company Regulation</u></p> <p>AFFILIATION: <u>Missouri DCI</u></p> <p>ADDRESS: <u>P.O. Box 690</u> <u>Jefferson City, MO 65102</u></p>	<p style="text-align: center;">FOR NAIC USE ONLY</p> <p>Agenda Item # <u>2023-13-CR</u> Year <u>2024</u></p> <p style="text-align: center;">DISPOSITION</p> <p>ADOPTED:</p> <p><input checked="" type="checkbox"/> TASK FORCE (TF) <u>3/17/2024</u></p> <p><input checked="" type="checkbox"/> WORKING GROUP (WG) <u>3/17/2024</u></p> <p><input checked="" type="checkbox"/> SUBGROUP (SG) <u>3/17/2024</u></p> <p>EXPOSED:</p> <p><input type="checkbox"/> TASK FORCE (TF) _____</p> <p><input checked="" type="checkbox"/> WORKING GROUP (WG) <u>12/02/2023</u></p> <p><input checked="" type="checkbox"/> SUBGROUP (SG) <u>12/02/2023</u></p> <p>REJECTED:</p> <p><input type="checkbox"/> TF <input type="checkbox"/> WG <input type="checkbox"/> SG _____</p> <p>OTHER:</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 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)

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 PRO27 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 PRO27 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. The PCRBC WG and Cat Risk SG adopted a fine-tuned version at the 2024 Spring National Meeting.

INTERROGATORY ON CATASTROPHE RISK REINSURANCE PROGRAM PR027

NOTE: This interrogatory is intended for completion by all property and casualty RBC filers that are exposed to natural catastrophe perils, and is not limited to earthquake, hurricane and wildfire and the associated RCAT exemptions. Insurance entities that participate in group reinsurance programs may respond to the interrogatory at a group level.

- (1) Provide an overall narrative description of the natural catastrophe reinsurance program in place at the insurer/group, by peril where appropriate, including elements such as the types of reinsurance coverage in place, attachment points/retention levels, exhaustion limits, reinstatement provisions, etc. When possible and relevant, provide a graphical reinsurance tower as an attachment.

[Redacted]

(2)
Y/N

- (2) Have there been any significant changes in the reinsurance program structure from the prior year (i.e., change in cost, level of coverage) (Y/N)
(2a) If yes, describe any significant changes from the prior year:

[Redacted]

[Redacted]

(2)
MM/DD/YYYY

- (3) Provide the primary program renewal date (i.e., 1/1/XX or 7/1/XX):

[Redacted]

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>12/02/23</u></p> <p>CONTACT PERSON: <u>Eva Yeung</u></p> <p>TELEPHONE: <u>816-783-8407</u></p> <p>EMAIL ADDRESS: <u>eyeung@naic.org</u></p> <p>ON BEHALF OF: <u>P/C RBC (E) Working Group</u></p> <p>NAME: <u>Tom Botsko</u></p> <p>TITLE: <u>Chair</u></p> <p>AFFILIATION: <u>Ohio Department of Insurance</u></p> <p>ADDRESS: <u>50 West Town Street, Suite 300</u> <u>Columbus, OH 43215</u></p>	<p style="text-align: center;">FOR NAIC USE ONLY</p> <p>Agenda Item # <u>2023-14-P</u> Year <u>2024</u></p> <p style="text-align: center;">DISPOSITION</p> <p>ADOPTED: <input checked="" type="checkbox"/> TASK FORCE (TF) <u>03/17/24</u> <input checked="" type="checkbox"/> WORKING GROUP (WG) <u>03/17/24</u> <input type="checkbox"/> SUBGROUP (SG) _____</p> <p>EXPOSED: <input type="checkbox"/> TASK FORCE (TF) _____ <input checked="" type="checkbox"/> WORKING GROUP (WG) <u>12/02/23</u> <input type="checkbox"/> SUBGROUP (SG) _____</p> <p>REJECTED: <input type="checkbox"/> TF <input type="checkbox"/> WG <input type="checkbox"/> SG _____</p> <p>OTHER: <input type="checkbox"/> DEFERRED TO _____ <input type="checkbox"/> REFERRED TO OTHER NAIC GROUP _____ <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 newline 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.



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	0.999	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

PR017.1

(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
SPECIAL PROPERTY/PET INSURANCE PLANS	AUTO PHYSICAL DAMAGE	OTHER (INCLUD CREDIT,A&H)	FINANCIAL / MORTGAGE GUARANTY	INTL	REIN. PROPERTY & FINANCIAL LINES	REIN. LIABILITY	PL	WARRANTY	TOTAL
0.983	1.016	0.946	0.674	2.414	0.924	1.024	0.874	0.995	XXX
0.983	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
0	0	0	0	0	0	0	0	0	0
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
0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	XXX
0.000%	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

PR017.2

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	0.679	0.791	0.777	0.651	0.671	0.767	0.815	0.578	0.641	0.363
(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

PR018.3

(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
0.550	0.727	0.702	0.209	1.136	0.578	0.743	0.597	0.652	XXX
0.550	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
0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0
0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	0.000%	XXX
0.000%	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?
If answer is yes, please complete Column 2, 2023 Net Premiums Written. | Y |
| (2) Did your company write Accident and Health Insurance in 2022?
If answer is yes, please complete Column 3, 2022 Net Premiums Written. | Y |
| (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		PR017		
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 - Occurence	7	18	0
21	Product Liab - Claims Made	7	18	0
22	Warranty	7	19	0
23	Pet Insurance Plans	7	11	0
24	Total	7	20	0

Underwriting Risk - Premiums		PR018		
Annual Statement Source : STMTINCOME (page 4, col.1 ln 4)		<u>Line</u>	<u>Column</u>	<u>Value</u>
25	Other Underwriting Expenses Incurred	6	1	0

PR038

SCHEDULE P PART 1U - 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*				(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	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

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

PR223

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%
23. Pet Insurance Plans	0.000%	0.000%

PR700

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 Prets 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%
23. Pet Insurance Plans	0.000%	0.000%

PR701

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;">DATE: <u>12/02/23</u></p> <p>CONTACT PERSON: <u>Eva Yeung</u></p> <p>TELEPHONE: <u>816-783-8407</u></p> <p>EMAIL ADDRESS: <u>eyeung@naic.org</u></p> <p>ON BEHALF OF: <u>P/C RBC (E) Working Group</u></p> <p>NAME: <u>Tom Botsko</u></p> <p>TITLE: <u>Chair</u></p> <p>AFFILIATION: <u>Ohio Department of Insurance</u></p> <p>ADDRESS: <u>50 West Town Street, Suite 300</u> <u>Columbus, OH 43215</u></p>	<p style="text-align: center;">FOR NAIC USE ONLY</p> <hr/> <p>Agenda Item # <u>2023-15-CR</u> Year <u>2024</u></p> <hr/> <p style="text-align: center;">DISPOSITION</p> <p>ADOPTED:</p> <p><input checked="" type="checkbox"/> TASK FORCE (TF) <u>03/17/24</u></p> <p><input checked="" type="checkbox"/> WORKING GROUP (WF) <u>03/17/24</u></p> <p><input checked="" type="checkbox"/> SUBGROUP (SG) <u>03/17/24</u></p> <p>EXPOSED:</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>REJECTED:</p> <p><input type="checkbox"/> TF <input type="checkbox"/> WG <input type="checkbox"/> SG _____</p> <p>OTHER:</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 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
<u>Disclosure in lieu of model-based reporting:</u>				(8) Direct and Assumed	(9) Net
(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.

CALCULATION OF CATASTROPHE RISK CHARGE PR027

	<u>Reference</u>	<u>(1)</u> <u>RBC Amount</u>
(1) Total Earthquake Catastrophe Risk	PR027A L(10) C(7)	<u>0</u>
(2) Total Hurricane Catastrophe Risk	PR027B L(10) C(7)	<u>0</u>
(3) Total Wildfire Catastrophe Risk	PR027C L(10)C(7)	<u>0</u>
(4) Total Convective Storms Risk	PR027D L(10)C(7)	<u>0</u>
(5) Total Catastrophe Risk (Reat)	SQRT(L(1) ² + L(2) ²)	<u>0</u>
(5a) Total Catastrophe Risk (Reat For Informational Purposes Only)	SQRT(L(1)² + L(2)² +L(3)²+L(4)²)	<u>0</u>

Lines 3, 4, and 5a are for informational purposes only

PR027

INTERROGATORY TO SUPPORT EXEMPTION FROM COMPLETING PR027 (To be completed by companies reporting no RBC charge in either Lines 1 through 3) PR027INT

Place an "X" in the appropriate cell for the criteria under which the company is claiming an exemption

A Earthquake Exemption (To be completed by companies reporting no RBC charge in PR027 Line 1) -

- (1) The company has not entered into a reinsurance agreement covering earthquake exposure with a non-affiliate or a non-US affiliate and, either
 - (1a) the company participates in an inter-company pooling arrangement with 0% participation, leaving no net exposure for earthquake risks; Or
 - (1b) the company cedes 100% of its earthquake exposures to its US affiliate(s), leaving no net exposure for earthquake risks
- (2) The Company's Ratio of Insured Value - Property to surplus as regards policyholders is less than 50%
- (3) The company has written Insured Value - Property that includes earthquake coverage in the Earthquake-Prone areas representing less than 10% of its surplus as regards policyholders

For any company qualifying for the exemption under 3 provide details about how the "geographic areas in the New Madrid Seismic Zone" were determined.

(3a) What resource was used to define the New Madrid Seismic Zone?

--

(3b) Was exposure determined based on zip codes or counties in the zone, was it based on all of the earthquake exposure in the identified states or was another methodology used? Describe any other methodology used.

Note: "Earthquake-Prone areas" include any of the following states or commonwealths: 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.

B Hurricane Exemption (To be completed by companies reporting no RBC charge in PR027 Line 2) -

- (4) The company has not entered into a reinsurance agreement covering hurricane exposure with a non-affiliate or a non-US affiliate and, either
 - (4a) the company participates in an inter-company pooling arrangement with 0% participation, leaving no net exposure for hurricane risks; Or
 - (4b) the company cedes 100% of its hurricane exposures to its US affiliate(s), leaving no net exposure for hurricane risks
- (5) The Company's Ratio of Insured Value - Property to surplus as regards policyholders is less than 50%
- (6) The company has written Insured Value - Property that includes hurricane coverage in the Hurricane-Prone areas representing less than 10% of its surplus as regards policyholders

Note: "Hurricane-Prone areas" include Hawaii, District of Columbia and states and commonwealths bordering on the Atlantic Ocean, and/or Gulf of Mexico including Puerto Rico.

C Wildfire Exemption (To be completed by companies reporting no RBC charge in PR027 Line 3) -

- (7) The company has not entered into a reinsurance agreement covering wildfire exposure with a non-affiliate or a non-US affiliate and, either
 - (7a) the company participates in an inter-company pooling arrangement with 0% participation, leaving no net exposure for wildfire risks; Or
 - (7b) the company cedes 100% of its wildfire exposures to its US affiliate(s), leaving no net exposure for wildfire risks
- (8) The Company's Ratio of Insured Value - Property to surplus as regards policyholders is less than 50%
- (9) The company has written Insured Value - Property that includes wildfire coverage in the wildfire-Prone areas representing less than 10% of its surplus as regards policyholders
- (10) The sum of the direct and assumed premium written in wildfire-prone areas across the following Annual Statement lines is less than \$50 million: Fire, Allied Lines, Earthquake, Farmowners, Homeowners, and Commercial Multi-Peril; and the company does not currently utilize NAIC approved third party commercial vendor wildfire catastrophe models.

Note: "Wildfire-Prone areas" include any of the following states: California, Idaho, Montana, Oregon, Nevada, Wyoming, Colorado, New Mexico, Washington, Arizona, and Utah.

D Convective Storms Exemption (To be completed by companies reporting no RBC charge in PR027 Line 3) -

- (11) The company has not entered into a reinsurance agreement covering Convective Storms exposure with a non-affiliate or a non-US affiliate and, either
 - (11a) the company participates in an inter-company pooling arrangement with 0% participation, leaving no net exposure for Convective Storms risks; Or
 - (11b) the company cedes 100% of its convective storms exposures to its US affiliate(s), leaving no net exposure for Convective Storms risks
- (12) The Company's Ratio of Insured Value - Property to surplus as regards policyholders is less than 50%
- (13) The company has written Insured Value - Property that includes Convective Storms coverage in the Convective Storms-Prone areas representing less than 10% of its surplus as regards policyholders
- (14) The sum of the direct and assumed premium written in Convective Storms-prone areas across the following Annual Statement lines is less than \$50 million: Fire, Allied Lines, Earthquake, Farmowners, Homeowners, and Commercial Multi-Peril; and the company does not currently utilize NAIC approved third party commercial vendor wildfire catastrophe models.

Denotes items that must be manually entered on the filing software.
* Item C is for informational purposes only.

PR027INT

SCHEDULE P PART 1 SUMMARY PR100

	(3) Premiums Earned, Net	(24) Total Net Losses and Expenses Unpaid	(28) Total Losses and Expenses Incurred, Net	(32) Non Tabular Discount Loss	(33) Non Tabular Discount Loss Expense	Earthquake and Hurricane Experience*				(28C) Total Losses and Expenses Incurred, Net excluding Earthquake and Hurricane 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	
(2) 2015	0		0				0			0
(3) 2016	0		0				0			0
(4) 2017	0		0				0			0
(5) 2018	0		0				0			0
(6) 2019	0		0				0			0
(7) 2020	0		0				0			0
(8) 2021	0		0				0			0
(9) 2022	0		0				0			0
(10) 2023	0		0				0			0
(11) 2024	0		0				0			0
(12) Totals		0		0	0	0		0		0

	Wildfire Catastrophe Experience*				Convective Storms Catastrophe Experience*				(28V) Total Losses and Expenses Incurred, Net excluding Earthquake, Hurricane, Wildfire and Convective Storms 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	(24III) Total U.S. Net Losses Unpaid	(28III) Total U.S. Losses Incurred, Net	(24IV) Total Non-U.S. Net Losses Unpaid	(28IV) Total Non-U.S. Losses Incurred, Net	
(2) 2015		0		0		0		0	0
(3) 2016		0		0		0		0	0
(4) 2017		0		0		0		0	0
(5) 2018		0		0		0		0	0
(6) 2019		0		0		0		0	0
(7) 2020		0		0		0		0	0
(8) 2021		0		0		0		0	0
(9) 2022		0		0		0		0	0
(10) 2023		0		0		0		0	0
(11) 2024		0		0		0		0	0
(12) Totals	0		0		0		0		0

 vendor link items

 Data elements calculated automatically by the spreadsheet

* Please provide comments on any data issues or estimations used to derive the catastrophe experience data

***Columns 24I through 28V are for informational purposes only.

SCHEDULE P PART 1A THRU 1U PR101 - PR123

	(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
				(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	
(2) 2014	0		0		0		0	0
(3) 2016	0		0		0		0	0
(4) 2017	0		0		0		0	0
(5) 2018	0		0		0		0	0
(6) 2019	0		0		0		0	0
(7) 2020	0		0		0		0	0
(8) 2021	0		0		0		0	0
(9) 2022	0		0		0		0	0
(10) 2023	0		0		0		0	0
(11) 2024	0		0		0		0	0
(12) Totals		0		0		0		

	Wildfire Catastrophe Experience*				Convective Storms Catastrophe Experience*				(28V) Total Losses and Expenses Incurred, Net excluding Earthquake, Hurricane, Wildfire and Convective Storms 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	(24III) Total U.S. Net Losses Unpaid	(28III) Total U.S. Losses Incurred, Net	(24IV) Total Non-U.S. Net Losses Unpaid	(28IV) Total Non-U.S. Losses Incurred, Net	
(2) 2014		0		0		0		0	0
(3) 2016		0		0		0		0	0
(4) 2017		0		0		0		0	0
(5) 2018		0		0		0		0	0
(6) 2019		0		0		0		0	0
(7) 2020		0		0		0		0	0
(8) 2021		0		0		0		0	0
(9) 2022		0		0		0		0	0
(10) 2023		0		0		0		0	0
(11) 2024		0		0		0		0	0
(12) Totals	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 28V are for informational purposes only.

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>CONTACT PERSON: <u>Eva Yeung</u></p> <p>TELEPHONE: <u>816-783-8407</u></p> <p>EMAIL ADDRESS: <u>eyeung@naic.org</u></p> <p>ON BEHALF OF: <u>P/C RBC (E) Working Group</u></p> <p>NAME: <u>Tom Botsko</u></p> <p>TITLE: <u>Chair</u></p> <p>AFFILIATION: <u>Ohio Department of Insurance</u></p> <p>ADDRESS: <u>50 West Town Street, Suite 300</u> <u>Columbus, OH 43215</u></p>	<p style="text-align: center;">FOR NAIC USE ONLY</p> <p>Agenda Item # <u>2024-01-P</u> Year <u>2024</u></p> <p style="text-align: center;">DISPOSITION</p> <p>ADOPTED:</p> <p><input checked="" type="checkbox"/> TASK FORCE (TF) <u>03/17/2024</u></p> <p><input checked="" type="checkbox"/> WORKING GROUP (WF) <u>03/17/2024</u></p> <p><input type="checkbox"/> SUBGROUP (SG) _____</p> <p>EXPOSED:</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>REJECTED:</p> <p><input type="checkbox"/> TF <input type="checkbox"/> WG <input type="checkbox"/> SG _____</p> <p>OTHER:</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) 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		

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 1J - 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) 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

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) 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

■ 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*				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

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

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 1T - WARRANTY PR122

	(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) 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	(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
(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

■ 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 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

PR211

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

PR212

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

PR214

SCHEDULE P PART 2S - FINANCIAL GUARANTY/MORTGAGE GUARANTY PR221

	(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

PR221

SCHEDULE P PART 2T - WARRANTY PR222

	(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

PR222

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

PR301

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)
(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 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)
(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 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

PR306

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
Ongoing Items – Life RBC							
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	
Carryover Items Currently being Addressed – Life RBC							
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
Ongoing Items – RBC IR & E							
Carryover Items Currently being Addressed – RBC IR & E							
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

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							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.	Referred from CADTF 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.	1/12/2022 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.	Referred from CADTF 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.	1/12/2022 8/4/2019	
IR4	RBC IRE	2	2023 or later	Comprehensive Fund Review for investments reported on Schedule D Pt 2 Sn2	Referred from CADTF 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.	1/12/2022 11/16/2018	
New Items – RBC IR & E								
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.	1/12/2022	
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	1/12/2022	

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						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
2024 #	Owner	2024 Priority	Expected Completion Date	Working Agenda Item	Source	Comments	Date Added to Agenda
Ongoing Items – P&C RBC							
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
Carryover Items Currently being Addressed – P&C RBC							
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> https://naiconline.sharepoint.com/teams/FRSRBC/PRBC/2018%20Calls%20-%20PRBC/PCRBC/06_14/attC01_Growth%20Risk%20Referral%20to%20Academy.pdf	Referral from Operational Risk Subgroup	1) Sent a referral to the Academy on 6/14/18 conference call.	1/25/2018

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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. 2/21/24 Proposal 2023-01BWG was adopted at the BWG Interim Meeting.	7/27/2023
New Items – P&C RBC							
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> https://naiconline.sharepoint.com/teams/FRSRBC/PRBC/2024%20Calls%20-%20Joint/03_17_NM/Att2c_%20Referral%20from%20RTF%20to%20PCRBCWG%20(1).docx	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

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Attachment Eleven
Capital Adequacy (E) Task Force
3/17/24

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	
2024 #	Owner	2024 Priority	Expected Completion Date	Working Agenda Item	Source	Comments	Date Added to Agenda
Ongoing Items – Health RBC							
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
Carryover Items Currently being Addressed – Health RBC							

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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
New Items – Health RBC							
2024 #	Owner	2024 Priority	Expected Completion Date	Working Agenda Item	Source	Comments	Date Added to Agenda

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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

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							focus on different issues: 1) RBC Purposes & Guidelines Ad Hoc Subgroup; 2) Asset Concentration Ad Hoc Subgroup; and 3) Geographic Concentration Ad Hoc Subgroup.	
Carryover Items Currently being Addressed – Task Force								
New Items –Task Force								
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> https://naiconline.sharepoint.com/teams/FRSRBC/Capital%20Adequacy%20CapAd%20Task%20Force/2024%20Calls/03_17NM/Att14Collateral%20Loan%20Memo%20to%20Multiple%20Groups.docx		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> Att16 2024-06-CA Repurchase Agreements P&C and Health.pdf	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	

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						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

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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>CONTACT PERSON: <u>Eva Yeung</u></p> <p>TELEPHONE: <u>816-783-8407</u></p> <p>EMAIL ADDRESS: <u>eyeung@naic.org</u></p> <p>ON BEHALF OF: <u>Capital Adequacy (E) Task Force</u></p> <p>NAME: <u>Tom Botsko</u></p> <p>TITLE: <u>Chair</u></p> <p>AFFILIATION: <u>Ohio Department of Insurance</u></p> <p>ADDRESS: <u>50 West Town Street, Suite 300</u> <u>Columbus, OH 43215</u></p>	<p style="text-align: center;">FOR NAIC USE ONLY</p> <hr/> <p>Agenda Item # <u>2024-08-CA</u> Year <u>2024</u></p> <hr/> <p style="text-align: center;">DISPOSITION</p> <p>ADOPTED:</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>EXPOSED:</p> <p><input checked="" type="checkbox"/> TASK FORCE (TF) <u>3/17/2024</u></p> <p><input type="checkbox"/> WORKING GROUP (WG) _____</p> <p><input type="checkbox"/> SUBGROUP (SG) _____</p> <p>REJECTED:</p> <p><input type="checkbox"/> TF <input type="checkbox"/> WG <input type="checkbox"/> SG _____</p> <p>OTHER:</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.

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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 Affiliate 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

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.

Washington, DC 444 North Capitol Street NW, Suite 700, Washington, DC 20001-1509 p | 202 471 3990

Kansas City 1100 Walnut Street, Suite 1500, Kansas City, MO 64106-2197 p | 816 842 3600

New York One New York Plaza, Suite 4210, New York, NY 10004 p | 212 398 9000

www.naic.org

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).

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>CONTACT PERSON: <u>Eva Yeung</u></p> <p>TELEPHONE: <u>816-783-8407</u></p> <p>EMAIL ADDRESS: <u>eyeung@naic.org</u></p> <p>ON BEHALF OF: <u>P/C RBC (E) Working Group</u></p> <p>NAME: <u>Tom Botsko</u></p> <p>TITLE: <u>Chair</u></p> <p>AFFILIATION: <u>Ohio Department of Insurance</u></p> <p>ADDRESS: <u>50 West Town Street, Suite 300</u> <u>Columbus, OH 43215</u></p>	<p style="text-align: center;">FOR NAIC USE ONLY</p> <hr/> <p>Agenda Item # <u>2024-02-CA</u> Year <u>2024</u></p> <hr/> <p style="text-align: center;">DISPOSITION</p> <p>ADOPTED:</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>EXPOSED:</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>REJECTED:</p> <p><input type="checkbox"/> TF <input type="checkbox"/> WG <input type="checkbox"/> SG _____</p> <p>OTHER:</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.

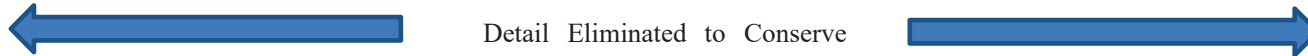
The Short-Term Investments to be included in this section are those short-term investments not reflected elsewhere in the formula. The 0.3 percent factor is equal to the factor for cash. The amount reported in Line (8) reflects the total from Schedule DA: Short-Term Investments (Line (6)), less the short-term 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 Assets



Schedule 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

	Annual Statement Source	(1) Bk/Adj Carrying Value	Factor	(2) RBC Requirement
(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 2509999999			
(4) Less: Exempt Money Market Mutual Funds as Identified by SVO	Schedule E, Part 2, Column 7, Line 8209999999			
(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 2509999999			
(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, Residual Tranches or Interests 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	
(22) Total Residual Tranches or Interests	Schedule BA, Part 1, Column 12 Lines 4699999 + 4799999 + 4899999 + 4999999 + 5099999 + 5199999 + 5299999 + 5399999 + 5499999 + 5599999 + 5699999 + 5799999		0.2000	
(23) Total Other Long-Term Invested Assets (Page 2, Column 3, Line 8)	Lines (13) + (14) + (15) + (16) + (17) + (18) + (19) + (20) + (21) + (22)			
(24) Derivatives	Page 2, Column 3, Line 7		0.0500	
(25) Total Miscellaneous Fixed Income Assets RBC	Lines (1) + (5) + (8) + (9) + (10) + (11) + (12) + (23) + (24)			

Denotes items that must be manually entered on filing software.

CALCULATION OF TOTAL RISK-BASED CAPITAL AFTER COVARIANCE

		(1)
		<u>RBC Amount</u>
H0 - INSURANCE AFFILIATES AND MISC. OTHER AMOUNTS		
(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)	=====
H1 - ASSET RISK - OTHER		
(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 (25)	_____
(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)	=====
H2 - UNDERWRITING RISK		
(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>
H3 - CREDIT RISK			
(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)	=====
H4 - BUSINESS RISK			
(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>	Factor	(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		
(19) Total Residual Tranches or Interests	Schedule BA, Part 1, Column 12 Lines 4699999 + 4799999 + 4899999 + 4999999 + 5099999 + 5199999 + 5299999 + 5399999 + 5499999 + 5599999 + 5699999 + 5799999		0.2000	
(20) Schedule BA Assets Excluding Collateral Loans, LIHTC, &-WCFI, & Residual Tranches or Interests	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
(23) Total Other Long-Term Assets	L(7)+L(10)+L(13)+L(14)+L(15) +L(16)+L(17)+L(19)+L(20)+L(21)+L(22)	0		0

PR008

Calculation of Total Risk-Based Capital After Covariance PR030 R0-R1

(1)

R0 - Subsidiary Insurance Companies and Misc. Other Amounts		PRBC O&I Reference	RBC Amount
(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
R1 - Asset Risk - Fixed Income			
(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

PR030

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>CONTACT PERSON: <u>Eva Yeung</u></p> <p>TELEPHONE: <u>816-783-8407</u></p> <p>EMAIL ADDRESS: <u>eyeung@naic.org</u></p> <p>ON BEHALF OF: <u>P/C RBC (E) Working Group</u></p> <p>NAME: <u>Tom Botsko</u></p> <p>TITLE: <u>Chair</u></p> <p>AFFILIATION: <u>Ohio Department of Insurance</u></p> <p>ADDRESS: <u>50 West Town Street, Suite 300</u> <u>Columbus, OH 43215</u></p>	<p style="text-align: center;">FOR NAIC USE ONLY</p> <p>Agenda Item # <u>2024-02-CA</u> Year <u>2024</u></p> <p style="text-align: center;">DISPOSITION</p> <p>ADOPTED:</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>EXPOSED:</p> <p><input checked="" type="checkbox"/> TASK Force(TF) <u>1/31/24, 3/17/24</u></p> <p><input type="checkbox"/> WORKING GROUP (WG) _____</p> <p><input type="checkbox"/> SUBGROUP (SG) _____</p> <p>REJECTED:</p> <p><input type="checkbox"/> TF <input type="checkbox"/> WG <input type="checkbox"/> SG _____</p> <p>OTHER:</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. During the Spring National Meeting, the Task Force agreed to re-expose this proposal with a 45% charge for a 30-day public comment period.

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.

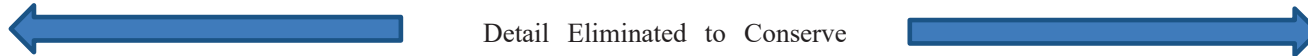
The Short-Term Investments to be included in this section are those short-term investments not reflected elsewhere in the formula. The 0.3 percent factor is equal to the factor for cash. The amount reported in Line (8) reflects the total from Schedule DA: Short-Term Investments (Line (6)), less the short-term 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)).

- 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.
- Residual Tranches or Interests reported on Line (22) receive a factor of 45 percent, consistent with life risk-based capital formula studied by the Life Risk-Based Capital (E) Working Group.
- 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 Assets



Schedule 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

	Annual Statement Source	(1) Bk/Adj Carrying Value	Factor	(2) RBC Requirement
(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 2509999999			
(4) Less: Exempt Money Market Mutual Funds as Identified by SVO	Schedule E, Part 2, Column 7, Line 8209999999			
(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 2509999999			
(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, Residual Tranches or Interests 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	
(22) Total Residual Tranches or Interests	Schedule BA, Part 1, Column 12 Lines 4699999 + 4799999 + 4899999 + 4999999 + 5099999 + 5199999 + 5299999 + 5399999 + 5499999 + 5599999 + 5699999 + 5799999		0.4500	
(23) Total Other Long-Term Invested Assets (Page 2, Column 3, Line 8)	Lines (13) + (14) + (15) + (16) + (17) + (18) + (19) + (20) + (21) + (22)			
(24) Derivatives	Page 2, Column 3, Line 7		0.0500	
(25) Total Miscellaneous Fixed Income Assets RBC	Lines (1) + (5) + (8) + (9) + (10) + (11) + (12) + (23) + (24)			

Denotes items that must be manually entered on filing software.

CALCULATION OF TOTAL RISK-BASED CAPITAL AFTER COVARIANCE

		(1) <u>RBC Amount</u>
H0 - INSURANCE AFFILIATES AND MISC. OTHER AMOUNTS		
(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)
H1 - ASSET RISK - OTHER		
(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 (25)
(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)
H2 - UNDERWRITING RISK		
(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>
H3 - CREDIT RISK			
(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)	=====
H4 - BUSINESS RISK			
(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>	Factor	(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		
(19) Total Residual Tranches or Interests	Schedule BA, Part 1, Column 12 Lines 4699999 + 4799999 + 4899999 + 4999999 + 5099999 + 5199999 + 5299999 + 5399999 + 5499999 + 5599999 + 5699999 + 5799999		0.4500	
(20) Schedule BA Assets Excluding Collateral Loans, LIHTC, &-WCFI, & Residual Tranches or Interests	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
(23) Total Other Long-Term Assets	L(7)+L(10)+L(13)+L(14)+L(15) +L(16)+L(17)+L(19)+L(20)+L(21)+L(22)	0		0

PR008

Calculation of Total Risk-Based Capital After Covariance PR030 R0-R1

(1)

R0 - Subsidiary Insurance Companies and Misc. Other Amounts		PRBC O&I Reference	RBC Amount
(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
R1 - Asset Risk - Fixed Income			
(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

PR030



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

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

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